

# Fact Check and Research Synthesis: Affirmative Action, Graduation Rates and Enrollment Choice at the University of California<sup>+</sup>

September 7, 2020

## I. Introduction

On November 3, 2020 California voters will decide the fate of Proposition 16, which proposes to repeal a 1996 ballot initiative (“Prop 209”) and thereby allow some consideration of race/ethnicity, sex and national origin in public education, employment and contracting so long as such programs are consistent with federal and state equal protection laws. A central question for voters and policymakers is what set of impacts Prop 209 had on University of California (UC) patterns of enrollment, degree attainment and subsequent success/earnings in the workforce.

A recent paper by Zachary Bleemer, a doctoral student in economics at UC Berkeley, utilizes a rich and detailed database of UC freshman applicants in the two years before and after Prop 209, including those who ended up enrolling at other colleges ([Bleemer 2020a](#), [2020b](#)). Mr. Bleemer adopts a number of empirical techniques in an effort to make “apples to apples” comparisons about how the affirmative action ban impacted Black, Latinx and American Indian (underrepresented minority, or “URM”) students. Among Bleemer’s key findings are:

(1) Prop 209 led to an annual enrollment decline of about 800 URM students at UC, and pushed hundreds of others to less selective UC campuses;

(2) After Prop 209 URM applicants to UC with lower test scores ended up 4% less likely to earn a bachelor’s degree from any college and the average URM became less likely to earn a bachelor’s degree in STEM;

(3) the earlier declines in UC enrollment and in degree attainment carried over to the California labor market; after Prop 209 URM applicants to UC ended up earning annual wages 5% lower between the ages of 24-34.

In response, UCLA law professor Richard Sander, a frequent critic of affirmative action in higher education, just issued a [short rebuttal paper](#). Professor Sander claims Bleemer “is demonstrably wrong on his core claims” and Sander asserts there “is every reason to distrust every other claim in his paper.” (pp. 1, 6)

Bleemer’s paper uses a “difference-in-difference” research design and he engages in extensive efforts to account for “selection bias” when estimating effects of California’s Prop 209. At a broad conceptual level, these methodological approaches are not inconsistent with principles espoused elsewhere by Dr. Sander (Sander 2019:815; Sander & Taylor 2012:77-79, 107-109).

Against this backdrop of academic disagreement about the impact of Prop 209, the purpose of this short summary is not to necessarily endorse or defend any particular methodological choice in Bleemer’s exhaustive paper (Bleemer 2020b runs nearly 100 pages, plus Bleemer provides a

60-page online [Appendix](#) that critiques the Sander & Taylor (2012) book at pp. 12-15). Rather, here the goal is to situate Mr. Bleemer’s core findings about URM students and Prop 209 within the larger body of relevant peer-reviewed research studies. In so doing, this concise review confirms that professor Sander’s sweeping assertion that Bleemer “is demonstrably wrong on his core claims” is inaccurate and unpersuasive for several reasons:

(1) Professor Sander’s rebuttal paper does not seriously engage with or critique Mr. Bleemer’s data findings and methods.

(2) Sander constructs (in order to tear down) a straw person argument about the *numbers* of enrolled URM freshmen and graduates at UC after Prop 209. Sander’s medley of descriptive statistics is irrelevant to Bleemer’s empirical modeling estimates about the net impact of Prop 209 on URM enrollment and college graduation.

(3) Sander’s narrative about Prop 209 and his medley of UC descriptive statistics rely heavily on long run changes that are more accurately characterized as unrelated to Prop 209, including: (a) the steady rise in the number and proportion of URM (especially Latinx) high school graduates that are the rootstock of the UC student population; (b) available seats in the freshman class at most UC campuses (and the UC system) grew substantially over the period of the late 1990s and the 2000s; and (c) the upward trend in UC’s admissions selectivity during this era boosted graduation rates for reasons independent of Prop 209.

(4) Sander cites few peer-reviewed studies in support of his specific claims about Prop 209; the ones he does cite are cherry-picked and are not representative of the broader scholarship. In summary, professor Sander's level of disbelief about Bleemer's findings is not supported by the overall body of relevant peer-reviewed scholarship. Rather, even for those preferring to reserve judgment about questions of detailed methodological choices and findings in Bleemer's new paper, it is notable that Bleemer's core findings about URM student enrollment, graduation rates and earnings are actually in the direction of what one would generally expect based on the preponderance of the relevant peer-reviewed research.

