

Amy Lutz, Pamela R. Bennett, Rebecca Wang; State Bans on Affirmative Action and Talent Loss Among Blacks and Latinos in the United States. *Ethnic Studies Review* 28 July 2020; 43 (2): 58–76.
doi: <https://doi.org/10.1525/esr.2020.43.2.58>

Access to this work was provided by the University of Maryland, Baltimore County (UMBC) ScholarWorks@UMBC digital repository on the Maryland Shared Open Access (MD-SOAR) platform.

Please provide feedback

Please support the ScholarWorks@UMBC repository by emailing scholarworks-group@umbc.edu and telling us what having access to this work means to you and why it's important to you. Thank you.

AMY LUTZ

Syracuse University

PAMELA R. BENNETT

University of Maryland, Baltimore County

REBECCA WANG

Syracuse University¹

State Bans on Affirmative Action and Talent Loss Among Blacks and Latinos in the United States

ABSTRACT Although affirmative action in college admissions is constitutionally permissible, several states prohibit it. We investigate whether bans push black and Latino students from in-state public selective colleges to other types of postsecondary institutions, thus contributing to talent loss among these groups. Unlike most other studies, we analyze national data (the High School Longitudinal Study of 2009) so that we can follow students across state lines. We find no evidence that students from ban states shift from one type of selective college to another; that is, from in-state public flagships to in-state private ones or selective colleges in other states. However, the odds of attending a nonselective college, instead of an in-state public selective college, are almost three times higher among blacks and Latinos in ban states compared with their counterparts in states without bans. We argue that bans on affirmative action may contribute to talent loss among black and Latino students. **KEYWORDS** affirmative action, higher education, minorities, selective colleges

From the mid-1990s to the 2000s, several states banned affirmative action in higher education. Little research has addressed whether students in states that ban race-sensitive admissions differ in enrollment patterns from those from states that have not instituted such restrictions. Given that bans on affirmative action seek to impact the opportunity structure where public institutions and college selectivity intersect, we seek to understand the implications of bans on race-sensitive admissions for college enrollment patterns among underrepresented minority students. In particular, we examine how state affirmative action bans are associated with the odds that blacks and Latino high school graduates enroll in their state's public selective colleges and universities in contrast to other types of postsecondary institutions.

Access to selective institutions is important because the preponderance of research on the topic indicates that there are key benefits of attending these types of institutions. Benefits include higher quality courses and greater academic rigor,² greater likelihood of

1. This research was supported by the National Science Foundation [Award #1228207]. The authors are solely responsible for the content of the paper. We thank Siyu Liu and Baurzhen Bokayev for research assistance.

2. John M. Braxton and Robert C. Nordvall, "Selective Liberal Arts Colleges: Higher Quality as Well as Higher Prestige?" *The Journal of Higher Education* 56, no. 5 (1985): 538–554.

graduation,³ the pursuit of careers that require postgraduate education,⁴ and higher wages upon degree completion compared with other types of postsecondary institutions.⁵ Enrollment in in-state public selective institutions is important because such institutions receive state taxpayer funding and are, on average, less expensive than private or out-of-state selective institutions, which make them financially accessible to disadvantaged groups.

Currently, eight states ban affirmative action in higher education.⁶ California banned affirmative action in 1996 through a statewide voter initiative, Proposition 209. At that time affirmative action had also been invalidated by a court order in Texas through the *Hopwood* decision, which was eventually overturned by the Supreme Court. David Card and Alan Krueger⁷ note the dramatic drop in admissions of black and Latino students in the University of California (UC) system after the ban became effective, particularly at UC Berkeley and UCLA.⁸ Among college-going students in California, Peter Hinrichs⁹ found an immediate drop in black, Latino, and Native American enrollment in highly selective universities and a corresponding increase in their enrollment at less-selective universities, though this was followed by a modest increase in their enrollment at selective institutions over time. In 2000, California adopted a plan where students in the top four percent of their graduating class who were deemed “UC eligible” by taking certain required coursework, the SAT or ACT, as well as SAT subject tests, would be guaranteed admission to a California institution. William Kidder and Patricia Gándara¹⁰ found that

3. Thomas J. Kane, “Racial and Ethnic Preferences in College Admissions,” *Ohio State Law Journal* 59, no. 3 (1998): 971–996.

4. Jeffrey G. Reitz, “Undergraduate Aspirations and Career Choice: Effects of College Selectivity,” *Sociology of Education* 48, no. 3 (1975): 308–323.

5. Scott L. Thomas, “Longer-term Economic Effects of College Selectivity and Control,” *Research in Higher Education* 44 (2003): 263–299; Dominic J. Brewer, Eric R. Eide, and Ronald G. Ehrenberg, “Does It Pay to Attend an Elite Private College? Cross-cohort Evidence on the Effects of College Type on Earnings,” *The Journal of Human Resources* 34, no.1 (1999): 104–123; Kane, “Racial and Ethnic Preferences in College Admissions,” 971–996; Jill M. Constantine, “The Effects of Attending Historically Black Colleges and Universities on Future Wages of Black Students,” *Industrial and Labor Relations Review* 48, no. 3 (1995): 531–546; Lewis C. Solmon, and Paul Wachtel. “The Effects on Income of Type of College Attended,” *Sociology of Education* 48 (1975): 75–90.

6. Drew Desilver, “Supreme Court says States Can Ban Affirmative Action; 8 Already Have,” Pew Research Center, April 22, 2014. <http://www.pewresearch.org/fact-tank/2014/04/22/supreme-court-says-states-can-ban-affirmative-action-8-already-have/>. Accessed September 12, 2018.

7. David Card, and Alan Krueger, “Would the Elimination of Affirmative Action Affect Highly Qualified Minority Applicants? Evidence from California and Texas,” *Industrial and Labor Relations Review* 58, no. 3 (2005): 416–434.

8. Catherine L. Horn, and Stella M. Flores. “Percent Plans in College Admissions: A Comparative Analysis of Three States’ Experiences,” The Civil Rights Project at Harvard University, 2003, <https://pdfs.semanticscholar.org/9315/8ac666881cde43be69c6ad407d6110cbcf68.pdf>, accessed January 21, 2020; David R. Colburn, Charles E. Young, and Victor M. Yellen, “Admissions and Public Higher Education in California, Texas, and Florida: The Post-Affirmative Action era,” *UCLA Journal of Education and Information Studies* 4 no.1 (2008), <https://escholarship.org/uc/item/35n755gf>.

9. Peter Hinrichs, “The Effects of Affirmative Action Bans on College Enrollment, Educational Attainment, and the Demographic Composition of Universities,” *The Review of Economics and Statistics* 94, no. 3 (2012): 1–35.

10. William C. Kidder, and Patricia Gándara, “Two Decades after the Affirmative Action Ban: Evaluating the University of California’s Race-neutral Efforts,” The Civil Rights Project, (October 2016), i, <https://civilrightsproject.ucla.edu/research/college-access/affirmative-action/two-decades-after-the-affirmative-action-ban-evaluating-the-university-of-california2019s-race-neutral-efforts>.

despite actions taken to increase diversity in the University of California system, “UC has never recovered the same level of diversity that it had before the loss of affirmative action.”

