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Decomposing Differences in Black Student Graduation Rates between HBCU and non-HBCU Students

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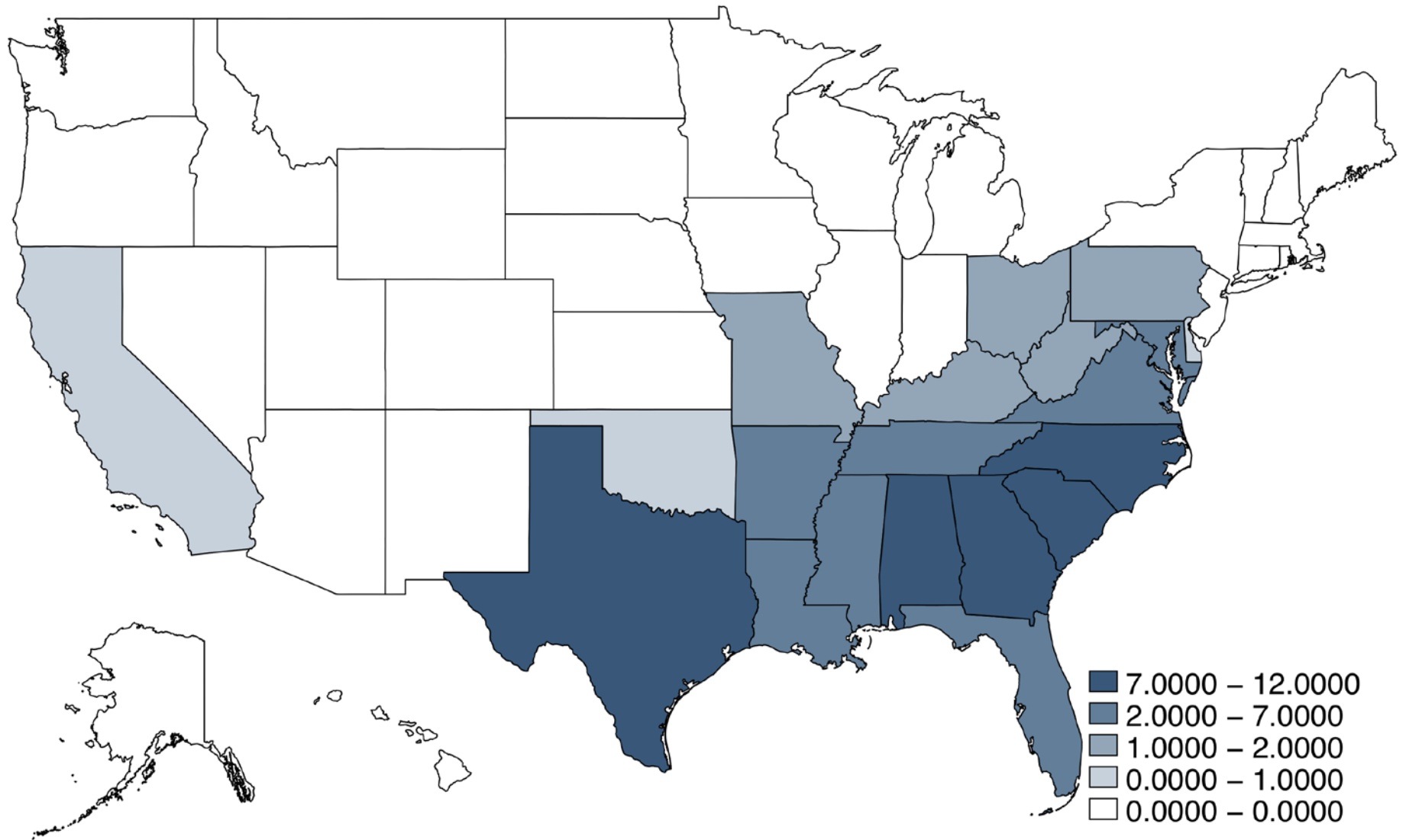
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Introduction and Background