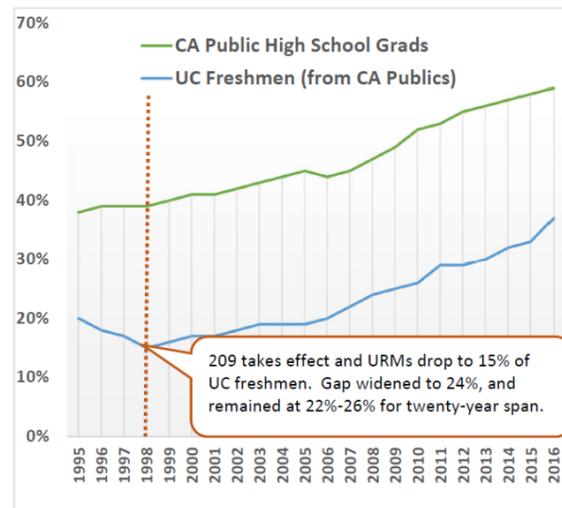
## II. UC Freshmen Enrollment & Yield

Bleemer estimates "Prop 209 caused an annual decline in URM UC enrollment of about 800 students in 1998-99, or 14 percent" (Bleemer 2020a: 19 n.65), a figure that represents an effort to calculate joint application, admission, yield and enrollment effects *compared to a counterfactual* without Prop 209 that holds other factors equal (see Bleemer 2020b: Table A-7). For this reason, Sander's discussion of UC freshman enrollment statistics (pp. 1-3) detours into a different topic and hardly casts doubt on Bleemer's findings. Moreover, important trends unrelated to Prop. 209 are performing the heavy labor behind Dr. Sander's claim that "number of URMs at the university was in fact higher, not lower, within a couple of years of Prop 209's implementation..." (p. 2) Namely, the population of URM high school graduates in California kept growing in the late-1990s and thereafter, and so

too the size of the entering California resident (and overall) freshman class expanded considerably at most UC campuses in the late-90s and early 2000s (e.g., UCD, UCI, UCR, UCSD and UCSC, plus UCM opened in 2005).

The chart below provides a more holistic view, showing that URMs were 38% of California public high school graduates in 1995 and this increased steadily to 45% by 2005 and 59% by 2016. URMs were 20% of UC freshmen from these same California schools in 1995, which dropped by one quarter (to 15%) when Prop 209 took effect in 1998. While the share of URM freshmen at UC inched back up in later years, it is still the case (as reported at UC Regents) that "while the proportion of public high school graduates becomes more diverse, freshman enrollment at the University has not kept pace with the state's diversity" (p. 5) (*see also* findings in Long & Bateman, 2020; Kidder 2013:104-105).

*URM Students in California and UC, 1995-2016*



(data from [UC Regents 3/19/20, Item B6 p.5](#))

Sander cites his own study in claiming that at UC post-209 (especially UC Berkeley and UCLA) the "likely reason for the jump in enrollment rates was the eagerness of talented Black and Hispanic students to attend a university where they would not be stigmatized as the beneficiaries of race-based admissions." (pp. 2-3, citing Antonovics & Sander, 2013) But Sander is the only scholar purporting to find such a "warming effect" on yield rates after an affirmative action ban. Other peer-reviewed studies report that Prop 209 negatively impacted URM freshmen yield rates to UC (more so at the higher end of the admit pool) and corresponded with a rise in URMs choosing to enroll at selective private universities with affirmative action (Geiser & Caspary, 2005; Kidder 2013). Bleemer, using robust National Student Clearinghouse data, similarly finds: "After Prop 209, high-AI [academic index] URM applicants tended to flow from UC's more-selective campuses to less-selective campuses and – especially among Black applicants – elite private universities, while lower-AI URM applicants mostly flowed to less-selective California colleges and universities." (2020a:2; *see also* Grodsky & Kurlaender, 2010)

Likewise, quality peer-reviewed studies of the Texas affirmative action ban and ten percent plan also account for private colleges when modeling Black and Latinx enrollment choices (Niu and Tienda, 2008; Niu, Tienda and Cortes, 2006), contra Sander's method. Moreover, the Sander study of yield rates did not account for confounders including the post-209 bump in the proportion of URMs who are recruited student-athletes (who have yield rates double other freshmen) and the fact that UC lowered tuition in

the late-1990s at the same time that its U.S. peer/competitor universities raised tuition.