In 1998, the voters of Washington State banned affirmative action in public education, contracting, and employment by passing Initiative 200 (I-200). Susan Brown and Charles Hirschman found declines in college-going minority students in Washington State in 1999, the year immediately following the passage of I-200; however, enrollments returned to their previous levels very quickly, in most cases by 2000.¹¹ While a portion of the decline in enrollment in 1999 was linked to lower acceptance rates for black and Latino students, they find that a greater factor, particularly at the prestigious University of Washington (UW), was a decline in applications by all minorities, including Asians. Because the decline occurred even among students who would have been admitted to UW given their qualifications, Brown and Hirschman attribute the decline to an unwelcoming atmosphere signaled by the passage of I-200.¹²

In 1999, Governor Jeb Bush banned affirmative action through Executive Order 99–281, known as the One Florida Initiative. It was replaced with a “top 20%” plan. Prior to the One Florida plan, the state did not have a strong affirmative action plan and only a very small number of students at state universities had been admitted through an affirmative action provision.¹³ Florida’s Talented 20 program began in 2000; it guaranteed the top twenty percent of high school students in their class (who also submitted SAT or ACT scores) admission to a state college, although not the state school of their choice.¹⁴ Because most schools in Florida are nonselective, and the top twenty percent of students do not have any guaranteed access to the flagships, as they do in Texas, the program has not had a similar impact on enrollment at the selective public institutions, as in Texas.¹⁵ In 2002, the University of Florida adopted its own admission plan to guarantee admission to the top five percent of graduates from a high school even if their SAT scores would normally not lead to admission.¹⁶ Patricia Marin and Edgar Lee found that the two flagships, the University of Florida and Florida State University, both “intensified” their use of “other types of race-conscious affirmative action—recruitment, financial aid, fostering a positive image of the campus, and supporting successful diversity on campus”—to maintain a diverse student population after affirmative action in admissions was banned.¹⁷

11. Susan K. Brown, and Charles Hirschman, “The End of Affirmative Action in Washington State and its Impact on the Transition from High School to College,” *Sociology of Education* 79, no. 2 (2006): 106–130. doi:10.1177/003804070607900202.

12. Brown, and Hirschman. “The End of Affirmative Action.”

13. Douglas C. Lyons, “Face to Face: A Conversation with Gary Orfield,” *Sun Sentinel*, November 11, 2003, <https://www.sun-sentinel.com/sfl-facegaryorfield-story.html>.

14. Patricia Marin, and Edgar K. Lee, “Appearance and Reality in the Sunshine State: The Talented 20 Program in Florida,” *The Civil Rights Project*, (February 2003), <https://civilrightsproject.ucla.edu/research/college-access/admissions/appearance-and-reality-in-the-sunshine-state-the-talented-20-program-in-florida>. Accessed January 21, 2020.

15. Joanne Barkin, “Alive and Not Well: Affirmative Action on Campus,” *Dissent* 55 (Spring 2008): 49–57.

16. Barkin, “Alive and Not Well.”

17. Marin and Lee, “Appearance and Reality in the Sunshine State,” 37.

In the new century, several other states adopted bans on affirmative action. In 2006, Michigan voted to pass Proposal 2, banning affirmative action in higher education and public employment. In 2008, voters in Nebraska passed Initiative 424 banning affirmative action in higher education, including race-targeted recruitment and scholarships.¹⁸ Arizona banned affirmative action in 2010, whereas New Hampshire and Oklahoma did so in 2011 and 2012, respectively.¹⁹

BANS ON AFFIRMATIVE ACTION AND TALENT LOSS AMONG UNDERREPRESENTED MINORITIES

John Holland and Alexander Astin describe “talent loss” as “the failure of talented persons to perform work at a level of excellence which is commensurate with their potential” in the presence of “favorable environmental opportunities for such performance.”²⁰ Holland and Astin’s definition is particularly useful because they separate the concept of talent loss into two components—the *capacity* of individuals to give a talented performance and the *opportunity* to give a performance of social significance.²¹ Bans on affirmative action target the opportunity component of talent loss in that they reduce the chances that underrepresented minorities will be admitted to selective colleges in the absence of changes in minority students’ capacity to perform well at such colleges.

Research indicates that bans on affirmative action impact enrollments in selective universities more than other types of colleges.²² David Colburn and colleagues examine changes in the racial composition of undergraduate students in three states that banned race-sensitive admissions between 1995 and 2005—California, Florida, and Texas.²³ They find that in the most selective public universities in these states, the percentage of African American freshman declined. The impact on Latinos was more mixed, with declines at the California flagships, but stable or increasing percentages in Texas and Florida. Asian enrollment increased during the period, while white enrollment decreased somewhat. Colburn and colleagues find that in California, Asian students filled in a gap left by declines in African American and Latino enrollment, while in Texas, Latinos filled a gap left by African Americans. As a comparison, they examined a group of selective public universities in states that did not ban affirmative action, including ones in New York, Maryland, Illinois, and Arizona, and found that during the same period, the percentage of students from different racial-ethnic groups remained fairly constant.

18. Alissa Skelton, “Initiatives May Ban Nebraska Affirmative Action Programs if Approved by Voters,” *Daily Nebraskan*, October 29, 2008. http://www.dailynebraskan.com/initiative-may-ban-nebraska-affirmative-action-programs-if-approved-by/article_b5bd88b-d68b-55b4-946f-98ed3f9dc9e4.html. Accessed September 12, 2018.

19. Drew Desilver, “Supreme Court Says States Can Ban Affirmative Action; 8 Already Have,” Pew Research Center, April 22 2014, <http://www.pewresearch.org/fact-tank/2014/04/22/supreme-court-says-states-can-ban-affirmative-action-8-already-have/>. Accessed September 12, 2018.

20. John L. Holland and Alexander W. Astin, “The Need for Redefining ‘Talent’ and ‘Talent Loss’: A Plan for Practical Action and Research,” *The Journal of Higher Education* 33, no. 2 (1962): 81.

21. Holland and Astin, “The Need for Redefining ‘Talent’ and ‘Talent Loss,’” 79.

22. Brown and Hirschman, “The End of Affirmative Action”; Hinrichs, “The Effects of Affirmative Action Bans on College Enrollment.”

23. Colburn, Young, and Yellen, “Admissions and Public Higher Education.”

Using the Current Population Survey, the American Community Survey, and data from Integrated Postsecondary Education Data System (IPEDS), Hinrichs²⁴ finds that affirmative action bans do not impact whether underrepresented minorities go to college; rather, bans impact the types of institutions students attend, pushing them from selective to nonselective colleges and, to a lesser extent, from bachelor's to associate's degree programs. In a separate analysis, Hinrichs attempted to ascertain whether affirmative action bans push students to out-of-state colleges and found that they do not.²⁵ However, he acknowledges that his null finding may result from the inability to decompose IPEDS data by race. Therefore, he cannot tell whether underrepresented minorities are pushed out of states with bans while whites and Asians are drawn into those states. This is a particularly important data limitation given that underrepresented minority students might alter their application and enrollment behavior in ways that differ from whites when a state adopts a ban on affirmative action. Ultimately, bans may push minority students out of in-state public selective colleges to other types of postsecondary institutions, including out-of-state institutions, which may come with a greater financial cost to students and their families.

