The Impact of Affirmative-Action Bans in States With a History of State-Sponsored Discrimination in Higher-Education

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The Impact of Affirmative-Action Bans in States with a History of State-Sponsored Discrimination in Higher-Education

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Qualifying Paper

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Acknowledgments and Dedication

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I am indebted to The Honorable Sallie Rich Jocoy, The Honorable W. Louis Sands, and Susan Sturm for their early and unending support, and to my late mentor and friend H. Lee Perdue, whose tireless advocacy for a world unencumbered by discrimination helped to inspire my legal career and doctoral studies. I especially thank my mother, Patricia A. Harrell, whose example of grace, perseverance, and excellence sets a high bar I will forever aspire to.

I dedicate this paper to my grandparents—Agnes, Otis, Robertha, and Fred—whose own talents the world never fully experienced because of the color of their skin, but whose fight and determination that their own children be better educated gave me a chance to realize my dreams.
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Abstract

In this paper I evaluate whether affirmative action had an impact on Black-undergraduate enrollment in institutions located in states with a history of state-sponsored segregation, and whether this impact differs by institutional selectivity. Motivated by Title VI of the Civil Rights Act of 1964, which required states and institutions to take affirmative action to remedy the effects of past discrimination, I use the case *Adams v. Richardson* (1973) to identify states whose institutions have this history. Taking advantage of simultaneously-enacted affirmative action bans in Florida and Georgia, I use a difference-in-differences estimation strategy to estimate whether these affirmative-action bans affected Black-student enrollment in public colleges and universities in these states. After accounting for differences in institutional and state characteristics, I find that the bans caused a 1.14 percentage-point (or 7.71 percent) decrease in Black-student enrollment, on average. This translates to a loss of approximately 353 Black students per year across these institutions. I also find that bans have a larger impact on Black-student enrollments in less selective institutions in these states. I argue that this counterintuitive result suggests that affirmative action, at least in formerly segregationist states, might act to depress environmental factors that dissuade Black students from participating in the college-going process, and not, as generally theorized, selectivity influences on admissions likelihoods.
Black students are half as likely as white students to earn a bachelor’s degree (Deming & Dynarski, 2009) and five times less likely to attend an elite, selective college or university (Reardon, Baker, & Klasik, 2012). Given the increasing importance of a college education for job and wage security (Deming & Dynarski, 2009; Long, 2013), reducing these college opportunity gaps has long been a national policy concern (e.g., *Grutter v. Bollinger*, 2003; *Sweatt v. Painter*, 1950). These concerns are amplified in states with a history of *de jure* (or state-sponsored) segregated systems of higher education. Following *Lucy v. Adams* (1955), which applied *Brown v. Board of Education* (1954) to desegregate undergraduate programs, many segregationist states admitted only a handful of Black students (see *Adams v. Richardson*, 1973 (discussing the pre-1964 desegregation behaviors of segregationist states and their public colleges). Others continued to refuse Black students altogether (*Meredith v. Fair*, 1962).

Affirmative action was introduced as part of Civil Rights Act of 1964 regulations to spur desegregation in education (34 C.F.R. 100.3(6)(i) (1964)). Since then, few topics in higher education policy have been debated as extensively; few have experienced such frequent and dramatic shifts in support and practice (Blume & Long, 2013). Since *Regents of the University of California v. Bakke* (1978), affirmative-action litigation has focused on whether colleges have a legitimate governmental interest in voluntarily pursuing on-campus diversity. Relying in part on social science research, the U.S. Supreme Court has clearly established the diversity interest as a sufficiently compelling governmental interest¹ (*Fisher v. University of Texas at Austin*, 2013; see also *Bakke*,

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¹ A compelling governmental interest: (1) must be important enough to justify otherwise unconstitutional governmental measures—in this case race-conscious admissions practices; and (2) “the actual interest motivates the government[al] act[ion]” (Liu, 1998, p. 385 (emphasis in original)).
Because affirmative action involves race-based decision making, establishing a compelling governmental interest is only one of three tests a college must meet for its admissions practices to be found constitutional. Strict scrutiny\(^2\), the standard encompassing these three tests, also requires a showing that affirmative action is necessary and narrowly tailored (Grutter, 2003).

A key component to evaluating necessity is evidence that affirmative action impacts enrollment outcomes. Existing research suggests that affirmative action (or bans thereof) has minimal (Antonovics & Backes, 2013; Antonovics & Sander, 2013) or no effect on Black-undergraduate enrollment outside of elite institutions (Hinrichs, 2012). In elite institutions, affirmative action has been found to have a substantial positive effect on Black-undergraduate enrollment (Arcidiacono, 2005; Howell, 2010; Krueger, Rothstein, & Turner, 2006); bans have been found to have a statistically significantly negative effect (Colburn, Young, & Yellen, 2008; Hinrichs, 2012; Tienda, Leicht, Sullivan, Maltese, & Loyd, 2003). While these studies are probative on necessity, past research has not focused on how affirmative action impacts Black-undergraduate enrollment in public institutions located in states with a history of state-sponsored racial discrimination. Such an evaluation is warranted because affirmative action was enacted in an attempt to help end and reverse the effects policies in these states specifically, which consisted of state-sponsored higher-education discrimination against Black students (Litolff, 2007; Palmer, 2010).

\(^2\) Because the Fourteenth Amendment was enacted to curb racial discrimination, any race-conscious governmental actions must “be subjected to the most rigid scrutiny.” (Loving v. Virginia, 1967, p. 11, quoting Korematsu v. United States, 1944). This level of analysis is commonly called “strict scrutiny,” and requires the government to show that its race-conscious action: (1) is necessary (2) to accomplishing a compelling governmental interest. This action must also be (3) the least restrictive means for accomplishing said interest.
The parallel development of mandatory affirmative action as a remedy to state-sponsored segregation in 19 states, while Bakke allowed the remainder to voluntarily take affirmative action, provides a unique opportunity to assess affirmative-action impact within this context (Table 2). Due to their failure to provide the Department of Health, Education, and Welfare (HEW) with a sufficient affirmative-action plan by 1970, the higher education systems in these states were subject to intense court supervision, which included mandatory affirmative-action initiatives (Adams v. Richardson, 1973; Litolff, 2007; Roebuch & Mutry, 1993). Beginning in the late 1980s, states began to enter into consent decrees through which they agreed to continue affirmative-action plans in exchange for ending court oversight. By 2000, 15 of the 19 states had entered into such agreements to have affirmative actions. Of those 15, three—Florida, Georgia, and Texas—experienced affirmative-action bans, either by separate court decree (Hopwood v. Texas, 1996; Johnson v. University of Georgia, 2000; 2001), or by gubernatorial executive order (One Florida, 1999). The remaining four—Alabama, Louisiana, Mississippi, and Tennessee—would remain under court supervision until the mid-2000s (Roebuck & Mutry, 1993).

This paper takes advantage of this variation among historically segregationist states to model affirmative-action impacts on Black-undergraduate enrollment outcomes. Inversely, I examine whether affirmative-action bans caused a decline in Black-undergraduate enrollment in institutions of higher education within those states. To do so, I employ a difference-in-differences quantitative analysis strategy that compares Black
undergraduate enrollments in (1) Florida and Georgia colleges before and after both states banned affirmative action in 2000 (see One Florida, 1999; Johnson, 2000) to (2) enrollments in colleges located in the 16 states where affirmative-action was not banned. The comparison states serve the purpose of allowing me to account for any non-ban effects on Black-undergraduate enrollments.