### III. Graduation Rates

Sander claims that addressing the “mismatch” problem for URM students and boosting their graduation rates is one of the “the most important benefits of Prop 209.” (p. 3) Sander cites few research studies to support his view, but his citation to the study of UC by Arcidiacono et al. (2014) notes mention. Bleemer both replicates the Arcidiacono et al. estimates of graduation rates and explains why those estimates of Prop 209’s effect on graduation rates fade away when more robust controls are introduced (Bleemer 2020b: 46-48). Relatedly, others researchers point out that the upward trend in UC graduation rates due to increased selectivity is something to properly distinguish from Prop 209 admissions changes (Chang & Rose 2010:83; Chingos 2013; Kidder 2013:105-108; Kidder & Onwuachi-Willig 2014: 912-915), which the Arcidiacono study attempts to account for but with limited success due to constraints in their source UC data obtained from Sander.

In the final analysis, a strong preponderance of peer-reviewed research, using a variety of empirical strategies, disconfirm Sander’s basic claim that affirmative action harms Black and Latinx overall graduation rates/attainment at selective U.S. universities (Dillon & Smith 2020, 2017; Lutz et al. 2018, 2019; Eller & DiPrete, 2018; cf. Goodman et al. 2017; Alon 2015; Kidder & Lempert 2015; Hinrichs 2014; Arcidiacono & Koedel 2014; Golann et al. 2013; Cortes 2010; Chang & Rose 2010; Bowen et al. 2009; Espenshade & Radford 2009; Melguizo 2008;

Fisher & Massey 2007; Massey & Mooney 2007; Small & Winship 2007; Alon & Tienda 2005; Bowen & Bok 1998; Kane 1998). The Bleemer paper is important because of the richness of his data and methods, not because his findings about URM graduation rates and Prop 209 are somehow novel or facially implausible.

### IV. Earnings in the Labor Market

Bleemer’s paper includes data on the subsequent wages of UC applicants by linkage to longitudinal records from the California Employment Development Department, leading to his finding that “Prop 209 led URM UC applicants to earn five percent lower average annual wages between ages 24 and 34 than they would have earned had affirmative action continued, with larger proportional effects for lower-AI applicants.” (2020a: 3) Other than expressing disbelief, Sander has nothing to say about these findings.

Just as with graduation rates, a body of peer-reviewed research finds that affirmative action is associated with positive labor market outcomes/earnings for African American and Latinx attendees of selective U.S. colleges and universities, often using a variety of methods to control for selection bias (Dillon & Smith 2020; Dale & Krueger 2014; Long 2010; Daniel et al. 2001). The Dale & Krueger “matching” methodology is respected by a range of scholars including Sander (Sander & Taylor 2012:108), but possibly errs on the side of *understating* labor market returns of attending a selective college (see Hoxby 2009). It is notable then, that Dale & Krueger found mixed results for students *overall*, yet found larger wage benefits for African Americans and Latinx students (2014:325-26).

Relatedly, other studies show labor market benefits (for URM and/or others) of attending a public flagship university compared to similar students attending other institutions, or attending four-year publics versus community colleges, etc. (Andrews et al. 2016, 2020; Smith et al. 2020; Cohodes & Goodman, 2014; Hoekstra 2009; Black et al. 2005).

### V. Conclusion

Professor Sander’s claims about Prop 209 in his rebuttal to the Bleemer paper are not consistent with the overall body of relevant peer-reviewed scholarship. Rather, Mr. Bleemer’s findings about URM enrollment, graduation rates and earnings under Prop 209 are broadly consistent with the preponderance of peer-reviewed research studies. Dr. Sander substantially overstates the role of Prop 209 in positively shaping URM patterns of enrollment and B.A. degree attainment at UC and his rebuttal paper does not seriously engage with or critique the findings and methods in Mr. Bleemer’s recent paper.

*+ Prepared by William C. Kidder, J.D., research associate at the UCLA Civil Rights Project. This represents my own research views, and is not intended to represent the views of the UCSC (or UC system) administration.*

### References

- Alon, Sigal. 2015. *Race, class, and affirmative action*. [Russell Sage Foundation](#).
- Alon, Sigal and Tienda Marta. 2005. “Assessing the ‘Mismatch’ Hypothesis: Differences in College Graduation Rates by Institutional Selectivity.” [Sociology of Education 78\(4\):294–315](#).