Mostly, scholars think about talent loss in terms of decreased admissions of underrepresented minority students at the public selective institutions in states that prohibit affirmative action. Gándara notes that despite strong credentials among black and Chicano UC applicants, whose grade point averages in 2010 were 3.41 and 3.56, respectively, acceptance rates for these students plummeted after Proposition 209.²⁶ Marta Tienda and colleagues also find that acceptance rates of underrepresented minorities in the public flagships in Texas declined after the *Hopwood* decision.²⁷ Jessica Howell performed a simulation based on National Education Longitudinal Study (NELS) data to estimate changes in black and Latino enrollment at four-year institutions were the entire United States to adopt bans on affirmative action.²⁸ Although she estimated a slight (2 percent) drop in black and Latino college enrollment overall, the estimated decline for enrollments in highly selective institutions was ten percent.

In addition to lower odds of admission, talent loss can occur among underrepresented minority students through declining applications to public selective colleges. As noted above, Brown and Hirschman found this to be the case in Washington State.²⁹ Mark

24. Peter Hinrichs, "The Effects of Affirmative Action Bans on College Enrollment," 1–35.

25. Peter Arcidiacono, "Affirmative Action in Higher Education: How Do Admission and Financial Aid Rules Affect Future Earnings?" *Econometrica* 73, no. 5 (2005): 1477–1524; Angel Harris, and Marta Tienda, "Minority Higher Education Pipeline: Consequences of Changes in College Admissions Policy in Texas," *The ANNALS of the American Academy of Political and Social Science* 627, no. 1 (2010): 60–81. doi:10.1177/0002716209348740.

26. Gándara, Patricia, "California: A Case Study in the Loss of Affirmative Action," The Civil Rights Project, (August 2012). <https://civilrightsproject.ucla.edu/research/college-access/affirmative-action/california-a-case-study-in-the-loss-of-affirmative-action>.

27. Marta Tienda, Kevin T. Leicht, Teresa Sullivan, Michael Maltese, and Kim Lloyd. "Closing the Gap?: Admissions & Enrollments at the Texas Public Flagships Before and After Affirmative Action," Working Papers 303, Princeton University, Woodrow Wilson School of Public and International Affairs, Office of Population Research. Accessed January 20, 2020.

28. Jessica S. Howell, "Assessing the Impact of Eliminating Affirmative Action in Higher Education," *Journal of Labor Economics* 28, no. 1 (2010): 113–166.

29. Brown and Hirschman, "The End of Affirmative Action."

Long finds that with the bans on affirmative action in California and Texas, black and Latino students shifted their applications from more-selective to less-selective colleges.³⁰ Yet, Card and Krueger come to a different conclusion; they tested whether affirmative action bans in California and Texas discouraged minority applications to flagship schools, but found that minority students did not exhibit a change in the schools to which they sent SAT scores following the adoption of affirmative action bans in those states.³¹ Lisa Dickson examined applications to public colleges in Texas after the *Hopwood* decision and found a decrease in applications among blacks and Latinos.³² Harris and Tienda found that even after the advent of the “Top 10%” program in Texas, which sought to restore diversity to the Texas flagships, applications by blacks and Latinos “remained below the levels observed during affirmative action.”³³

Finally, loss of underrepresented minority students from public selective colleges may be due to students choosing to attend other types of institutions. Saul Geiser and Kyra Caspary find that underrepresented minority students “enroll at UC at a considerably lower rate than other students, and the gap has widened in the past few years,” and are choosing private selective institutions instead. Geiser and Caspary suggest that black and Latino students may perceive UC as “less welcoming” in light of Proposition 209.³⁴ William Kidder’s work also suggests that underrepresented minority students may choose not to attend a college in a state with an affirmative action ban because they may not want to be in a racially isolated environment.³⁵ Kidder notes that the yield rate for African Americans at the University of California system decreased after passage of Proposition 209. Susan Wilbur notes that underrepresented minority students, and particularly black students, “are more likely than others to decline an offer of admission from the UC in favor of an offer from a top-tier private institution.”³⁶ Hinrichs finds that affirmative action bans ultimately lead to fewer black and Latino graduates at top-tier colleges.³⁷

If underrepresented minority students are denied admission to a public selective college, there may be negative consequences because outcomes are not as favorable at

30. Mark C. Long, “College Applications and the Effect of Affirmative Action,” *Journal of Econometrics* 121 (2004): 319–342. doi:10.1016/j.jeconom.2003.10.001.

31. David Card, and Alan Krueger, “Would the Elimination of Affirmative Action Affect Highly Qualified Minority Applicants? Evidence from California and Texas,” 416–434.

32. Lisa Dickson, “Does Ending Affirmative Action in College Admissions Lower the Percent of Minority Students Applying to College?” *Economics of Education Review*, 25, no. 1 (2006): 109–119. doi:10.1016/j.econedurev.2004.11.005.

33. Harris and Tienda, “Minority Higher Education Pipeline,” 65.

34. Saul Geiser and Kyra Caspary, “‘No Show’ Study: College Destinations of University of California Applicants and Admits Who Did Not Enroll, 1997–2002,” *Educational Policy* 19, no. 2 (2005): 400, 401. doi:10.1177/0895904804274059.

35. William C. Kidder, “The Salience of Racial Isolation: African Americans’ and Latinos’ Perceptions of Climate and Enrollment Choices With and Without Prop 209,” The Civil Rights Project, (October 2012), <https://civilrightsproject.ucla.edu/research/college-access/affirmative-action/the-salience-of-racial-isolation-african-americans2019-and-latinos2019-perceptions-of-climate-and-enrollment-choices-with-and-without-proposition-209>.

36. Susan Wilbur, “Investigating the College Destinations of University of California Freshman Admits,” in *Equal Opportunity in Higher Education: The Past and Future of California’s Proposition 209*, ed. Eric Grodsky and Michal Kurlaendar (Cambridge: Harvard Education Press, 2010), 66.

37. Peter Hinrichs, “Affirmative Action Bans and College Graduation Rates,” *Economics of Education Review* 42 (2014): 43–52.

less-selective institutions.³⁸ For example, Tatiana Melguizo found that underrepresented minority students were more likely to graduate from selective rather than nonselective institutions.³⁹ Likewise, Sigal Alon and Marta Tienda found that odds of graduating within six years were higher at more-selective institutions than at less-selective institutions.⁴⁰ Similarly, William Bowen and Derek Bok found that for black students, attending a selective institution was associated with a greater likelihood of graduation compared with less-selective institutions.⁴¹ Scott Heil and colleagues found that selectivity *per se* was not associated with increased likelihood of graduation, but rather enrolling in an expensive college was associated with greater likelihood of graduation.⁴²

There may be other benefits to attending a selective institution. Long, for example, has found that attending a selective institution is associated with higher earnings.⁴³ Stacey Dale and Alan Krueger found that, while students with similar abilities who attended selective and nonselective institutions (defined by SAT scores) had similar earnings upon graduation, those who attended expensive schools (defined by tuition costs) had higher earnings.⁴⁴ However, they found that students from low-socio-economic status (SES) families gained a unique wage benefit from attending selective institutions relative to their peers who attended nonselective universities.

