CLOSING THE GAP?:
Admissions & Enrollments at the Texas Public Flagships Before and After Affirmative Action*

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ABSTRACT

This paper uses administrative records to evaluate the impact of eliminating affirmative action in Texas on admissions and enrollments at the state's two most selective public universities during the 1990s. Although Texas is rapidly becoming a "majority minority state," the demographic profile of the two public flagships has failed to keep pace with the growth of minority groups among college-age students. Unless qualified minority students who are admitted to the public flagships actually enroll, both institutions will weaken their reach in educating a leadership class for the State's rapidly growing minority population.

Changes in admissions probabilities during the 1990s reveal substantial changes in the structure of opportunities for African American, white, Hispanic and Asian American applicants. On the one hand, H.B. 588 leveled the playing field for students ranked in the top decile of their class by equalizing their nearly equal odds of admission before the *Hopwood* decision. This change benefited high achieving minority students who may have been rejected for low test scores or poor essays before the top ten percent law was implemented in 1998. On the other hand, *Hopwood* reversed the favorable admission probability enjoyed by minority applicants who graduated in the second decile of their class or below, but the "non-overlapping groups" simulation indicates that no more than three percent of all admitted students were affirmative admits at either institution. The *Hopwood* reversal benefits white applicants, and especially Asian Americans seeking admission to UT. Moreover, contrary to public criticisms alleging that H.B.588 privileges high performing students who attend low performing schools, *the admission probability of students from the major feeder high schools who ranked in the second decile actually rose at both institutions, but most especially at UT*.

The ban on affirmative action did have a chilling effect on enrollment odds of minority students admitted to the public flagships. For African Americans, Hispanics and Asian Americans admitted to A&M, the net odds of enrollment relative to whites, which were well below unity for all groups before *Hopwood*, fell after 1996. At UT the odds ratios for enrollment conditional on admission, which were below parity before 1996, changed very little for Hispanics and Asian Americans, and dropped slightly for African Americans. Admitted white applicants are significantly more likely to enroll than African Americans and Hispanics granted admission to UT, and Asian Americans accepted to UT after 1997 were about 16 percent more likely to matriculate than their white statistical counterparts. The enrollment analyses forcefully demonstrate that *by itself, the top ten percent policy is NOT an alternative to race sensitive admissions*; rather, it is a merit-based admission plan that emphasizes high school academic achievement in the admission decision while de-emphasizing standardized achievement tests for top ranked students. In the absence of financial support to needy students coupled with a vigorous outreach program to high schools populated by minority and economically disadvantaged students, the top ten percent policy will not diversify campuses of selective universities.

INTRODUCTION

Before *Brown v. Board of Education* (1954), the debate about race and ethnic educational inequality revolved around the desirability and necessity of integration. With ample compelling evidence that school segregation is inimical to equal educational opportunity (Coleman, et al. 1966; Coleman, 1990; Massey and Fisher, 2002; Orfield and Gordon, 2001; Orfield and Yun, 1999), the legal and political debate shifted to the socially acceptable *methods* for achieving integration and setting institutional goals.[1] On the heels of the Civil Rights Movement that fostered legislation outlawing discrimination on the basis of race, sex, and national origin, affirmative action policies were proposed as a strategy to go beyond the simple prohibition of disparate treatment. Guidelines for affirmative action policy were never clearly specified, however, and remained murky until aspiring medical student Allan Bakke sued the University of California on grounds that affirmative action policies violate the equal protection clause of the 14th Amendment (Bowen and Bok, 1998; Swain, 2001). Although the Supreme Court ruled in Bakke's favor, the 1978 opinion (*Regents of the University of California v. Bakke*) includes language that permits institutions of higher education to consider race and ethnicity in order to garner the educational benefits that derive from a diverse student body. Selective colleges and universities across the nation have interpreted this decision as authorization to consider race and ethnicity, among a myriad of factors, in their admissions decisions.