- Andrews, Rodney J., Jing Li, and Michael F. Lovenheim. 2016. "Quantile treatment effects of college quality on earnings." *Journal of Human Resources* 51, no. 1 (2016): 200-238.
- Andrews, Rodney J., Scott A. Imberman, and Michael F. Lovenheim. 2020. "Recruiting and supporting low-income, high-achieving students at flagship universities." *Economics of Education Review* 74: 101923.
- Antonovics, Kate L., and Richard H. Sander. 2013. "Affirmative Action Bans and the 'Chilling Effect.'" 2013. *American Law and Economics Review* 15: 252-299.
- Arcidiacono, Peter, Esteban Aucejo, Patrick Coate, and V. Joseph Hotz. 2014. "Affirmative action and university fit: Evidence from Proposition 209." *IZA Journal of Labor Economics* 3, no. 1: 7.
- Arcidiacono, Peter, and Cory Koedel. 2014. "Race and college success: Evidence from Missouri." *American Economic Journal: Applied Economics* 6, no. 3: 20-57.
- Black, Dan, Kermit Daniel, and Jeffrey Smith. 2005. "College quality and wages in the United States." *German Economic Review* 6, no. 3: 415-443.
- Bleemer, Zachary. 2020a. "Affirmative Action, Mismatch, and Economic Mobility After California's Proposition 209." UC Berkeley [CSHE ROPS paper](#).
- Bleemer, Zachary. 2020b. "Affirmative Action, Mismatch, and Economic Mobility After California's Proposition 209." [Extended version](#).
- Bowen, William, Chingos, Matthew and McPherson, Michael. 2009. *Crossing the Finish Line: Completing College at America's Public Universities*. Princeton, NJ: Princeton University Press.
- Bowen, William and Bok, Derek. 1998. *The Shape of the River: Long-Term Consequences of Considering Race in College and University Admissions*. Princeton, NJ: Princeton University Press.
- Cohodes, Sarah R., and Joshua S. Goodman. 2014. "Merit aid, college quality, and college completion: Massachusetts' Adams scholarship as an in-kind subsidy." *American Economic Journal: Applied Economics* 6, no. 4: 251-85.
- Chang, Tongshan, and Heather Rose. 2010. "A portrait of underrepresented minorities at the University of California, 1994-2008." In *Equal opportunity in higher education: the past and future of California's Proposition 209* (E. Grodsky & M. Kurlaender, eds.): 83-102.
- Chingos, Matthew M. 2013. *Arc Minority Students Harmed by Affirmative Action?*. [Brown Center Chalkboard series](#) at Brookings.
- Dale, Stacy Berg and Krueger, Alan. 2014. "Estimating the Effects of College Characteristics over the Career Using Administrative Earnings Data." *Journal of Human Resources* 49(2):323-58.
- Daniel, Kermit, Dan A. Black, and Jeffrey Smith. 2001. "Racial differences in the effects of college quality and student body diversity on wages." In *Diversity Challenged (Gary Orfield ed.)*. Cambridge: Harvard Education Publishing Group.
- Dillon, Eleanor Wiske and Jeffrey Andrew Smith. 2020. "The Consequences of Academic Match between Students and Colleges." *Journal of Human Resources* 55 (3):767-808.
- Dillon, Eleanor, and Jeffrey Smith. 2017. "Determinants of the Match between Student Ability and College Quality." *Journal of Labor Economics* 35(1):45-66.
- Eller, Christina Ciocca and Thomas A. DiPrete. 2018. "The paradox of persistence: explaining the black-white gap in bachelor's degree completion." *American Sociological Review* 83, no. 6: 1171-1214.
- Espenshade, Thomas J., and Alexandria Walton Radford. 2009. *No Longer Separate, Not Yet Equal*. Princeton, NJ: Princeton University Press.
- Fischer, Mary J., and Douglas S. Massey. 2007. "The effects of affirmative action in higher education." *Social Science Research* 36, no. 2: 531-549.
- Golann, Joanne W. Kerstin Gentsch, Chang Y. Chung, and Thomas J. Espenshade. 2013. "Does the 'Mismatch Hypothesis' Apply to Hispanic Students at Selective Colleges?" In B. Gastic & R.R. Verdugo (eds.) *The Education of the Hispanic Population: Selected Essays*. Charlotte, NC: [Information Age Publishing](#).