In sum, bans on affirmative action in college admissions represent structural impediments to the enrollment of underrepresented minority students in selective institutions. Bans act as barriers to enrollments in public selective colleges and universities in particular, in contrast to private ones and those that are nonselective. Consequently, we investigate whether minority students in ban states are more likely to experience alternative college destinations versus enrollment in the public selective college in their home state. The alternative college destinations we investigate are (a) in-state private selective colleges, (b) out-of-state selective colleges, (c) nonselective colleges, and (d) no enrollment in a four-year college. We view the enrollment of blacks and Latinos into two of these college destinations as forms of talent loss, while the other two have the potential to increase the cost burden to students. We consider enrollment in a nonselective college or non-enrollment in a four-year college as producing talent loss, given evidence of the

38. Kidder, "The Salience of Racial Isolation"

39. Tatiana Melguizo, "Are Students of Color More Likely to Graduate from College if They Attend more Selective Institutions?: Evidence from a Cohort of Recipients and Nonrecipients of the Gates Millennium Scholarship Program," *Education Evaluation and Policy Analysis* 32 (2010): 230–248; Tatiana Melguizo, "Quality Matters: Assessing the Impact of Attending More Selective Institutions on College Completion Rates of Minorities," *Research in Higher Education* 49 (2008): 214–236.

40. Alon Sigal and Marta Tienda, "Assessing the 'Mismatch' Hypothesis: Differences in College Graduation Rates by Institutional Selectivity," *Sociology of Education* 78, no. 4 (2005): 294–315.

41. William G. Bowen and Derek Bok, *The Shape of the River: Long-Term Consequences of Considering Race in College and University Admissions* (Princeton: Princeton University Press, 1998).

42. Scott Heil, Liza Reisel, and Paul Attewell, "College Selectivity and Degree Completion," *American Educational Research Journal* 51, no. 5 (October 2014): 913–35. doi:10.3102/0002831214544298.

43. Mark C. Long, "College Quality and Early Adult Outcomes," *Economics of Education Review* 27 (2008): 588–598.

44. Stacy Berg Dale, and Alan B. Krueger, "Estimating the Payoff to Attending a More Selective College: An Application of Selection on Observables and Unobservables," *The Quarterly Journal of Economics* 117, no. 4 (2002): 1491–1527.

myriad benefits of attending a selective institution, including a greater likelihood of earning a bachelor's degree, which is an important credential in the United States.⁴⁵ Blacks and Latinos would still reap the benefits of attending a selective institution if they enrolled in an in-state private selective college or out-of-state selective university, but at greater financial cost to themselves and their families.

HYPOTHESES

Below, we present formal hypotheses on the possible relationship between living in a state with a ban on affirmative action and college destination:

- (1) Underrepresented minority students in states with affirmative action bans will be more likely to forgo enrollment in a four-year college than attend an in-state public selective college relative to students in states without bans.
- (2) Underrepresented minority students in states with affirmative action bans will be more likely to enroll in nonselective institutions than in-state public selective institutions relative to students in states without bans.
- (3) Underrepresented minority students in states with affirmative action bans will be more likely to enroll in out-of-state selective institutions than in-state public selective institutions relative to students in states without bans.
- (4) Underrepresented minority students in states with affirmative action bans will be more likely to attend in-state private selective colleges than in-state public selective institutions relative to students in states without bans.

DATA AND METHODS

For this research, we use data from the High School Longitudinal Study of 2009 (HSLs:09) to examine the relationship between living in a state that bans affirmative action and college destination.⁴⁶ The HSLs is a nationally representative longitudinal survey of over 23,000 ninth graders and their parents and teachers in 944 schools in the United States. The survey was conducted by the National Center for Education Statistics.⁴⁷ Ninth-grade students were randomly selected within sampled high schools in 2009, with follow-up surveys conducted in 2012 and 2013.⁴⁸ The HSLs provides

45. We recognize that all types of colleges offer benefits of some form to their students, and that some individuals can do well in life without attending college. However, in this paper, we are concerned primarily with students who may have college destinations other than a selective college because race-conscious admissions are prohibited. Thus, we think it is reasonable to consider enrollment in nonselective alternatives and non-enrollment as forms of talent loss for such students.

46. Steven J. Ingels, Daniel J. Pratt, Deborah R. Herget, Michael Bryan, Laura Burns Fritch, Randolph Ottem, James E. Rogers, and David Wilson, "High School Longitudinal Study of 2009 (HSLs:09) 2013 Update and High School Transcript. Data File Documentation," National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, DC, June 2015, <https://nces.ed.gov/pubs2015/2015036.pdf>.

47. High School Longitudinal Study of 2009 (HSLs:09) - Basic Facts, National Center for Education Statistics, https://nces.ed.gov/surveys/hsls09/basic_facts.asp. Accessed January 20, 2020.

48. High School Longitudinal Study of 2009 (HSLs:09) - Basic Facts, National Center for Education Statistics, https://nces.ed.gov/surveys/hsls09/basic_facts.asp. Accessed January 20, 2020.

in-depth sociodemographic, academic, and college attendance data on student respondents.

VARIABLES

Dependent Variable

For this analysis, we created several dependent variables based on information found in the HSLs transcript files. Each outcome variable is dichotomous and reflects whether a respondent enrolled in a particular type of college or university after they graduated from high school (as of November 2013). The reference category for each dependent variable is enrollment in the respondent's in-state public selective college or university. In particular, we measure whether respondents (1) did not enroll in a four-year college or university at all (i.e., they attended a two-year college or obtained no postsecondary education), (2) enrolled in a nonselective college or university, (3) enrolled in an out-of-state selective college or university, or (4) attended an in-state private selective college or university. Selective institutions are those that are categorized as "highly selective" or "moderately selective" four-year institutions based on the Barron's ratings of admissions competitiveness, which the National Center for Education Statistics (NCES) provides.

Independent Variables

Race-Ethnicity: This variable indicates the respondent's race-ethnicity. Race-Ethnicity was reported in the base year of the survey. Because we are interested in the consequences of bans for underrepresented minorities, we selected only blacks and Latinos for the analysis; the population of American Indian students was too small to include.

Ban State: This is a dichotomous variable that reflects whether the respondent resided in a state that restricts the use of affirmative action during their senior year in high school in 2013. States with affirmative action bans include the following: New Hampshire, Arizona, Nebraska, Michigan, Florida, Washington, and California. Although an eighth state, Oklahoma, banned affirmative action in 2012, the ban did not go into effect until March 2015.⁴⁹ Therefore, we treat Oklahoma as a non-ban state for this analysis.

GPA: This is a continuous variable that reflects respondents' overall high school GPA taken from the transcript files.