During the 1990s, organized opposition toward the use of race-sensitive admissions gained momentum and succeeded in challenging their legality. In 1996, California voters passed Proposition 209, which outlawed practices that consider race or ethnicity in college admissions decisions at public universities, and the *Hopwood v. University of Texas* (5th Cir. 1996) decision

[1] Most studies of the consequences of school segregation involve K-12, but Massey and Fisher (2002) demonstrate lasting effects through higher education.

achieved the same end in Texas. Citizen initiatives in other states have followed the path of either California (e.g., Washington State Initiative 200), or plaintiffs have pursued litigation as in Texas (e.g., Michigan) to circumvent the controversial 1978 *Bakke* decision. Against the backdrop of conflicting Circuit Court decisions based on differing interpretations of *Bakke* (Schmidt and Selegno, 2002), the Supreme Court has decided to reconsider the 1978 decision.[2]

Because affirmative action plans of colleges and universities were neither defined systematically nor evaluated prior to Bowen and Bok's (1998) landmark study, baseline information for assessing college admissions criteria is weak to nonexistent. Faced with legal and political prohibitions against race-sensitive admissions, leaders in higher education began to devise alternative strategies to maintain their hard-earned campus diversity. In response to the 1996 *Hopwood* decision, the 75th Texas legislature passed H.B. 588, which guarantees admission to any Texas public college or university for all seniors graduating in the top 10 percent of their class. Signed into law on May 20, 1997, H.B. 588, popularly known as the "top ten percent law," has become as controversial as the practice of race-sensitive admissions it replaced. Parents from affluent districts contend that their children are penalized by granting equal admissions prospects for high-achieving students from low-performing schools (Yardley, 2001; Nissimov, 2000). Although the *Hopwood* decision has been interpreted to apply to undergraduate and post-graduate admissions, financial aid awards, and targeted retention programs, H.B. 588 only applies to undergraduate admissions.[3]

The Texas top ten percent law strives to improve, or at least maintain, the diversity of the state's selective public institutions. However, it differs in two important ways from the California and Florida percent plans. First, H.B. 588 guarantees students who graduate in the top ten percent of their class a spot at *any* public institution of their choice, and at UT, they are given

[2] The two pending lawsuits against the University of Michigan [*Gratz v. Bollinger* (Docket No. 02-516) and *Grutter v. Bollinger* (Docket No. 02-241)] are scheduled to be argued before the Supreme Court in spring 2003.
[3] The actual opinion never mentions financial aid, but then Attorney General Dan Morales broadened the interpretation of the opinion to include economic aid.

preference, but no guarantee, in choice of major. Qualifying students must complete the university's application (including essays) and a college entrance exam (either SAT or ACT), although test scores are not considered in the admission decision or course placement.[4] Second, in Texas class rank is reported by the students' high schools, not by the University Systems, as in California. Eligible rank can be attained either at the end of the junior year, in the fall of the senior year, or at the end of the senior year and the admission guarantee is good for two years following graduation provided students do not register at another college (Leicht and Sullivan, 2000).

If the Texas top ten percent plan appears to be a radical change in admissions policy, it is not, in fact. Class rank has always been heavily weighed in admissions decisions at selective institutions. Because there was no minimum test score requirement for students graduating in the top decile of their class before 1995, they were virtually ensured—but not guaranteed—admission to the University of Texas at Austin (Walker and Lavergne, 2001a). H.B.588 largely transformed a *de facto* practice of admitting highly ranked students to a *de jure* guarantee of acceptance. What IS "new" about the Texas college admissions policy is the explicit de-emphasis of test scores, which are not considered for students who graduate in the top decile of their class, and the explicit prohibition of considering race and ethnicity in decisions.[5] Other things equal, the former should benefit African Americans and Hispanics, who achieve lower standardized test scores for scholastic grades, on average, but the ban on affirmative action should favor whites and Asian Americans, who are more likely to attend high schools that offer

[4] SAT I and ACT tests are not used in course placement decisions, but SAT II and other tests may be so used. E-mail, Gary Lavergne, 16 January 2003.