- HBCU = Historically Black Colleges and Universities
 - institutions of higher education serving primarily African-American students; unique to the U.S.
 - rich history dating back to the end of the civil war

Geographical Distribution of HBCUs



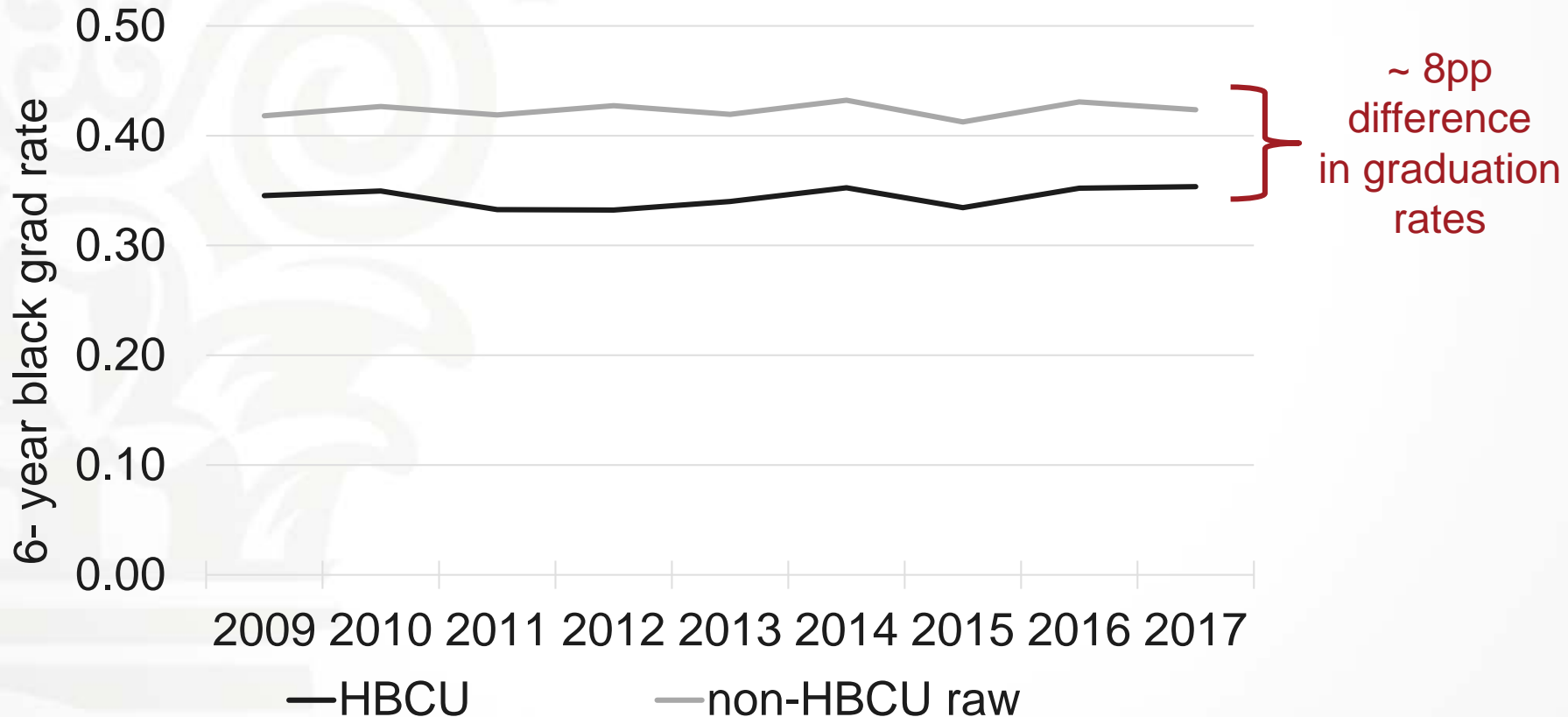
Source: <https://hbculifestyle.com/list-of-hbcu-schools/>