Took AP Course(s): This is a dummy variable that indicates whether the respondent took at least one AP course in high school, as indicated in the transcript files.

SAT: This is a continuous variable taken from the transcript files. It reflects respondents' composite SAT score. For students who took the ACT college entrance exam, scores were converted to SAT scores by NCES.

Socioeconomic Status: This is a continuous variable created by NCES. It is a composite variable that includes parents' education, occupation, and family income from the base year of the survey. The variable ranges from -1.9302 to 2.8807.

49. Desilver, "Supreme Court Says States Can Ban Affirmative Action; 8 Already Have."

Female: This is a dummy variable that indicates whether the respondent identified as female in the base year of the survey.

Urbanicity: This is a categorical variable that indicates whether the respondent lived in a city, suburb, town, or rural area in the base year of the survey. City is the reference category.

Region: This variable indicates the geographic region that the student lived in during the base year. Categories include Northeast, Midwest, South, and West. Northeast is the reference category.

SAMPLE AND ANALYTICAL STRATEGY

We selected respondents based on several criteria. Students were included in the sample if they identified as black and/or Latino. American Indian students are also underrepresented in selective colleges. However, as noted above, we do not include them in this analysis because of their very small sample size. In addition to race-ethnicity, we included students in the study if they remained in the HSLs data from 2009 to 2013, given that the 2013 wave includes detailed data on college enrollment outcomes; if they graduated from high school; and if they had valid information on outcome variables. Because of the latter criteria, there are no missing data on dependent variables. Based on the recommendation of Ian White, Patrick Royston and Angela Wood in their 2011 article, “Multiple Imputation Using Chained Equations,” we use multiple imputation with chained equations to impute missing values on independent variables. Royston and Wood recommend imputing 100 times the fraction of missing information (FMI). The highest FMI is .59 so we produce 59 multiply imputed datasets. We do so using the *mi impute* command in STATA. We also use the *svy* command in STATA to estimate correct standard errors. All analyses are weighted using weights provided by NCES.

There are several elements to the analytical strategy we use to investigate the relationship between state bans on affirmative action and the college destinations of black and Latino students. One, we use national data to investigate this relationship and, therefore, move beyond studies that take a state-level approach. This is facilitated by our use of the HSLs data, which provides a nationally representative sample of students to analyze. Taking a national approach to our research question is important because students may choose to attend college out of state as a result of a ban on affirmative action in their home state. Hinrichs’ use of census data in his 2012 study, “The Effects of Affirmative Action Bans on College Enrollment, Educational Attainment, and the Demographic Compositions of Universities,” is one of the few studies to examine the impact of state bans using national-level data, as it is more common to investigate the effects of affirmative action bans at the state level.⁵⁰ However, as previously noted, Hinrichs was unable

50. Card and Krueger, “Would the Elimination of Affirmative Action Affect Highly Qualified Minority Applicants? Evidence from California and Texas”; Harris and Tienda, “Minority Higher Education Pipeline: Consequences of Changes in College Admissions Policy in Texas”; Colburn, Young, and Yellen, “Admissions and Public Higher Education in California, Texas, and Florida: The Post-Affirmative Action Era”; Brown and Hirschman, “The End of Affirmative Action in Washington State and its Impact on the Transition from High School to

to determine whether students have moved from in-state to out-of-state schools because the census data he analyzes did not provide information on where students attended high school.

Two, we estimate the following logistic regression model:

$$\text{Logit}(P) = \alpha + \beta_1 \text{BSTATE} + \beta_2 \text{ACADEMIC PREPARATION} + \beta_3 \text{CONTROLS} + u,$$

where P is the probability of enrollment in each type of college we consider versus enrollment in a public selective college. BSTATE indicates whether respondents lived in a state that banned affirmative action during the year they graduated from high school. $\text{ACADEMIC PREPARATION}$ is a vector of variables that measure respondents' preparation for college during high school. These variables include GPA, AP course-taking, and SAT score as described above. Finally, CONTROLS are a vector of control variables. They include respondents' sex, family socioeconomic status, whether they attended a public high school, urbanicity, and geographic region as described above.

Third, we conduct the analysis for blacks and Latinos separately. There is reason to think that the relationship between residence in a state that bans affirmative action and college destination may be the same for blacks and Latinos, given that both are under-represented minority groups. However, there are also reasons to conduct analyses separately when doing so is permitted by the data. In our case, the HSLs contains sufficient numbers of blacks and Latinos to conduct the analysis separately ($n = 980$ and $n = 1,550$, respectively). The more substantive reason for doing so, however, is to avoid the assumption that relationships between predictor and outcome variables are the same for blacks and Latinos. Estimating separate models for the two groups allows for the possibility that, for example, the relationship between family SES and college destination varies between blacks and Latinos. Allowing for such possibilities facilitates better estimates of the relationship of primary interest—that between living in a ban state and college destination—for each group than were we to pool the black and Latino subsamples.

RESULTS

Descriptive Statistics

Table 1 shows descriptive statistics for black and Latino high school graduates. We present the statistics prior to multiple imputation and include the percent of data missing for each variable. Blacks and Latinos have differential exposure to bans on affirmative action. Approximately 18 percent of African American high school graduates live in a state that bans race-sensitive college admissions while nearly 45 percent of Latinos do.

The next variables presented in the table reflect respondents' academic preparation for college. African Americans in the sample have an average grade point average of 2.67, while about 31 percent have taken one or more AP courses. The average SAT score for African Americans is 881, and nearly 96 percent of them attended a public high school.

College"; Dickson, "Does Ending Affirmative Action in College Admissions Lower the Percent of Minority Students Applying to College?"; Kalena E. Cortes, "Do Affirmative Action Bans Hurt Minority Students? Evidence from the Texas Top 10% Plan," *Economics of Education Review*, 29 (2010).

TABLE 1. Descriptive Statistics.

	Blacks (N = 980)	Latinos (N = 1550)
Ban State	0.18	0.45
Missing	<.01	<.01
GPA	2.67	2.72
Std. Error	0.03	0.03
Missing	<.01	<.01
Took AP Course(s)	0.31	0.43
Missing	<.01	<.01
SAT Score	881.19	939.44
Std. Error	13.75	10.11
Missing	0.44	0.49
Public High School	0.96	0.95
Female	0.61	0.53
Missing	0.00	0.00
SES	-0.14	-0.35
Std. Error	0.03	0.03
Missing	0.00	0.00
Urbanicity		
City	0.42	0.47
Suburb	0.29	0.32
Town	0.09	0.04
Rural	0.20	0.16
Missing	0.00	0.00
Region		
Northeast	0.16	0.12
Midwest	0.18	0.09
South	0.58	0.38
West	0.08	0.40
Missing	0.00	0.00

Notes: Data are weighted.

Sample sizes are rounded to nearest ten, per NCES requirements.

Among Latinos, the average grade point average is 2.72. Nearly 43 percent of Latino high school graduates have taken at least one AP course. Their average SAT score is 939, and about 95 percent of them attended a public high school.