- Goodman, Joshua, Michael Hurwitz, and Jonathan Smith. 2017. "Access to 4-year public colleges and degree completion." *Journal of Labor Economics* 35, no. 3: 829-867.
- Grodsky, Eric and Kurlaender, Michal. 2010. "The demography of higher education in the wake of affirmative action." In *Equal opportunity in higher education: the past and future of California's Proposition 209* (E. Grodsky & M. Kurlaender, eds.): 33-58.
- Hinrichs, Peter. 2014. "Affirmative action bans and college graduation rates." *Economics of Education Review* 42: 43-52.
- Hoekstra, Mark. 2009. "The effect of attending the flagship state university on earnings: A discontinuity-based approach." *The Review of Economics and Statistics* 91, no. 4: 717-724.
- Hoxby, Caroline M. 2009. "The changing selectivity of American colleges." *Journal of Economic perspectives* 23, no. 4: 95-118.
- Kane, Thomas J. 1998. "[Racial and ethnic preferences in college admissions](#)." In C. Jencks & M. Phillips (eds.), *The Black-White test score gap* (p. 431-456). Brookings Institution Press.
- Kidder, William C. 2013. "Misshaping the river: Proposition 209 and lessons for the Fisher case." *Journal of College & Univ. Law* 39: 53-126. (A longer 2012 version is available here as a [Civil Rights Project working paper](#)).
- Kidder, William C., and Angela Onwuachi-Willig. 2014. "Still Hazy after All These Years: The Data and Theory behind Mismatch." *Texas Law Review*, 92:895-941.
- Kidder, William C. and Lempert, Richard O. 2015. "The Mismatch Myth in U.S. Higher Education: A Synthesis of the Empirical Evidence at the Law School and Undergraduate Levels" in *Affirmative Action and Racial Equity: Considering the Evidence in Fisher to Forge the Path Ahead*, Uma M. Jayakumar and Liliama M. Garces (eds.). [Expanded version available at SSRN](#).
- Long, Mark. 2010. "Changes in the Returns to Education and College Quality." *Economics of Education Review*, 29(3):338-47.
- Long, Mark and Nicole A. Bateman. 2020. "Long-Run Changes in Underrepresentation After Affirmative Action Bans in Public Universities." *Educational Evaluation and Policy Analysis* 42 (2):188-207.
- Lutz, Amy, Pamela R. Bennett, and Rebecca Wang. 2019. "How Affirmative Action Context Shapes Collegiate Outcomes at America's Selective Colleges and Universities." *Journal of Law and Social Policy* 31, no. 1: 71-91.
- Lutz, Amy, Pamela R. Bennett, and Rebecca Wang. 2018. "Mismatch and academic performance at America's selective colleges and universities." *Ethnic and Racial Studies* 41, no. 14: 2599-2614.
- Massey, Douglas S., and Margarita Mooney. 2007. "The effects of America's three affirmative action programs on academic performance." *Social Problems* 54, no. 1: 99-117.
- Melguizo, Tatiana. 2008. "Quality matters: Assessing the impact of attending more selective institutions on college completion rates of minorities." *Research in Higher Education* 49, no. 3: 214-236.

Niu, Sunny Xinchun, Marta Tienda, and Kalena Cortes. 2006. "College selectivity and the Texas top 10% law," [\*Economics of Education Review\* 25: 259-272](#).

Niu, Sunny Xinchun, and Marta Tienda. 2008. "Choosing colleges: Identifying and modeling choice sets," [\*Social Science Research\* 37: 416-433](#).

Sander, Richard. 2019. "Replication of mismatch research: Ayres, Brooks and Ho." [\*International Review of Law and Economics\* 58: 75-88](#).

Sander, Richard, and Stuart Taylor Jr. 2012. [\*Mismatch: How Affirmative Action Hurts Students It S Intended to Help, and Why Universities Won T Admit It\*](#). Basic Books.

Small, Mario L., and Christopher Winship. 2007. "Black students' graduation from elite colleges: Institutional characteristics and between-institution differences." [\*Social Science Research\* 36, no. 3: 1257-1275](#).

Smith, Jonathan, Joshua Goodman, and Michael Hurwitz. 2020. *The Economic Impact of Access to Public Four-Year Colleges*. No. w27177. [National Bureau of Economic Research paper](#).