Introduction and Background

- HBCU = Historically Black Colleges and Universities
 - institutions of higher education serving primarily African-American students; unique to the U.S.
 - rich history dating back to the end of the civil war
- Significant differences in educational and labor market outcomes between HBCU and non-HBCU graduates
 - disappear when student characteristics are controlled for
 - doesn't capture social, psychological, emotional benefits
- If outcomes are primarily attributable to differences in student characteristics, is there anything left for HBCUs to learn for further improving outcomes?

Dig Deeper into Differences in Outcomes

Student Outcome (6-year black graduation rate)



Dig Deeper into Differences in Outcomes

Student Outcome
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graph TD; A[Student Outcome (6-year black graduation rate)] --- B[Student Characteristics]; A --- C[Institutional Characteristics]
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Student
Characteristics

Institutional
Characteristics

Differences in Characteristics

Differences in Characteristics

Institutional Characteristics	HBCU	non-HBCU
Endowment-expense ratio	0.44	1.04
Revenue per fte - \$1000s	28.8	31.3
In-state tuition and fees - \$1000s	10.3	22.3
Student to Faculty ratio	15	14
Graduate program = 1	0.53	0.60
Student Characteristics		
Share of 1st gen. college students	39%	33%
Share of undergrads who receive a Pell grant	65%	32%
Avg SAT equiv. score of students admitted	867	1,064
Share of female students	61%	58%
Share of Non-Hispanic Black Students	82%	10%
Share of STEM graduates	16%	13%
Share of part-time students	14%	22%

Dig Deeper into Differences in Outcomes

Student Outcome
(6-year black graduation rate)

e.g., does a low SAT score handicap HBCU students more or less than non-HBCU students?

Student
Characteristics

e.g., how important tuition is in determining HBCU outcomes vs. non-HBCU outcomes