In terms of sociodemographic variables, a greater proportion of black high school graduates are female (61.4%) compared with Latino high school graduates (53.4%). Black high school graduates come from a somewhat more advantaged family background than do Latinos, with values of -0.14 and -0.35, respectively, on the SES composite variable).

TABLE 2. Logistic Regression Models Predicting College Destination of Black High School Graduates (Reference is In-State Public Selective College).

Independent Variables	No Four-Year College (N = 600)			Nonselective College (N = 390)			Out-of-State Selective College (N = 300)			In-State Private Selective (N = 250)		
	Coef.	Std. Error	Sig.	Coef.	Std. Error	Sig.	Coef.	Std. Error	Sig.	Coef.	Std. Error	Sig.
Ban State	-0.505	0.370		1.036	0.423	*	-0.532	0.474		-0.088	0.855	
High School GPA	-1.555	0.334	***	-0.923	0.411	*	0.116	0.478		0.700	0.866	
Took AP Course(s)	-1.413	0.463	**	-0.274	0.403		-0.236	0.633		-0.130	0.588	
SAT Score	-0.004	0.002	*	-0.002	0.001		-0.001	0.002		0.001	0.003	
Public High School	0.926	0.655		-0.959	0.323	**	-1.837	0.499	***	-0.863	0.545	
Family SES	-0.374	0.235		0.092	0.202		0.961	0.314	**	0.716	0.307	*
Female	-0.185	0.356		0.114	0.344		-1.260	0.469	**	-0.282	0.509	
Suburb (ref. = City)	-0.187	0.386		-0.296	0.368		0.301	0.529		-0.253	0.576	
Town (ref. = City)	0.274	0.694		0.193	0.586		-0.104	0.835		0.410	1.128	
Rural (ref. = City)	0.475	0.438		0.618	0.408		-0.647	0.624		-1.102	0.852	
Midwest (ref. = Northeast)	-0.268	0.485		1.633	0.565	**	0.690	0.890		0.186	0.706	
South (ref. = Northeast)	-0.287	0.443		1.190	0.446	**	0.238	0.787		-0.286	0.805	
West (ref. = Northeast)	1.069	0.778		0.337	0.728		1.340	0.867		-0.599	1.164	
Constant	7.922	1.622	***	3.883	1.557	*	1.375	2.006		-2.924	2.054	
Model F	4.69		***	3.71		***	4.77		***	1.47		

Notes: Data are weighted.

Sample sizes are rounded to nearest ten, per NCES requirements.

* = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

With respect to the kinds of places high school graduates lived, nearly 42 percent of African Americans come from a city, while nearly 29 percent come from a suburb, 9 percent come from a town, and 20 percent come from a rural area. Among Latino high school graduates, about 47 percent come from a city, about 32 percent come from a suburb, about 4 percent come from a town, and nearly 16 percent come from a rural area. In terms of region, similar percentages of blacks (15.7%) and Latinos (12.4%) come from the Northeast. African Americans are more likely than Latinos to come from the South, while Latinos are more likely to come from the West.

Multivariate Analysis

Table 2 shows logistic regression coefficients from our model predicting college destinations for African Americans. The first and second set of columns show results for college

destinations that represent talent loss, while the third and fourth set of columns display results for destinations for which students likely incur greater costs. The first set of columns predict non-enrollment in a four-year college compared with attending an in-state public selective college. Blacks who live in states with bans are not more likely than their counterparts in non-ban states to forgo four-year colleges rather than enroll in the public selective college in their home states. The second set of columns predicts attendance at nonselective institutions compared with in-state public selective ones. Here we see that black students in states that ban affirmative action are more likely to go to nonselective institutions than to enroll in public selective institutions in their home state ($b = 1.036$, $p < 0.01$). This suggests that bans on affirmative action may push black students into nonselective institutions from in-state public selective ones. Students with higher grade point averages and those who attended a public high school are less likely to go to a nonselective institution, while those in the Midwest and South are more likely to attend a nonselective college.

The third set of columns show results from a model that predicts enrollment in an out-of-state selective institution versus an in-state public selective college. Results indicate no significant differences in the chances of attending an out-of-state selective college between blacks from ban states and states that do not ban affirmative action. Students who attended a public high school are less likely to attend an out-of-state selective institution, as are females. Students with higher family socioeconomic status are more likely to attend an out-of-state selective institution.

The last set of columns predicts attendance at an in-state private selective institution compared to an in-state public selective one. Black students in ban states are not significantly different from black students in states that do not ban affirmative action in terms of their odds of enrolling in an in-state private versus an in-state public selective college. Students with higher family socioeconomic status are more likely to attend in-state private selective institutions.

Table 3 shows results for Latinos. The first set of columns shows results from predicting non-enrollment in four-year colleges compared with attending in-state public selective institutions. As with blacks, Latinos from ban states are not significantly different from Latinos in non-ban states in their chances of forgoing four-year colleges compared with attending their state's public selective institution. Students with high GPAs and AP coursework are less likely to not attend four-year institutions. However, Latinos who graduated from a public high school and who live the Midwest and West are more likely to forgo a four-year college education than attend an in-state public selective college.

The second set of columns shows a difference in terms of affirmative action policy. Latinos from states that ban affirmative action are more likely to attend a nonselective institution compared to Latinos from states that do not ban race-sensitive admissions ($b = 1.052$, $p < 0.01$). Those with AP coursework are less likely to go to a nonselective institution compared with an in-state public selective one. Compared with those who live in a city, those who live in a suburb or rural area are more likely to go to a nonselective institution.

The next set of columns shows that there is no significant difference in the odds of attending an out-of-state selective institution compared with an in-state public selective institution among Latinos from ban and non-ban states. Latino graduates from public

TABLE 3. Logistic Regression Models Predicting College Destination of Latino High School Graduates (Reference is In-State Public Selective College).

Independent Variables	No Four-Year College (N = 1,090)			Nonselective College (N = 530)			Out-of-State Selective College (N = 430)			In-State Private Selective (N = 390)		
	Coef.	S.E.	Sig.	Coef.	S.E.	Sig.	Coef.	S.E.	Sig.	Coef.	S.E.	Sig.
Ban State	-0.100	0.377		1.052	0.390	**	-0.206	0.491		0.043	0.719	
High School GPA	-2.484	0.389	***	-1.264	0.454	**	0.473	0.526		-0.549	0.504	
Took AP Course(s)	-1.335	0.307	***	-0.860	0.335	*	0.509	0.579		0.424	0.523	
SAT Score	-0.001	0.001		-0.001	0.001		-0.001	0.002		-0.001	0.002	
Public High School	1.076	0.541	*	-0.742	0.418		-1.459	0.421	***	-0.630	0.510	
Family SES	-0.295	0.262		-0.338	0.232		0.477	0.287		0.410	0.263	
Female	0.340	0.302		0.392	0.275		0.071	0.417		0.169	0.429	
Suburb (ref. = City)	0.410	0.371		0.944	0.367	*	-0.287	0.405		-1.242	0.536	*
Town (ref. = City)	0.553	0.673		-1.198	0.941		-0.975	0.810		-0.226	0.813	
Rural (ref. = City)	0.473	0.394		1.168	0.446	**	-1.204	0.542	*	-0.272	0.474	
Midwest (ref. = Northeast)	0.901	0.452	*	0.219	0.517		-1.896	0.618	**	-0.787	0.685	
South (ref. = Northeast)	0.163	0.420		0.058	0.452		-2.182	0.637	***	-2.888	0.711	**
West (ref. = Northeast)	1.394	0.509	**	-0.643	0.574		-2.122	0.745	**	-1.893	0.855	*
Constant	7.692	1.263	***	4.402	1.431	**	1.240	1.893		3.611	1.770	*
Model F	13.610		***	3.490		***	4.150		***	2.370		**

Notes: Data are weighted.