I find that bans caused a 1.14 percentage-point (or 7.71%) decline in Black-undergraduate enrollments, comparing Florida and Georgia to the broader array of historically segregationist states; and a 1.90 percentage-point (or 12.85%) decline when comparing Florida and Georgia enrollments to enrollments in more proximate states which share more similar demographics and a common legal history on desegregation. Thus, I argue that bans on affirmative action in Florida and Georgia have led to an otherwise unexpected decrease in Black-student enrollment across all colleges and universities in those states, and not just the selective ones.

Though, as a quasi-experimental strategy, it is impossible to completely rule out alternate explanations, these results suggest in states with histories of higher-education discrimination, institutional affirmative action should remain on the table as a viable policy and practice option toward addressing the ongoing effect of past discrimination on present-day Black undergraduate enrollment patterns.

I. Background and Context

A. Historical Development of Affirmative Action

< INSERT TABLE 1 >

The Second Morrill Act of 1890 required states which had land-grant colleges to provide educational opportunities to Black students. States could do so either by
admitting Black students to existing colleges alongside their white peers or they could create Black colleges under what would come to be known six years later as the “separate, but equal” doctrine (see *Plessy v. Ferguson*, 1896). 19 states and the District of Columbia chose to establish separate Black colleges, thereby creating “dual systems” of higher education. When the U.S. Supreme Court invalidated segregation in undergraduate education in *Lucy v. Adams* (1955), these states and their higher education institutions actively resisted court orders requiring their desegregation. Popular tactics ranged from vigorous legislative action that would nullify federal enforcement authority through “interposition,” (see, e.g., *State ex rel. Hawkins v. Bd. of Control*, 1957), governmental intimidation through so-called “sovereignty commissions,” violence, and in at least two cases wrongful imprisonment (Minchan & Salmond, 2009). These state responses were largely unchecked—and uncheckable—by the courts. The colleges, for their part, themselves imposed good character requirements and attestations of scholarly fitness—usually from state-employed principals of segregated Black schools who risked losing their jobs if they recommended a Black student to a state-sponsored white school (e.g., *Meredith*, 1962). One state, Louisiana, resisted desegregation on an institutional basis, requiring court intervention to desegregate one-by-one each of its then-existing white colleges (Emanuel & Tureaud, Jr., 2011), and at Louisiana State University each of its departments (Wade, 2008). When these efforts failed, registrars simply refused to enroll Black students, in some cases requiring the federalization and mobilization of National Guard troops to accomplish enrollment (e.g., *Holmes v. Danner*, 1961; *Meredith*, 1962). Once public colleges finally acquiesced, Black-student enrollment was *de minimis*, with token enrollments and states providing neither encouragement nor assistance to
institutional efforts to satisfy desegregation orders (see Lee v. Macon County Board of Education, 1967).

The failure of court orders to accomplish higher-education desegregation, as well as desegregation in other educational and public arenas, encouraged Congress to pass the Civil Rights Act of 1964, which in Title VI prohibits racial discrimination by entities receiving federal funding:

No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

(42 U.S.C. § 2000d (1964)). In the higher education context, Title VI abrogated the Second Morrill Act. States were no longer allowed to use federal funds to maintain a dual higher education system. Importantly, the Johnson Administration’s Department of Health, Education, and Welfare (HEW) did not find ending the funding stream to be a sufficient stand-alone remedy. Its regulations passed to administer Title VI unequivocally required institutions that had previously discriminated by race to take “affirmative action,” stating:

In administering a program regarding which the recipient has previously discriminated against persons on the ground of race, color, or national origin, the recipient must take affirmative action to overcome the effects of prior discrimination.

34 C.F.R. 100.3(6)(i) (1964). By requiring affirmative action by institutions and states receiving federal education funding—and at the same time increasing federal grants and aid available to complying institutions through the Higher Education Act of 1965 (20 U.S.C. § 2001, et seq.), the Johnson Administration sought to induce by funding requirements what the courts could not by legal proscription (see also Executive Order
I11246, 1965). While some institutions—including many that had no history of state-approved discrimination—responded to these directives by creating minority-specific admissions quotas and recruitment programs, others responded by creating holistic admissions that did not explicitly consider race, but allowed it as a special consideration factor (Karabel, 2005; Reuben, 2001).

Most formerly all-white institutions that had previously existed in a dual system tended toward a different response pattern: race neutrality. In the absence of internal pressure to desegregate—and in the face of continuing external resentment and opposition—these institutions did little more than remove administrative barriers to students of color enrollment. As a result, these colleges remained functionally segregated years after Brown, Adams, and Title VI. In 1969-1970, the Department of Health, Education, and Welfare (HEW) ordered the university systems of these same 19 states to submit affirmative-action plans (Litolff, 2007). When HEW did not follow through on its enforcement demands, the National Association for the Advancement of Colored People (NAACP) sued HEW in 1970 to force compliance (Adams, 1973). As a result of Adams, the U.S. Department of Education4 Office of Civil Rights (OCR) aided by the District Court imposed and actively supervised the affirmative-action plans of 18 of the 19 states identified in Adams beginning in 1975. OCR independently supervised Texas’s plan (Roebuck & Mutry, 1993).

Beginning in the late 1980s, states began to enter into agreements with the federal courts called “consent decrees” to remove affirmative-action mandates and court supervision. Typically, these consent decrees required the states to maintain their OCR-
approved affirmative-action plans (Roebuck & Mutry, 1993; Litolff, 2007). But, in 1992, only three years after oversight ended in Texas, Cheryl Hopwood sued the University of Texas at Austin Law School for voluntarily maintaining a race-conscious affirmative-action plan. In 1996, the Fifth Circuit Court of Appeals banned Texas’s OCR-approved affirmative-action plan (Hopwood). In 1999, Florida, where a consent decree had been entered into in 1992, then-Governor Jeb Bush signed an executive order which banned affirmative action in that state beginning in 2000 (One Florida, 1999). Around the same time, a federal district court in Georgia, which had entered into a consent decree in 1989, banned affirmative action at the University of Georgia (Johnson, 2000). The University System of Georgia responded by discontinuing affirmative action in all of its institutions pending appeal to the Eleventh Circuit of Appeals, which eventually upheld the ban (Johnson, 2001). Because the Fifth Circuit has appellate jurisdiction over Louisiana and Mississippi, Hopwood would have banned affirmative action in those states had the public university system of each not been under court supervision (U.S. v. Fordice, 1992; U.S. v. Louisiana, 1993). Similarly, Johnson (2001) would have banned affirmative action in Alabama had that state not been under court supervision (Knight v. Alabama, 1995). \(^5\)

< INSERT TABLE 2 >

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\(^5\) *Grutter* and its companion case *Gratz v. Bollinger* (2003) asked whether affirmative-action practices at the University of Michigan law school and undergraduate college, respectively, were constitutional. The law school practice of holistic review was found constitutional; the college practice of assigning points to student race was not. Affirmative action practices based in holistic review were thereby permitted. An outright ban in Michigan, though not one of the 19 historically segregationist states, would have affected Kentucky, Ohio, and Tennessee, which are, because all four states are subject to the Sixth Circuit Court of Appeals. An earlier affirmative-action challenge in Maryland, if it were to have been successful at the Fourth Circuit Court of Appeals, would have also banned the practice in North Carolina, South Carolina, Virginia, and West Virginia (cf. *Farmer v. Ramsay*, 2002).
In 2003, *Grutter* invalidated *Hopwood* and *Johnson* allowing affirmative action again in Georgia and Texas colleges. (Florida’s ban was enacted pursuant to state executive order, and was unaffected by federal court rulings.) Thus, as I detail in Tables 1 and 2, for a three-year period, between 2000 and 2003, there were three different groups of states among those with discrimination history: 1) states that banned affirmative-action; 2) states that were required to have affirmative action; and 3) states whose institutions could voluntarily use affirmative action.