[5] For students who do not graduate in the top ten percent of their class, student merit is based on a broad range of objective and subjective criteria. At the UT-Austin campus, for example, the former include class rank, completion of the required high school curriculum, the extent to which students exceed the UT-required course units and standardized test scores; the latter include scores on required essays, leadership, extracurricular activities, awards/honors, work experience, public service, and special circumstances [such as socioeconomic status, family responsibilities, and school conditions, among others] (Walker and Lavergne, 2001a:20).

advanced placement courses and support a broad range of extracurricular activities that are favorably evaluated in college decisions.

As social and political commitment to race-sensitive admissions wanes, and in light of the forthcoming Supreme Court reconsideration of *Bakke*, it is imperative to document the consequences of banning affirmative action and striving to maintain campus diversity via percent plans. In Texas reports about the impact of the top ten percent policy focus on restoration (or lack thereof) of the ethno-racial composition of entering freshman classes, with considerably less attention given to changes in the applicant and admitted student pools (e.g., THECB, 1998; U.S. Commission on Civil Rights, 2002; Walker and Lavergne, 2001b). With such high legal, social and political stakes and in the wake of an increasingly diverse college-age population, a balanced assessment requires due attention to changes in both the applicant and admit pools, as well as possible changes in the likelihood of admission (enrollment) before and after the *Hopwood* decision.

The number of minority students enrolled in a university is a function of three proportions: the proportion of minority students in the applicant pool; the proportion of minority applicants who are admitted; and the proportion of minority admittees who actually enroll. The second proportion, the proportion of minority applicants who are admitted, is most directly affected by the change in admission policy from affirmative action to a percent plan, but the other two proportions may also be affected. For example, Hirschman (2002) claims that in Washington State, where Initiative 200 banned race-sensitive criteria in admissions, the key to maintaining diversity at the public flagship institution is the applicant pool. Initiative 200 discouraged high school seniors from applying because the proportion of applicants who were African American or Hispanic dropped after the initiative passed.

This paper evaluates the impact of a change in admission regime at the two most selective public institutions in Texas during the 1990s. This period covers several years prior to

and following the prohibition of affirmative action in 1996. We address two questions: (1) How did the change in admission criteria alter the probability of acceptance and enrollment at each institution for African Americans, whites, Hispanics, and Asian Americans? (2) What is the net impact of the changed admission criteria on the likelihood that individual members of these groups would be admitted had they applied under the alternative admissions regime? We use a *non-overlapping groups framework* to simulate an answer to the latter question and in the concluding section consider the most salient question in education since *Brown v. Board of Education*, namely: are there alternative strategies to diversify a campus to garner the benefits of heterogeneity without taking race into account?

Because the demographic composition of Texas is changing rapidly, we first characterize the evolving ethno-racial composition of the college-age population; the pool of high school graduates; and the college-going population during the 1990s. The next section describes the administrative data and summarizes trends in applications, admissions, and enrollment at Texas A&M University and the University of Texas at Austin before and after the *Hopwood* decision ended affirmative action in Texas. Following a discussion of statistical modeling and the non-overlapping groups framework, we present transition probabilities and estimate multivariate logistic regressions to characterize group and institutional differences in admission and enrollment decisions pre- and post-*Hopwood*. The final section considers policy implications, which are particularly important in light of the seemingly endless flurry of journalistic accounts evaluating the trends in college campus diversity and the impending Supreme Court review of *Bakke*.[6]

[6] See, for example, Torres and Hair, 2002; Rimer, 2002; Hockstader, 2002; Fletcher, 2002; Davila and Mayo, 2002; Yardley, 2002, and Jacobson, 2001.