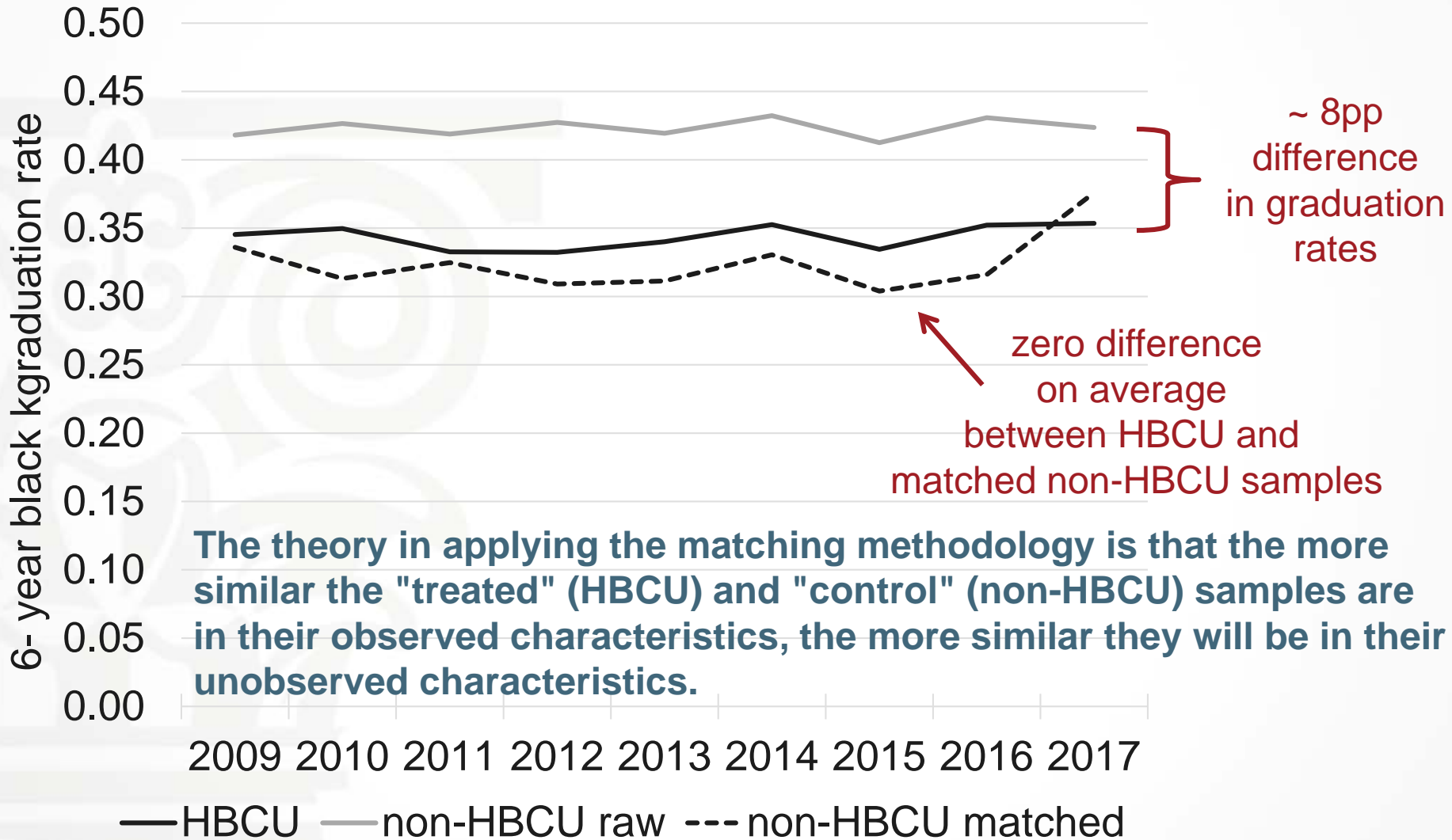
Institutional
Characteristics

Differences in Mechanisms

Methodology

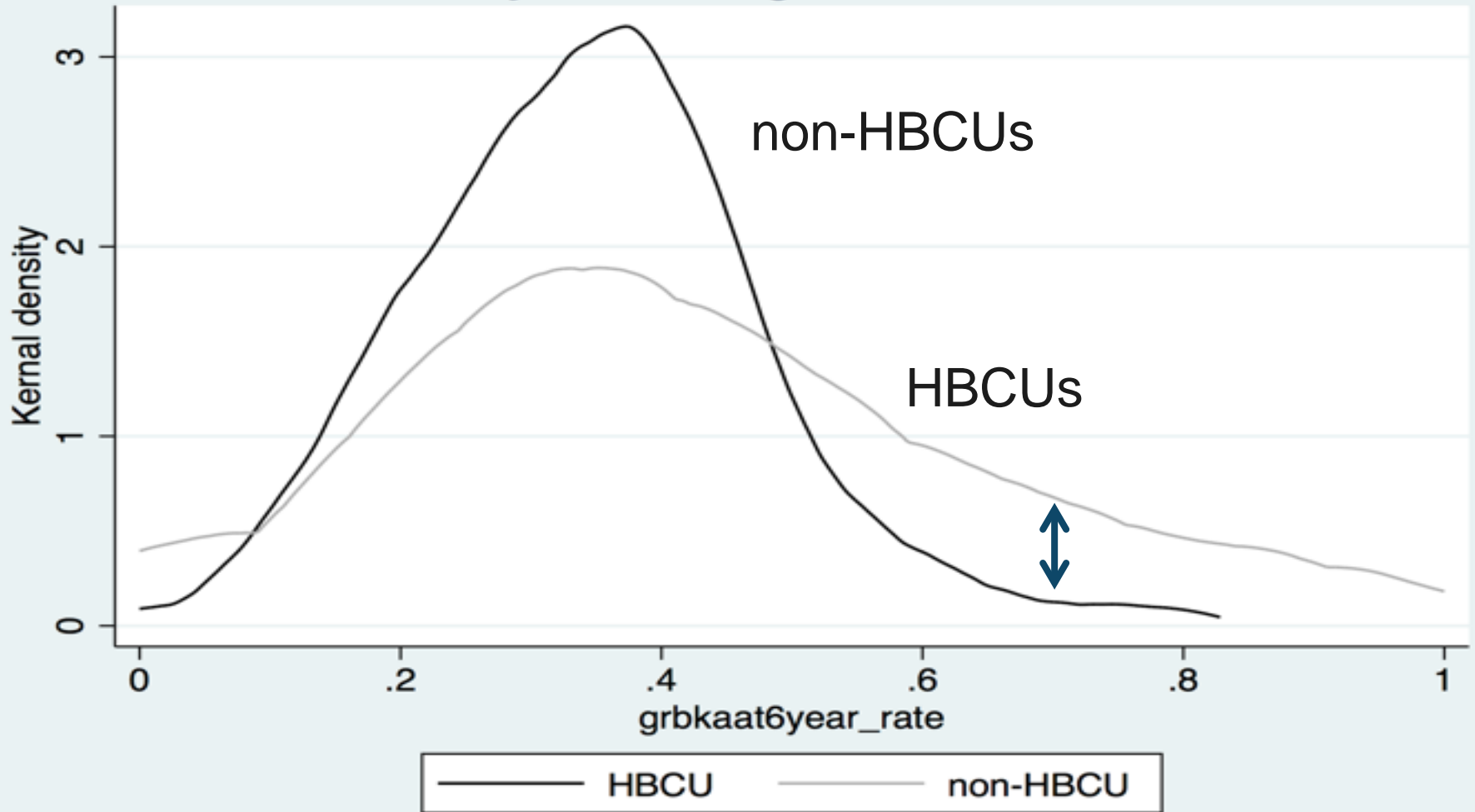
- Data
 - Four-year public and non-profit private colleges, 2009-2018
 - U.S. Dept of Education's Integrated Postsecondary Education Data System (IPEDS)
 - U.S. Dept of Education's College Scorecard
- Analysis
 - Performed at the institutional level
 - Compare comparable institutions through propensity-score matching
 - Decompose difference in graduation rates across distributions
 - tells us how important differences in characteristics vs. differences in mechanisms are in determining differences in graduation rates

Implications of Propensity-score Matching



Distribution of Institutions Across Grad Rate

6-year black graduation rate



Results and Implications - Characteristics

- Most important Characteristics Differences
 - **higher tuition and fees at non-HBCUs** increase graduation rate gap at the low end of the distribution
 - doesn't necessarily mean HBCUs should raise tuition – likely a correlation with other characteristics still left unmeasured
 - **lower SAT scores among HBCU students** at all points of the distribution increases graduation rate gap
 - HBCUs could skim the cream by rejecting lower SAT students to improve outcomes -- not consistent with a mission to undo effects of early systemic racism (perhaps manifested in lower SATs)
 - **lower share of part-time students** at all points of the distribution *decreases* graduation rate gap
 - fewer part-time students give HBCUs an edge; continue supporting focus on studies as full-time endeavor

Results and Implications - Mechanisms

- Most important differences in mechanisms
 - **first-generation students** at lower end of distribution have a harder time graduating from HBCUs than from non-HBCUs
 - students with **similar SAT scores have a harder time graduating from HBCUs** than from non-HBCUs
 - HBCUs could devote more resources (through grants or federal funding initiatives) to students arriving at college without familial experiences to draw on and to students entering college needing more remedial attention (i.e., lower SAT scores)

Bottom Line

- Even if outcome differences are erased by comparing comparable institutions, digging deeper tells us how outcomes among HBCU institutions can be improved even more, relative to their non-HBCU counterparts.



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Thank you.