**B. Existing Research on the Impact of Affirmative Action**

Existing affirmative-action research does not contemplate affirmative action as a remedy for institutional behaviors as Title VI intended, nor does it address the regional context that gave rise to its promulgation. Instead, research in this area tends to focus on cross-national studies of admissions likelihoods as a function of student inputs. For example, Hinrichs (2012) uses Integrated Post-Secondary Education Data System (IPEDS) to estimate the effects of affirmative-action bans on student enrollment by racial group for cohorts entering college between 1995 and 2003; schools that had no history of state-sponsored racial discrimination in admissions are incorporated in the analysis without differentiation, including private schools. Applying a series of difference-in-differences causal estimation models, Hinrichs finds that affirmative action bans caused an approximate 28% drop in Black- and Latina/o-student enrollments in elite institutions, but no statistically significant effect in all-colleges enrollment. Although he states that one reason for this result is that the typical university may not be as selective as elite universities, he does not control for institutional selectivity factors beyond student-supplied factors such as SAT scores.
Three other studies also examine student-level data to estimate the impact of affirmative-action bans on Black-student admissions probabilities. First, evaluating Expanded College and Beyond study data from the 1995 admissions cycle, Krueger, Rothstein, and Turner (2006) simulate comparative average admissions rates by institutional selectivity. Using race-blind, SAT-determinant simulation strategies, they project the Black-student share for most selective institutions to drop by almost 70%, from 17.1 to 5.1%. They find smaller, yet substantial declines in admissions probabilities for highly selective (-58%), public (55%), and moderately selective (46%) institutions.

Second, evaluating data from the National Longitudinal Study of the Class of 1972, Arcidiacono (2005) finds that subjecting the class of 1972 to race-neutral simulations causes a 2% decline in the enrollment of Black students with SAT scores 1200 or higher in any college. He does so by estimating individual Black students’ admissions expectations against the probability of admission if they were white. This, he contends estimates what admissions and yields scenarios for Black students might have been had they not had “race-based advantages” in the admissions process. He also finds a 40% drop in Black students’ enrollment in elite colleges and a 45% drop in Black male enrollment overall using this method. Third, using National Educational Longitudinal...
Study of 1988 (for the high-school Class of 1992), Howell (2010) also finds decreases in Black-student enrollment under race-neutral admissions conditions: 2% for all colleges, and 10% for elite colleges.

In contrast, Garces’s (2012; 2013) studies explore changes in graduate-student enrollment come closer to evaluating affirmative action within a set of institutional enrollment policies. Using data from the Council of Graduate Schools (CGS), Garces (2012) imposes a difference-in-differences strategy to find that affirmative-action bans in Texas, California, Washington, and Florida cause a 12.2% decrease in graduate-student enrollments on average, from 9.9% to 8.7%. Disaggregating this effect by fields of graduate study, Garces (2013) finds that students-of-color graduate enrollment declined by about two percentage points in engineering, natural sciences, and social sciences, three of the six fields which account for 92% of all graduate-student enrollment, and by one percentage point in a fourth, humanities. Though Garces (2012; 2013) focuses on a different outcome (i.e., graduate-student enrollment), and incorporates a broader group of states than a region-sensitive frame might readily contemplate, the more focused attention on institutions makes a compelling methodological heuristic which, informed by institutional selectivity, could be used to capably estimate the effects of affirmative action as an institutional policy on Black-student undergraduate enrollment within a context where affirmative action is a remedy for largely regional segregationist laws and practices.

While these studies are instructive on data choices, methodology, and important factors to incorporate in a research design on enrollment as a function of institutional inputs, none of these studies has examined affirmative action’s effectiveness as a
mandatory remedy for race-based discrimination within certain colleges. Such an evaluation is warranted because affirmative action was enacted in an attempt to help end and reverse the effects of state-sponsored higher-education discrimination against Black students (Litolff, 2007; Palmer, 2010). So while it is interesting to understand the role of affirmative action nationally, it is of particular importance to understand how the policies affected the states that were the initial impetus for creating affirmative action.

II. Empirical Strategy

A. Research Questions

In a critical first step toward evaluating affirmative action’s present-day effects on Black-student enrollment within states with a history of segregation, I address the following research questions: (1) Do affirmative-action bans cause a decline in Black-undergraduate enrollment among all colleges in this region?; and, if so, (2) Do these affirmative-action ban effects differ by institutional selectivity?

B. Dataset

I use the Integrated Postsecondary Education Data System (IPEDS), an institution-level enrollment dataset assembled in part by the Delta Cost Project. IPEDS is a required, annual census of all colleges and universities that participate in federal financial assistance programs under Title IV of the Higher Education Act (20 U.S.C. § 1094). IPEDS details information about yearly postsecondary student enrollment by relevant student characteristics, such as degree level, race, gender, and in-state status; as well as institutional characteristics, such as state of location, public/private status, historic

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8 The Delta Cost Project is a longitudinal database maintained by the National Center for Education Statistics that includes IPEDS data on enrollment, finance, and student aid for the years 1987-2010 (Delta Cost Project, 2012).

C. Sample

My sample is U.S. public, four-year colleges and universities that are not historically Black colleges or universities (HBCUs) in 18 states who reported IPEDS data for the years 1997-2002. (n = 149). Though Title VI is also binding on private institutions that receive federal funding, Adams (1973) and subsequent cases involved federal enforcement of state action to desegregate public higher education (see, e.g., Fordice, 1992). Because neither Adams (1973) nor any consent decrees that states entered into thereafter involved oversight of private institutions, I excluded them from this study (cf. Hinrichs, 2012). I also excluded all HBCUs because the social, historical, and institutional motivations behind their enrollment management policies are different from the practices and rationales behind race-conscious admissions programs at issue in this paper (Palmer, 2010). I excluded the United States Naval Academy, the only U.S. military academy located within a segregationist state, because the State of Maryland never governed its desegregation process, and thus Adams (1973) never applied there. I excluded all Texas institutions because they had experienced an affirmative-action ban in 1996, four years before Florida and Georgia (Hopwood, 1996).
D. Measures

My outcome of interest is $PCTBLK_{isy}$, a continuous variable measuring the percentage of first-time, full-time Black undergraduates enrolled at a given institution located in a given state in a given year. My primary predictor variable of interest is $BANxPOST_{isy}$, an interaction between two categorical binary variables: (1) $BAN_{is}$, whether affirmative action was ever banned in an institution located in a given Adams state, thus having a value of one for Florida and Georgia (“ban states”) institutions, and zero for all others (“non-ban states”); and (2) $POST_y$, whether the enrollment period for a given institution was in a year after the affirmative action ban was in effect, thus receiving a value of one if enrollment is after 2000, when those two bans went into effect, and zero if before. As I show in Table 3, before 2000, Black-undergraduate enrollment in Florida and Georgia institutions was, on average, approximately 2.5 percentage points higher than in 16 states without affirmative-action bans (14.79 vs. 12.12%), but, important for sensitivity purposes, approximately 6 percentage points lower in the Old Fifth Circuit comparison group (14.79 vs. 20.92%). After the bans, while non-ban-state Black-undergraduate enrollment appears to have improved by a quarter of a percentage point (from 12.12 to 12.44%), and enrollment in the Old Fifth Circuit comparison group appears to be greater by three times that amount (from 20.92 to 21.66%), enrollment in Florida and Georgia institutions appears to have lower by three quarters of a percentage point (from 14.79 to 14.03%).