Sample sizes are rounded to nearest ten, per NCES requirements.

* = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

high schools and rural areas are less likely to attend out-of-state selective institutions than their counterparts from private high schools and cities. Compared with those who live the Northeast, students from all other regions are less likely to attend an out-of-state public selective institution.

Finally, there is no significant difference in the odds of attending an in-state private selective institution versus an in-state public one among Latinos across ban and non-ban states. Those from the suburbs, South, and West are less likely to attend an in-state private selective institution.

DISCUSSION AND CONCLUSION

What happens to college enrollment when states adopt bans on affirmative action? Given that state bans on race-sensitive admissions operate as structural barriers to enrollments at

the intersection of public institutions and colleges that are selective enough to choose among applicants, we expected that black and Latino students would shift in their enrollments from in-state public selective colleges to other types of postsecondary institutions or to non-enrollment in four-year colleges. Two of those outcomes are conceptualized as producing talent loss among black and Latino high school graduates, while the other two represent increased costs to students and their families.

We find no evidence that living in a state that bans affirmative action is associated with higher-cost college destinations relative to attending in-state public selective colleges. However, we find support for our hypothesis regarding affirmative action bans and college destinations that contribute to talent loss. Black and Latino students from ban states are more likely to attend nonselective institutions than are their same-race counterparts in states that do not ban affirmative action. More specifically, we estimate that the odds of attending a nonselective college, instead of an in-state public selective college, are about 2.8 times higher among blacks and Latinos in ban states compared with those in non-ban states ($e^{1.036} = 2.818$ for blacks and $e^{1.052} = 2.862$ for Latinos). To be sure, our analysis does not permit us to make causal claims. Therefore, we cannot say with certainty that bans on affirmative action cause blacks and Latinos to shift enrollments from selective to nonselective colleges. What we can say is that, for both blacks and Latinos, there exists a clear association between living in a state with restrictions on affirmative action and the odds of enrolling in a nonselective institution rather than the public selective college in one's state, net of differences in family socioeconomic background, academic preparation, and geographic region. Thus, it seems that the main way that affirmative action bans may impact underrepresented minority students is by pushing them from in-state public selective colleges and universities to nonselective institutions. These findings are in line with those of Hinrichs who found that affirmative action bans did not determine whether a student went to college, but influenced the type of institution they attended.

Ours is a conservative analysis of the effects of affirmative action. Though colleges and universities in states without bans are free to use affirmative action, not all institutions do. But, this limitation of our study means that we may actually *underestimate* the effects of affirmative action bans in states that have them.

The findings reported here have implications for racial and ethnic inequality. There is now ample evidence that college students benefit more from their educational experiences and credentials if they attend selective compared to nonselective institutions. Students at selective colleges are more likely to graduate, more likely to pursue postgraduate education, and earn more money than their counterparts from less-selective schools. Therefore, state bans on affirmative action operate as barriers to more black and Latino students reaping those benefits. In this way, bans contribute to talent loss among underrepresented minority students by contributing to their lower graduation rates and lower salaries upon graduation. More broadly, bans help to keep racial and ethnic gaps in educational attainment and earnings wider than they would otherwise be. These are consequences borne not just by black and Latino students; they represent costs to the United States as a whole. ■

REFERENCES

- Alon, Sigal and Marta Tienda. "Assessing the 'Mismatch' Hypothesis: Differences in College Graduation Rates by Institutional Selectivity," *Sociology of Education* 78, no. 4 (2005): 294-315.
- Arcidiacono, Peter. "Affirmative Action in Higher Education: How do Admission and Financial Aid Rules Affect Future Earnings?" *Econometrica* 73, no. 5 (2005): 1477-1524.
- Barkin, Joanne. "Alive and Not Well: Affirmative Action on Campus," *Dissent* 55 (Spring 2008): 49-57.
- Bowen, William G. and Derek Bok. *The Shape of the River: Long-Term Consequences of Considering Race in College and University Admissions* (Princeton: Princeton University Press, 1998).
- Braxton, John M. and Robert C. Nordvall. "Selective Liberal Arts Colleges: Higher Quality as Well as Higher Prestige?" *The Journal of Higher Education* 56, no. 5 (1985): 538-554.
- Brewer, Dominic J., Eric R. Eide, and Ronald G. Ehrenberg. "Does it Pay to Attend an Elite Private College? Cross-cohort Evidence on the Effects of College Type on Earnings," *The Journal of Human Resources* 34, no.1 (1999): 104-123.
- Brown, Susan K. and Charles Hirschman. "The End of Affirmative Action in Washington State and its Impact on the Transition from High School to College," *Sociology of Education* 79, no. 2 (2006): 106-130. doi:10.1177/003804070607900202.
- Card, David and Alan Krueger. "Would the Elimination of Affirmative Action Affect Highly Qualified Minority Applicants? Evidence from California and Texas," *Industrial & Labor Relations Review* 58, no. 3 (2005): 416-434.
- Colburn, David R., Charles E. Young, and Victor M. Yellen. "Admissions and Public Higher Education in California, Texas, and Florida: The Post-Affirmative Action Era," *UCLA Journal of Education and Information Studies* 4, no. 1 (2008). <https://scholarship.org/uc/item/35n755gf>.
- Constantine, Jill M. "The Effects of Attending Historically Black Colleges and Universities on Future Wages of Black Students," *Industrial and Labor Relations Review* 48, no.3 (1995): 531-546.
- Dale, Stacy Berg and Alan B. Krueger. "Estimating the Payoff to Attending a More Selective College: An Application of Selection on Observables and Unobservables," *The Quarterly Journal of Economics* 117, no. 4 (2002): 1491-1527.
- Desilver, Drew. "Supreme Court Says States Can Ban Affirmative Action; 8 Already Have," Pew Research Center, April 22, 2014. <http://www.pewresearch.org/fact-tank/2014/04/22/supreme-court-says-states-can-ban-affirmative-action-8-already-have/>. Accessed September 12, 2018.
- Dickson, Lisa. "Does Ending Affirmative Action in College Admissions Lower the Percent of Minority Students Applying to College?" *Economics of Education Review*, 25, no. 1 (2006): 109-119. doi:10.1016/j.econedurev.2004.11.005.
- Gándara, Patricia. "California: A Case Study in the Loss of Affirmative Action," The Civil Rights Project, (August 2012). <https://civilrightsproject.ucla.edu/research/college-access/affirmative-action/california-a-case-study-in-the-loss-of-affirmative-action>. Accessed January 21, 2020.
- Geiser, Saul and Kyra Caspary. "'No Show' Study: College Destinations of University of California Applicants and Admits Who Did Not Enroll, 1997-2002," *Educational Policy* 19, no. 2 (2005): 396-417. doi:10.1177/0895904804274059.
- Harris, Angel and Marta Tienda. "Minority Higher Education Pipeline: Consequences of Changes in College Admissions Policy in Texas," *The ANNALS of the American Academy of Political and Social Science* 627, no. 1 (2010): 60-81. doi:10.1177/0002716209348740.
- Heil, Scott, Liza Reisel, and Paul Attewell. "College Selectivity and Degree Completion," *American Educational Research Journal* 51, no. 5 (October 2014): 913-35. doi:10.3102/0002831214544298.
- High School Longitudinal Study of 2009 (HSL:09) - Basic Facts, National Center for Education Statistics. https://nces.ed.gov/surveys/hsls09/basic_facts.asp. Accessed January 20, 2020.
- Hinrichs, Peter. "Affirmative Action Bans and College Graduation Rates," *Economics of Education Review* 42 (2014): 43-52.