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9 These three states—Alabama, Louisiana, and Mississippi—have nearly identical legal histories to Florida, Georgia, and Texas by virtue of their federal courts having been subject to the same U.S. Court of Appeals for the Fifth Circuit until 1981 (Bonner v. City of Prichard, 1981). Federal cases from Tennessee, the fourth state, are appealed to the Sixth Circuit.
I include six other predictor variables in the analysis as controls. First, *institutional selectivity*, a binary variable based on Barron’s (2000) selectivity designations. I have grouped as “selective” any institution Barron’s designates as “most competitive,” “highly competitive,” or “very competitive,” and coded these institutions with a value of one. I have grouped the remaining institutions, which Barron’s designates as either “competitive” or “non-competitive,” as “non-selective,” and coded them with a value of zero. 82% of ban-state institutions rank as “selective,” as compared to 67% of non-ban-state institutions, and only half of the Old Fifth Circuit affirmative-action-mandated institutions. In light of existing research linking Black-undergraduate enrollment patterns to institutional selectivity, it will be important to both control for selectivity in estimating ban effects and evaluate whether selectivity moderates any effect. Second, I include average institutional in-state *tuition* and fees measured annually in unadjusted nominal thousands of dollars to estimate how any affirmative-action ban effects might covary across the ban with cost of attendance. Across the ban, average in-state tuition list prices in ban states and Old Fifth Circuit affirmative-action-mandated states increased by about $420; tuition in non-ban states increased by an average of $70 more. Finally, as state-level covariates, I include the percentages of *Black people*, *unemployed persons* between the ages of 18-24, as well as persons between the ages of 18-24 who have *bachelor’s degrees*, and average *income* in a state’s population at the 2000 census to estimate how these state-level demographic characteristics might adjust ban effects. Of note, the population percentage of Black residents differs by 3.5 percentage points when comparing the Florida and Georgia group to the 16-state non-ban group (21.74 vs. 18.22), and 8.6 percentage points when compared to the Old Fifth
Circuit group (21.74 vs. 30.32). The average annual median income for the Florida and Georgia group and the 16-state non-ban group is approximately the same ($37,800 vs. $37,390). For the Old Fifth Circuit group, average median income is more than a standard deviation lower than that of the Florida and Georgia group ($37,800 vs. $33,190). However, tuition and unemployment trends as well as the percentage of bachelor’s degree holders ages 18-24 are similar across all three groups.

E. Research Design

Having identified the 2000 bans as a source of exogenous variation with respect to Florida and Georgia colleges and universities, I use a difference-in-differences approach to estimate the effect of disallowing institutions to use affirmative-action practices on Black-undergraduate enrollment (Murnane & Willett, 2010). I tested the equality in pre-treatment trends assumption by regressing enrollment on an interaction of treatment group status and year, including all lower-ordered terms. The pre-treatment slopes comparing ban-state to the non-ban-state comparison ($p = 0.282$) and Old Fifth Circuit alternate comparison groups ($p = 0.272$) were not statistically significantly different. Thus, though it is impossible to conclusively establish, there is evidence to support these data meeting necessary equality in trends assumption.

Given this, I calculated as a “first difference,” the difference between mean enrollments before (1997-1999) and after (2000-2002) the 2000 affirmative-action-ban effective dates for ban-state institutions. In my design, these colleges and universities received the affirmative-action-ban “treatment.” This difference estimated the population impact on Black-undergraduate enrollment as well as any non-ban-related effects on enrollment across these events. To account for these effects, I calculated as a “second
difference,” the same mean difference for institutions in the comparison group, and subtract the second difference from the first. To assess the robustness of the analysis to variation among the states in demographic characteristics, I added state Black population, bachelor’s-degree-holder, and unemployment percentages and average income in a second statistical model. Similarly, to assess the robustness of the analysis to variation among institutional selectivity and in-state tuition rates, I added those variables to a third statistical model. Finally, to assess whether the initial analysis is robust to the simultaneous incorporation of institutional and state characteristics, I incorporated both sets of characteristics in a fourth and final main-effects model. This approach is equivalent to fitting the following model:

\[
PCTBLK_{isy} = \beta_0 + \beta_1(BAN \times POST_{isy}) + \beta_2(BAN_{is}) + \beta_3(POST_{y}) + \beta_4(X_{is}) + \beta_5(Z_s) + \beta_6 \text{year} + \delta_s + (u_{isy} + \epsilon_i)
\]

\(\beta_1\) provides the difference-in-differences, and is the coefficient of interest that captures the impact of affirmative-action bans on Black-undergraduate enrollment. Vector \(X\) represents institutional characteristics; Vector \(Z\) represents state-level characteristics; \(\delta_s\) represents dummy variables for each state; \(\text{year}\) represents year of enrollment; and \(\epsilon\) and \(u\) represent level-1 and level-2 residuals, respectively.

To evaluate my second research question, whether ban effects on enrollment differ by institutional selectivity, I included an interaction between selectivity and ban exposure in a fifth model. This approach is equivalent to fitting the following model, in which \(\beta_4\) provides a secondary coefficient of interest that measures the extent to which the ban effect on Black-undergraduate enrollment is modified by institutional selectivity:
\[ PCTBLK_{isy} = \beta_0 + \beta_1(BAN \times POST_{isy}) + \beta_2(BAN_{is}) + \beta_3(POST_y) + \beta_4(SELECT \times BAN \times POST_{isy}) + \beta_5(X_{is}) + \beta_6(Z_s) + \beta_7year + \delta_s + (u_{iy} + \varepsilon_i) \]

I fit all models using state fixed effects to control for observed and unobserved

time-invariant characteristics among states, and to address the lack of independence of

observations within states; and random year effects to account for the nesting of

institution-level observations within time. Because the bivariate relationships between

enrollment and income and enrollment and tuition are non-linear, I used a log-

transformation for each to achieve linearity in all models.

III. Findings and Discussion

<INSERT TABLE 4 HERE>

Results from the statistical analysis suggest that affirmative-action bans resulted

in a 1.14-percentage-point (or 7.71\%) decline in Black-student enrollment in Florida and

Georgia colleges and universities when compared to the larger 16-state non-ban group,

controlling for contemporaneous institutional and state characteristics that might

otherwise explain the observed decline in Black-student enrollment (see Table 4). This

translates to a loss of approximately 353 Black students per year across all Florida and

Georgia public colleges due to affirmative-action bans, or an average of about 21 Black

students per institution. Limiting the comparison group to the three affirmative-action-

mandated states results in a greater estimated effect of the ban: the 1.90 percentage-point

(or 12.82\%) decline is 66\% larger than the negative 1.14-percentage-point effect for the

16-non-ban-state group. This translates to an approximate 490-Black-student loss per

year.
A comparison of results across the first four models displayed in Table 4 shows that the ban effect is constant; the observed associations remain irrespective of the controls. The ban effect is constant even after controlling for differences across states in the percentage of the population that is Black and the distribution of institutional selectivity. In sum, irrespective of institutional selectivity, affirmative-action bans in these states appear to have both arrested and reversed trends toward more population-representative on-campus enrollments.

One plausible explanation of these findings involves the college choice process, which Hinrichs (2012) conceives of as involving four separate stages: participation, application, admissions, and enrollment. I suggest that affirmative-action bans influence how students negotiate the college choice process; and that bans have conditioned how institutions interact with potential Black students as they decide whether and where to attend college (Moses, 2001). My enrollment outcome measure implicates how an individual student negotiates the final three stages of the college choice process. In each of these stages, a student’s individual negotiation might have been conditioned by state and institutional responses to the affirmative-action policies I detail in Table 2. Though my measure does not capture participation effects, the literature suggests that bans might impact college choice at this stage. Estimates of the actual Black high-school graduation rates vary widely. However, most scholars agree that there is no evidence of divergence in Black-white graduation rates above and beyond existing gaps since 1970 (see, e.g., Mishel & Roy, 2006; Murnane, 2013; cf. Heckman & LaFontaine, 2010). Dickson (2006) finds that the population proportion of Black students among Texas high-school graduates increased from 1994 to 2001, but that the proportion of Black students taking
the SAT or ACT declined by 1.9 percentage points, or by 434 students. Without data measuring high school graduation and SAT/ACT participation rates, my study cannot assess the extent to which declines in participation might influence these results.

However, I am able to differentiate out the influence institutional selectivity might have on these findings. To test whether affirmative-action bans enhances the effect of selectivity on Black-undergraduate enrolment, I incorporate as a predictor an interaction between institutional selectivity and the ban. Results from this model suggest that institutional selectivity makes a positive difference on the ban effect on Black-student enrollment ($\beta = 1.74, p < 0.001$). For less-selective institutions, affirmative-action bans have a negative 2.57 percentage-point (-17.38%) effect, adjusting for covariates ($p < 0.001$). For more selective institutions, affirmative-action bans have only a negative 0.831 percentage-point (-5.62%) effect ($p < 0.001$). In other words, in states with segregation history, the affirmative-action-ban effect is not limited to elite colleges, as Hinrichs (2012) found, but is rather ubiquitous, with greater effect in less selective colleges.

My findings might reflect the convergence of plausible Black-student and institutional responses to bans. The most alarming of these would be Black-student withdrawal from participation in the college choice process altogether as a result of bans. Though the academy, particularly scholars of higher education, are familiar with how admissions processes work differently by institution and selectivity level, the average citizen is considerably less familiar (Moses, 2001). More people believe that all colleges are selective than not, and that through affirmative-action, Black students benefit from a lesser impact of selectivity on admissions odds (Farley, Gaertner, & Moses, 2013). Black
students themselves are no different in this regard. Because student decisions to apply or enroll in a given college or even to a college within a state are vulnerable to environmental influences, a Black student in an affirmative-action-ban state might interpret such a ban as creating an unfavorable college choice context (Garces & Jayakumar, 2014). Moses (2001) suggests may hinder the students’ belief in their college preparedness, which might manifest itself in their lower enrollment rates in all colleges and universities regardless of institutional selectivity or decisions.

That I observe this greater impact of affirmative-action bans on less-selective institutions might appear at first glance to run counter to the above-stated theory. These results appear counterintuitive to general understanding on how affirmative action works, i.e., as a depressive mechanism on institutional selectivity in favor of certain student groups (Moses, 2001; see generally, e.g., Hinrichs, 2012; Kahlenberg, 1996; Krueger et al., 1996). I argue, however, that my findings might expose both the true mechanism of action for affirmative-action practices—at least in formerly segregationist states and higher-education institutions—and subsequent failures of less selective institutions to develop comprehensive strategies to account for the absence of affirmative action practices. If affirmative action was necessary to remediate past discriminatory enrollment practices in institutions at all levels of a state’s higher education system (see Adams, 1973), and if these discriminatory practices are only partially abated as literature and case law suggests, (Fordice, 1992 see also Ford, 2002 (discussing UGA); Knight v. Alabama, 1995; Litolff, 2007 (documenting consent decrees across segregationist states and persistent race-based disproportionalities in enrollments); Ubiles, 2012 (discussing Florida colleges)), then a ban should affect Black-student enrollments in all such
institutions. As I have observed, whatever role selectivity plays in enrollment likelihoods would be conditionally independent of the role affirmative-action, or its ban, would play in the same.

I theorize, though I cannot test the same in this paper, that the greater effect for less-selective institutions results from differences in how institutions have sought to mitigate the effects of bans. Student college choice can be influenced by institutional outreach and recruitment efforts (or lack thereof). Black students, in particular, have shown greater likelihoods of applying to and enrolling in colleges that have targeted diversity recruitment efforts (Reardon, Baker, & Klasik, 2012; Ford, 2002). Before the 2000 bans, Florida and Georgia affirmative-action plans included a variety of outreach strategies targeted toward increasing Black-undergraduate representation in all of its colleges, but in particular the most selective flagship institutions—Florida State University (FSU), Georgia Institute of Technology (Georgia Tech), and the Universities of Florida (UF) and Georgia (UGA) (Ford, 2002; Marin & Lee, 2003; Litolff, 2007). These strategies included hosting students-of-color mentorship and test preparation, summer visitation programs for Black prospective students, and special “minority preview day[s]” for admitted students that included Black cultural events and fraternity and sorority shows (Ford, 2002). Johnson (2000; 2001) immediately disallowed Georgia institutions from using race-sensitive enrollment strategies (Ford, 2002). Though FSU and the remainder of Florida colleges immediately adhered to One Florida in discontinuing race-sensitive recruitment and admissions practices in 2000, UF initially ended affirmative action only in admissions. As discussed above, UF ended race-sensitive recruitment policies only after a court case settled the issue later in 2000, after
having recruited the entering 2000 cohort (Marin & Lee, 2003; Ubiles, 2012). While there are no studies evaluating the extent to which Johnson affected Black-student application behaviors in Georgia, Horn and Flores (2003) note that applications from Black students sharply declined at both FSU and UF from 2000 to 2001. Among Talented Twenty applicants, between 2000 and 2001, the proportion of white applicants to all Florida colleges rose by 2.5 percentage points as the proportion of Black applicants declined by 4.4 percentage points (Marin & Lee, 2003). Moreover, while the population percentage of Talented Twenty-eligible Black students exceeded that of white students by three percentage points, the percentage of eligible Black students who enrolled in Florida colleges was nearly a percentage point lower than their white counterparts (Marin & Lee). Ford (2002) suggests that UGA’s ending targeted recruitment and yield programs which had proved successful before Johnson is a leading factor in both the decline in Black-undergraduate enrollment and the perception among continuing Black undergraduates that the university does not truly value racial or ethnic diversity. These sentiments, Ford finds, lead to an overall ethos that UGA is not welcoming toward Black students.

While affirmative-action bans have compromised the ability of colleges and universities to target Black students, some institutions have developed creative strategies that have sought to work around these limits to yield Black admitted (Garces & Jayakumar, 2014). More selective institutions like the four aforementioned universities are known to have replaced their race-conscious admissions strategies with class- and geography-based recruitment and yield strategies that might attenuate the impact of affirmative-action bans (Ford, 2002; Ubiles, 2012). Few less-selective institutions have
done the same. If the common narrative of affirmative action as a mechanism on selectivity’s impact on enrollment is to be believed, then a less selective institution, particularly an open-enrollment institution, might not believe such strategies to be useful or necessary to improve Black-student enrollment, and therefore might not use them. One interpretation of my findings is that in states whose higher-education systems have a segregationist history, strategies targeted at improving Black-student enrollment are necessary across the board due to factors unrelated to selectivity as measured by student-driven factors like test scores and grade-point average.

Among the remaining three stages, institutional admissions decisions appear from my results to be the least affected by affirmative-action bans. For open-enrollment and less selective colleges, this observation seems axiomatic. In institutions that accept all or most applicants, selectivity would not explain the process by which a ban on affirmative action affects their Black undergraduate enrollments. If selectivity does not explain affirmative-action effects, then something other than institutional admission behaviors might cause the observed enrollment decline.