- Hinrichs, Peter. "The Effects of Affirmative Action Bans on College Enrollment, Educational Attainment, and the Demographic Composition of Universities," *The Review of Economics and Statistics* 94, no. 3 (2012): 1–35.
- Hinrichs, Peter. "Affirmative Action Bans and College Graduation Rates," *Economics of Education Review* 42 (2014): 43–52.
- High School Longitudinal Study of 2009 (HSL:09) - Basic Facts, National Center for Education Statistics. https://nces.ed.gov/surveys/hsls09/basic_facts.asp. Accessed January 20, 2020.
- Holland John L. and Alexander W. Astin. "The Need for Redefining 'Talent' and 'Talent Loss': A Plan for Practical Action and Research," *The Journal of Higher Education* 33, no. 2 (1962): 77–82.
- Horn, Catherine L. & Stella M. Flores. "Percent Plans in College Admissions: A Comparative Analysis of Three States' Experiences," The Civil Rights Project at Harvard University (2003). <https://pdfs.semanticscholar.org/9315/8ac666881cde43be69c6ad407d6110cbcf68.pdf>. Accessed January 21, 2020.
- Howell, Jessica S. "Assessing the Impact of Eliminating Affirmative Action in Higher Education," *Journal of Labor Economics* 28, no. 1 (2010): 113–166.
- Ingels, Steven J., Daniel J. Pratt, Deborah R. Herget, Michael Bryan, Laura Burns Fritch, Randolph Ottem, James E. Rogers, and David Wilson. "High School Longitudinal Study of 2009 (HSL:09) 2013 Update and High School Transcript. Data File Documentation," National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC, June 2015. <https://nces.ed.gov/pubs2015/2015036.pdf>. Accessed August 20, 2018.
- Kane, Thomas J. "Racial and Ethnic Preferences in College Admissions," *Ohio State Law Journal* 59, no. 3 (1998): 971–996.
- Kidder, William C. "The Salience of Racial Isolation: African Americans' and Latinos' Perceptions of Climate and Enrollment Choices With and Without Prop 209," The Civil Rights Project, (October 2012). <https://civilrightsproject.ucla.edu/research/college-access/affirmative-action/the-salience-of-racial-isolation-african-americans2019-and-latinos2019-perceptions-of-climate-and-enrollment-choices-with-and-without-proposition-209>.
- Kidder, William C. and Patricia Gándara, "Two Decades After the Affirmative Action Ban: Evaluating the University of California's Race-Neutral Efforts," The Civil Rights Project, (October 2016). <https://civilrightsproject.ucla.edu/research/college-access/affirmative-action/two-decades-after-the-affirmative-action-ban-evaluating-the-university-of-california2019s-race-neutral-efforts>.
- Long, Mark C. "College Applications and the Effect of Affirmative Action," *Journal of Econometrics* 121 (2004): 319–342. doi:10.1016/j.jeconom.2003.10.001.
- Long, Mark C. "College Quality and Early Adult Outcomes," *Economics of Education Review* 27 (2008): 588–598.
- Lyons, Douglas C. "Face to Face: A Conversation with Gary Orfield," *Sun Sentinel*, November 11, 2003. <https://www.sun-sentinel.com/sfl-facegaryorfield-story.html>. Accessed January 21, 2020.
- Marin, Patricia and Edgar K. Lee. "Appearance and Reality in the Sunshine State: The Talented 20 Program in Florida," The Civil Rights Project, (February 2003). <https://civilrightsproject.ucla.edu/research/college-access/admissions/appearance-and-reality-in-the-sunshine-state-the-talented-20-program-in-florida>. Accessed January 21, 2020.
- Melguizo, Tatiana. "Are Students of Color More Likely to Graduate from College if They Attend More Selective Institutions?: Evidence from a Cohort of Recipients and Nonrecipients of the Gates Millennium Scholarship Program," *Education Evaluation and Policy Analysis* 32 (2010): 230–248.
- Melguizo, Tatiana. "Quality Matters: Assessing the Impact of Attending More Selective Institutions on College Completion Rates of Minorities," *Research in Higher Education* 49 (2008): 214–236.
- Reitz, Jeffrey G. "Undergraduate Aspirations and Career Choice: Effects of College Selectivity," *Sociology of Education* 48, no. 3 (1975): 308–323.

- Skelton, Alissa. "Initiatives May Ban Nebraska Affirmative Action Programs If Approved by Voters," *Daily Nebraskan*, (October 29 2008). http://www.dailynebraskan.com/initiative-may-ban-nebraska-affirmative-action-programs-if-approved-by/article_b5bd88b-d68b-55b4-946f-98cd3f9dc9e4.html. Accessed September 12, 2018.
- Solmon, Lewis C. and Paul Wachtel. "The Effects on Income of Type of College Attended," *Sociology of Education* 48 (1975): 75-90.
- Thomas, Scott L. "Longer-term Economic Effects of College Selectivity and Control," *Research in Higher Education* 44 (2003): 263-299.
- Tienda, Marta, Kevin T. Leicht, Teresa Sullivan, Michael Maltese, and Kim Lloyd. "Closing the Gap?: Admissions & Enrollments at the Texas Public Flagships Before and After Affirmative Action," Working Papers 303, Princeton University, Woodrow Wilson School of Public and International Affairs, Office of Population Research. http://theop.princeton.edu/reports/briefs/www_brief_closinggap.pdf. Accessed January 21, 2020.
- White, Ian R., Patrick Royston, and Angela M. Wood. "Multiple Imputation Using Chained Equations: Issues and Guidance for Practice," *Statistics in Medicine* 30, no. 4 (2011): 377-99.
- Wilbur, Susan. "Investigating the College Destinations of University of California Freshman Admits," in *Equal Opportunity in Higher Education: The Past and Future of California's Proposition 209*, ed. Eric Grodsky & Michal Kurlaendar (Cambridge: Harvard Education Press, 2010), 63-82.