A. Potential Attenuation and Bias

Several factors may have diminished the impact of bans. First, given the time scope of this paper’s inquiry, it is likely that Hopwood (1996) led to a general environment shock in the Deep South that this study, by isolating its inquiry at the 2000 affirmative-action bans has accounted for, but not explicitly measured. Due to growing political support for bans, particularly in regions with segregationist histories, it is likely that institutions and students—both in Florida and Georgia, and elsewhere in the South—anticipated bans and began to adjust their behaviors accordingly. For example, evidence
suggests that Florida State University (FSU) had begun reducing race-conscious enrollment efforts ahead of the One Florida ban in response to popular mistrust of these practices (Ford, 2002; Marin & Lee, 2003). In 1998, the University of North Carolina at Chapel Hill, where affirmative action was never banned, retooled a scholarship program designed to attract students of color to preference low-income students and students from underrepresented portions of the state in anticipation of a *Hopwood*-like lawsuit (Education Week, 1998).

Second, institutions themselves might have taken efforts to mitigate the anticipated effects on Black students. The flagship universities in both Florida and Georgia actively resisted ban implementation through litigation, fully acquiescing to bans after adverse court rulings. Thus, while most colleges—including the Universities of Florida (UF) and Georgia (UGA)—generally adhered to ban prohibitions, it is reasonable, given their institutional opposition, to assume that they pursued alternate avenues to recruit and yield Black applicants once bans were fully in effect. For example, evidence suggests that UF, the largest institution among ban-state colleges, heavily recruited Black students in the 2000 cohort using race-sensitive practices (Marin & Lee; Ubiles, 2012). Initiatives that pay greater attention to socioeconomic and geographic diversity, which are not as constitutionally suspicious as attention to race, are another alternative approach, which evidence suggests colleges in both states attempted (Ford, 2002; Marin & Lee, 2003).

Third, state-level interventions are another source of potential attenuation. The Florida Talented Twenty Program, which guarantees all students who finish in the top 20% of their high-school class admissions to a Florida college, is one state-level attempt,
though preliminary evidence suggests that it has not been ineffective (Marin & Lee, 2003). While less effective than affirmative action in focusing institutional attention to racial underrepresentation (Horn & Flores, 2003), these approaches might nevertheless yield greater racial diversity than in their absence due to strong correlations between race and both socioeconomic disadvantage and geographic isolation (see Kahlenberg, 1996; Cashin, 2014), and should not be summarily discounted.

Finally, there are Black students for whom an affirmative-action ban increases the desirability of applying and enrolling in an institution. Though my results do not support such an understanding as a general phenomenon, we cannot summarily discount that for some students a college’s use of affirmative action might signal an institutional belief that students like them were not as competitive as their white peers (cf. Steele, 2003). Card & Krueger (2005) found that bans did not cause a statistically significant decline in applications to elite California and Texas colleges. These and other factors might have offset a steeper-than-observed decline. Despite these attenuating efforts, the substantial and meaningful loss of Black undergraduate enrollment is notable and concerning.

B. Sensitivity Analyses and Limitations

As a quasi-experimental strategy, the difference-in-differences estimation approach is limited in its ability to support causal claims (Shadish, Cook, & Campbell, 2002). As such, alternate explanations for these results must be analyzed and discussed. A hypothesis often put forth by affirmative-action opponents is that affirmative action depresses institutional selectivity in favor of Black applicants. The make-up of the sample makes such a claim provocative: 82% of ban-state institutions are rated in the top
Barron’s (2000) categories, while only 67% of the remaining 16 non-ban-state institutions are; and only half of institutions in Old Fifth Circuit affirmative-action-mandated states are.

As I show in Table 5, my results are, however, generally robust to changes in model specification. The affirmative-action ban estimates are practically identical using maximum likelihood estimation. Adjusting the analytic window to the shorter four-year period, 1998-2001 causes a negligible change in the ban effects. Though robust, these findings are not without their limitations. The scope of this paper is constrained by certain aspects of these data sources, which present different limitations. First, IPEDS does not disaggregate enrollment outcomes by decision points in the college choice process, which I will discuss more below. As a result, my study cannot capture how affirmative-action bans might affect student decisions about where to apply or how bans might affect institutional admissions decisions. Second, consistent with the motivating legal analysis and theory that drive this paper, I might want to examine ban effects on U.S-born Black students separately from foreign-born Black students. IPEDS, however, does not distinguish between U.S. and foreign-born Black students in its enrollment by race accounting. As a result, I cannot fully isolate affirmative-action ban effects on the specific target population. Third, IPEDS did not begin to measure out-of-state enrollments until 1998. Data for this year, which are collected biennially, are missing for many institutions in my sample. Evaluation of ban-effects on out-of-state enrollments appears helpful in fully exploring Black-student institutional migration hypotheses. Fourth, U.S. Census data do not disaggregate by age state-level Black population counts; neither do unemployment and income data. This limits my ability to distill potential
differentiated effects of income, unemployment, or bachelor’s degree holding on ban impacts for Black residents. Despite these limitations, this study helps to bring an empirical basis to evaluating the necessity of affirmative action, by framing this study in terms of remedy, region, and institution, as Title VI affirmative action originally contemplated, this study helps to bring an empirical basis to evaluating the effect of race-sensitive policies on Black-undergraduate enrollments.

IV. Implications and Conclusion

One implication of these findings might be that in public colleges and universities in states with segregationist history, race-conscious recruitment, admissions, and enrollment strategies might still be needed to improve Black-student underrepresentation. Because my study examined did not compare affirmative-action ban effects among these states to a control group of non-segregationist states, it remains to be seen whether the need of such strategies is greater for institutions in these states. Comprehensive research on how outreach strategies influence Black-student college choice is needed to better evaluate this proposition. Should these prove necessary, this analytic approach might provide a rudimentary blueprint for colleges in these states to evaluate their affirmative-action need under what appears to be a heightened evidentiary standard (see Fisher, 2013). Given Adams (1973) and Fordice (1992), which discuss the obligation of segregationist states and institutions under Title VI to take action to address disparities rooted in historical discrimination, my findings might reinvigorate remediation as a complementary justification to diversity for engaging in affirmative-action practices.

In a policy environment increasingly hostile to affirmative-action policies, the findings in this study underscore a need to craft efficient, context-specific alternatives to
affirmative action to mitigate the predictive influence of race on enrollment outcomes. Formally race-neutral options like percent plans, while ostensibly more politically palpable, have not been shown to fully meet, let alone improve upon Black students’ enrollment. These plans, though formally race-neutral, are not race-neutral in impact or mechanism of action. Rather, percent plans like Florida’s Talented Twenty program rely primarily on school assignment plans associated with racially segregated housing patterns (Horn & Flores, 2013). As Lim (2013) notes, for these plans to yield a more racially diverse student body, high schools would need to remain—or become more—racially identifiable, with students of similar backgrounds competing with each other for top ranks. Some argue that because percent plans reify these racially disparate impacts that they are no less constitutionally problematic than race-sensitive admissions strategies (see, e.g., Fitzpatrick, 2014).

Following Schuette v. Coalition to Defend Affirmative Action (2014), institutions located in states where affirmative action is allowed might face political pressures to end or limit these practices. After Grutter (2003) allowed Georgia colleges to reinstitute affirmative action, only one institution, Georgia Tech, opted to restore race-conscious recruitment and yield practices (Georgia Institute of Technology, 2005; 2013). If, as my results intimate, we are losing students altogether from the college choice process, attention to state-level (and perhaps national-level) messaging around education access and participation might be warranted. As Garces (2012) notes, all stakeholders—from institutions and students to governments and the voting public—should consider results such as these that document the negative impact of affirmative-action bans.
References


Executive Order No. 11246 (1965).


*Hopwood v. Texas*, 78 F.3d 932 (5th Cir. 1996).

Integrated Postsecondary Education Data System (2012). Delta Cost Project Database, http://nces.ed.gov/ipeds/deltacostproject/download/IPEDS_Analytics_DCP_87_10_STATA.zip (Retrieved 03/14/14)


*Johnson v. Board of Regents of the University of Georgia*, 263 F.3d 1234 (11th Cir. 2001).


Meredith v. Fair, 313 F.2d 532 (5th Cir. 1962).


*Plessy v. Ferguson,* 163 U.S. 537 (1896).


*State ex rel. Hawkins v. Board of Control of Florida,* 47 So. 2d 608 (Fla. 1950).


US v. Louisiana, 9 F.3d 1159 (5th Cir. 1993).

Table 1: Timeline of Significant Events in the History of Affirmative Action in the United States.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1862</td>
<td><strong>Morrill Act of 1862</strong>: Federal lands given to each state to fund an endowment fund for the establishment of agricultural, mechanical, technical, and practical-arts colleges.</td>
</tr>
<tr>
<td>1868</td>
<td><strong>Fourteenth Amendment to the United States Constitution</strong>: States are required to give all citizens, including recently emancipated Blacks, “equal protection of the laws.”</td>
</tr>
<tr>
<td>1890</td>
<td><strong>Agricultural College Act of 1890</strong> (commonly called <strong>Second Morrill Act of 1890</strong>): States were required to accept Black students in their land-grant colleges or establish separate, equivalent land-grant colleges for Black students.</td>
</tr>
<tr>
<td>1896</td>
<td><strong>Plessy v. Ferguson</strong>: “Separate, but equal” principle extended to public accommodations.</td>
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<tr>
<td>1954</td>
<td><strong>Brown v. Board of Education</strong>: <em>Plessy</em> held inapplicable to public education.</td>
</tr>
<tr>
<td>1955</td>
<td><strong>Lucy v. Adams</strong>: <em>Brown</em> extended to higher education; Alabama admits then immediately expels Autherine Lucy.</td>
</tr>
<tr>
<td>1957</td>
<td><strong>State ex rel. Hawkins v. Board of Control</strong>: Florida establishes “sovereignty commission” to “interpose” state administration on desegregation process.</td>
</tr>
<tr>
<td>1961</td>
<td><strong>Executive Order 10925</strong>: “Affirmative action” first appears in a government document; President Kennedy requires government contractors to not discriminate on the basis of race.</td>
</tr>
<tr>
<td>1961</td>
<td><strong>Holmes v. Danner</strong>: University of Georgia ordered to desegregate; Georgia Governor Ernest Vandiver decides not to fight order to desegregate; Hamilton Holmes and Charlayne Hunter admitted.</td>
</tr>
<tr>
<td>1962</td>
<td><strong>Meredith v. Fair</strong>: University of Mississippi ordered to desegregate; Mississippi Governor Ross Barnett challenges federal authority; James Meredith admitted under National Guard protection following rioting.</td>
</tr>
</tbody>
</table>
| 1963 | **Gantt v. Clemson**: Clemson University ordered to desegregate; South
QP: IMPACT OF AFFIRMATIVE-ACTION BANS

Carolina becomes last segregationist state to be ordered to admit first Black student; South Carolina does not fight order to desegregate.

1964 **Civil Rights Act of 1964**: In Title VI regulations, institutions receiving federal funds required to take “affirmative action to overcome the effects of prior discrimination.”

1965 **Executive Order 11246**: President Johnson extends affirmative action requirements extended to federal contractors’ labor and employment decisions.

1965 **Higher Education Act of 1965**: Congress provides for financial aid and other institutional funding for higher-education institutions; eventually most U.S. higher-education institutions participate in one or more HEA funding programs.

1967 **Lee v. Macon County Board of Education**: Alabama’s efforts to desegregate higher education system found insufficient.

university systems of 19 states to submit affirmative-action plans; HEW does not follow-up on enforcement demands.

1973 **Adams v. Richardson**: NAACP sues HEW for failure to follow-up on enforcement demands; Office of Civil Rights (OCR) supervises 18 of 19 state affirmative-action plans assisted by U.S. District Court; supervises Texas’s plan independently.

Late 1980s-early 1990s **Consent decrees**: Court and OCR end oversight of 15 of 19 Adams states in exchange for promise to continue affirmative-action plans. Alabama, Louisiana, Mississippi, and Tennessee remain under court supervision until late 2000s.


2000 **Johnson v. University of Georgia**: University of Georgia ordered to end affirmative-action plan in 2000; University System of Georgia ends

2003  **Grutter v. Bollinger:** Affirmative action permitted; holistic evaluation allowed; Georgia Institute of Technology only known school in Florida or Georgia to have reinstated affirmative-action after *Grutter.*
Table 2: States identified by Adams v. Richardson (1973) as having failed to take appropriate action to end state-sponsored higher-education segregation by 1970, as required by Title VI of the Civil Rights Act of 1964, by affirmative-action-status group.

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Florida</td>
<td>11th*</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Georgia</td>
<td>11th*</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Arkansas</td>
<td>8th</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Delaware</td>
<td>3d</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Kentucky</td>
<td>6th</td>
<td></td>
<td>X</td>
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<tr>
<td>Maryland</td>
<td>4th</td>
<td></td>
<td>X</td>
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<tr>
<td>Missouri</td>
<td>8th</td>
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<td>X</td>
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<td></td>
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<tr>
<td>North Carolina</td>
<td>4th</td>
<td></td>
<td>X</td>
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<td></td>
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<tr>
<td>Ohio</td>
<td>6th</td>
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<td>X</td>
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<td></td>
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<tr>
<td>Oklahoma</td>
<td>10th</td>
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<td>X</td>
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<tr>
<td>Pennsylvania</td>
<td>3d</td>
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<td>X</td>
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<tr>
<td>South Carolina</td>
<td>4th</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tennessee</td>
<td>6th</td>
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<td>X</td>
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<tr>
<td>Virginia</td>
<td>4th</td>
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<td>X</td>
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<tr>
<td>West Virginia</td>
<td>4th</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alabama</td>
<td>11th*</td>
<td></td>
<td>X</td>
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<tr>
<td>Louisiana</td>
<td>5th*</td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>Mississippi</td>
<td>5th*</td>
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<tr>
<td>Texas</td>
<td>5th*</td>
<td></td>
<td>X</td>
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</tbody>
</table>

* Until October 1981, federal appeals from Alabama, Florida, Georgia, Louisiana, Mississippi, and Texas were administered and heard by a single U.S. Court of Appeals for the Fifth Circuit. After that date, cases from Alabama, Florida, and Georgia were administered and heard by the U.S. Court of Appeals for the Eleventh Circuit. Unless otherwise distinguished, “Old Fifth Circuit” case law from before October, 1981 is good precedent in both Fifth and Eleventh Circuits (Bonner v. City of Pritchard, 1981). Cases from after
October, 1981 in one Circuit is often persuasive in the other (see Johnson v. University of Georgia (Eleventh Circuit case which cites and relies heavily on the Fifth Circuit case, Hopwood v. Texas, 1996)).
Table 3: Selected summary characteristics of the public, non-HBCU institutions in the sample, for the years 1997-2002 (n=149); and selected state characteristics, for the year 2000, by affirmative-action-ban status.¹

<table>
<thead>
<tr>
<th></th>
<th>Florida and Georgia (n=17)</th>
<th>Comparison Group² (n=132)</th>
<th>Old Fifth Circuit Alternate Comparison Group (n=27)³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selective</td>
<td>14 (82.35%)</td>
<td>89 (67.42%)</td>
<td>13 (50.00%)</td>
</tr>
<tr>
<td>Non-Selective</td>
<td>3 (17.65%)</td>
<td>43 (32.58%)</td>
<td>13 (50.00%)</td>
</tr>
<tr>
<td>In-State Tuition and Fees per $1,000 (a)</td>
<td>2.12 (0.36)</td>
<td>2.54 (0.57)</td>
<td>3.08 (1.13)</td>
</tr>
<tr>
<td>Black Population (%) (c)</td>
<td>21.74 (7.19)</td>
<td>18.22 (9.08)</td>
<td>30.32 (4.08)</td>
</tr>
<tr>
<td>18-24 Population with Bachelor’s Degree (%) (c)</td>
<td>34.34 (0.90)</td>
<td>35.70 (1.28)</td>
<td>36.42 (0.75)</td>
</tr>
<tr>
<td>Average Annual Income per $1,000 (d)</td>
<td>37.80 (3.46)</td>
<td>37.39 (6.03)</td>
<td>33.19 (2.39)</td>
</tr>
<tr>
<td>Unemployed Residents (%) (d)</td>
<td>4.26 (0.33)</td>
<td>4.40 (0.74)</td>
<td>4.44 (0.87)</td>
</tr>
</tbody>
</table>

1 Enrollment and population data are percentage measures. In-state tuition and fees are measured in unadjusted non-constant dollars. Standard deviations are in parentheses. For institutional selectivity, relative frequency displayed as percentages are in parentheses.
2 Alabama, Arkansas, Delaware, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia.
3 Alabama, Louisiana, and Mississippi.
Table 4: Taxonomy of models for affirmative-action ban effects on percentage of first-time full-time Black-student enrollment, for public non-HBCU colleges and universities in states with higher-education segregation histories during the primary analytic window, 1997-2002 (n=149).

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrollment after 2000*</td>
<td>-1.086</td>
<td>-1.134***</td>
<td>-1.114</td>
<td>-1.136</td>
<td>-2.567***</td>
</tr>
<tr>
<td></td>
<td>(0.432)</td>
<td>(0.418)</td>
<td>(0.456)</td>
<td>(0.444)</td>
<td>(1.007)</td>
</tr>
<tr>
<td>Affirmative-Action ban</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i.e., impact of affirmative-action bans on Black-student enrollment)</td>
<td>2.673</td>
<td>3.914</td>
<td>1.285</td>
<td>2.213</td>
<td>2.194</td>
</tr>
<tr>
<td></td>
<td>(2.183)</td>
<td>(2.145)</td>
<td>(1.895)</td>
<td>(1.853)</td>
<td>(2.073)</td>
</tr>
<tr>
<td>Enrollment after 2000</td>
<td>0.322*</td>
<td>0.126</td>
<td>0.185</td>
<td>0.119</td>
<td>0.117</td>
</tr>
<tr>
<td></td>
<td>(0.215)</td>
<td>(0.248)</td>
<td>(0.510)</td>
<td>(0.227)</td>
<td>(0.277)</td>
</tr>
<tr>
<td>Institutional Selectivity</td>
<td>-5.441***</td>
<td>-4.470***</td>
<td>-3.898***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.589)</td>
<td>(1.060)</td>
<td>(1.341)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selectivity * Ban</td>
<td></td>
<td></td>
<td></td>
<td>1.736***</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.550)</td>
<td></td>
</tr>
<tr>
<td>State Black Population (%)</td>
<td>0.553***</td>
<td>0.562***</td>
<td>0.563***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.067)</td>
<td>(0.067)</td>
<td>(0.067)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State 18-24 Population Bachelor’s Degree (%)</td>
<td>0.396</td>
<td>0.426</td>
<td>0.418</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.568)</td>
<td>(0.569)</td>
<td>(0.570)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State Average Annual Income</td>
<td>1.158</td>
<td>0.285</td>
<td>0.350</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.841)</td>
<td>(3.481)</td>
<td>(3.480)</td>
<td></td>
<td></td>
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<tr>
<td>State Unemployed Population (%)</td>
<td>0.061</td>
<td>0.007</td>
<td>0.003</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.114)</td>
<td>(0.127)</td>
<td>(0.127)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-State Tuition and Fees</td>
<td>1.324</td>
<td>1.151</td>
<td>1.128</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.791)</td>
<td>(1.112)</td>
<td>(1.110)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>constant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12.121***</td>
<td>5.239</td>
<td>-24.510</td>
<td>-12.282</td>
<td>-34.540</td>
</tr>
<tr>
<td></td>
<td>(0.760)</td>
<td>(6.351)</td>
<td>(34.326)</td>
<td>(27.553)</td>
<td>(36.190)</td>
</tr>
<tr>
<td>Obs</td>
<td>894</td>
<td>894</td>
<td>894</td>
<td>894</td>
<td>894</td>
</tr>
<tr>
<td>df</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.006</td>
<td>0.015</td>
<td>0.280</td>
<td>0.313</td>
<td>0.313</td>
</tr>
</tbody>
</table>

Robust standard errors are in parentheses: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: These models estimate the effect of affirmative-action bans on Black-student enrollment in Florida and Georgia colleges and universities by comparing average institutional enrollment before (1997-1999) and after (2000-2002) the bans’ 2000 effective date. Alabama, Arkansas, Delaware, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia colleges and universities, collectively “16 states,” are the comparison group. Model 1 presents the naïve affirmative-action ban effect. Model 2 includes measures for institutional selectivity and the log-in-state tuition and fees per $1,000 as institution-level covariates. Model 3 includes measures for the state population percentages of Black residents and residents aged 18-24 who have bachelor’s degrees in 2000; and the log income per $1,000 and average state population percentages.
of unemployed residents for a given year. Model 4 includes all covariates. Model 5 includes an interaction to estimate the extent to which ban effects vary by institutional selectivity. None of these models include year fixed effects to avoid collinearity. All models account for the clustering of observations within institutions over time and within states with year random effects.
Table 5: Sensitivity analyses.

<table>
<thead>
<tr>
<th></th>
<th>Ban-effect Estimates</th>
<th>Old Fifth Circuit Alternate Comparison Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Primary models</td>
<td>-1.136* (0.444)</td>
<td>-1.901*** (0.742)</td>
</tr>
<tr>
<td>B: Maximum likelihood estimation</td>
<td>-1.136* (0.447)</td>
<td>-1.906*** (0.642)</td>
</tr>
<tr>
<td>C: Adjusting analytic window (1998-2001)</td>
<td>-1.008* (0.461)</td>
<td>-1.457 (0.891)</td>
</tr>
</tbody>
</table>

Robust standard errors are in parentheses. ~ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: All models include the population percentages of the relevant racial/ethnic group(s) as a state-level covariate as well as a control for Texas institutions having experienced an affirmative action ban in 1996. Institution-level covariates are admissions selectivity and average in-state tuition and fees. None of these models include year fixed effects to avoid collinearity. All models account for the clustering of observations within institutions over time and within states with year random effects. The A-group Models estimates the effect of affirmative action bans in Florida and Georgia by comparing the percentage of first-time full-time Black student enrollment outcomes for various racial/ethnic groups before (1997-1999) and after (2000-2002) the bans’ 2000 effective date using Adams states as the comparison group. The B-group Models estimate the same effect specifying robust standard errors and maximum likelihood estimation. The C group Models adjust the analytic window to 1998-2001.
Attestation

I, Matthew Patrick Shaw, certify that my qualifying paper has a total word count of 8,111.