RISING DEMAND FOR HIGHER EDUCATION

In Texas, the system of higher education has experienced rising pressure from three sources: a higher than average demographic growth rate; a young age structure; and, owning to an elevated high school drop-out rate, a relatively undereducated population. The Texas population nearly trebled between 1950 and 2000, but the fastest increases occurred after 1960, when the state recorded double digit growth rates. Between 1970 and 1990, Texas rose from the 4th to 2nd rank based on population size (Leicht and Sullivan, 2000), exceeded only by California. Census 2000 recorded 20.8 million Texas residents—almost one million higher than projected—and a large school-age population. During the 1990s Texas rose from 9th to 5th in the proportion of population under 19 (Leicht and Sullivan, 2000). By 2000, almost one in three (31.4 percent) Texas residents were under age 20, compared with the national population share of 28.6 (U.S. Census Bureau, 2001: Table P12).

A high rate of natural increase coupled with high levels of immigration and differential fertility not only keep the population young, but also diversify the ethno-racial composition of the state. In Texas, the Hispanic population share rose from 25.5 to 32 percent during the 1990s, while other nonwhite races increased their share by about two percentage points (see Table 1).[7] Significantly, the non-Hispanic white population declined 8 percentage points, from 61 to 52 percent. Hispanics are the largest minority group in the State's largest cities, Houston and Dallas (Yardley, 2001). Texas State demographer Murdock and colleagues (2003) predict that Texas will become a "majority-minority" state by 2005. Among the college-age population, whites ceased being a majority during the 1990s; by 2000, their population share fell from 53 to

[7] The race item used in the 2000 census that allowed respondents to select more than one race renders the 1990-2000 comparisons more imprecise than in past years. Thus, the slight decline in the African American population share partly may be an artifact of this change. Also, given the lack of published data on non-Hispanic Whites in Texas, we interpolated population composition and college-age population by adding whites to others and then subtracting Hispanics.

43 percent and the Hispanic share rose from 31 to 40 percent. If all groups had equal access to the public flagships, this demographic momentum could obviate the need for race-sensitive admission policies. That admission and enrollment rates of minority groups have failed to keep pace with population diversification produced a widening gap between the State's population and matriculants at the public flagships.

Table 1 About Here

Two demographic trends provide propitious conditions to sustain or increase minority representation at Texas public institutions after affirmative action was abolished, namely the persisting segregation of Texas schools and the growing share of minority high school graduates. The share of high school graduates who are Hispanic has been increasing over time, because Hispanics are growing much faster than whites, but large disparities in graduation rates persist. By 2000, just under half of Hispanic Texans ages 25 and over graduated from high school, up a meager 4 percentage points from 1990, compared to the statewide average of 76 percent. African Americans and non-Hispanic whites made faster educational progress during the 1990s, increasing their shares of high school graduates among persons ages 25 and over by ten and six percentage points, respectively (Table 1). According to the Texas Education Agency (TEA, 1992), among seniors who graduated in 1991, 55 percent were white, 26 percent Hispanic, 12 percent were African American, and seven percent other races, including Asian Americans (Table 1). In 2000, the white share of high school graduates dropped to 52 percent while the Hispanic and African American shares rose to 32 and 13 percent, respectively (TEA, 2001).

The State's tradition of low tuition for in-state residents makes Texas public institutions attractive relative to more expensive private and out-of-state institutions (Leicht and Sullivan, 2000). Historically, Texas college graduation rates were below the national average, but recent years witnessed a convergence. In 1990, only one in five Texans over the age of 25 had completed a four-year college degree. A decade later 23 percent of the population had done so

compared with the national average of 24 percent (Table 1). Large race and ethnic differentials in college enrollment and completion persist, however. Among Texans ages 25 and over, only 9 percent of Hispanics and 15 percent of African Americans were college graduates in 2000, compared with 30 percent of Whites and 47 percent of Asians (Table 1).[8] The growth of Hispanic high school graduates makes their under-representation among college graduates all the more striking.

Rapid population growth and ethno-racial diversification will continue to place pressure on the public higher education system as increasing numbers compete for spots at the selective institutions. The Texas Higher Education Coordinating Board predicts that enrollment in public universities, community colleges, technical colleges, and private colleges will rise 15 percent between 2000 and 2010 (THECB, 2001). Enrollment at Texas public universities is projected to rise about 14 percent by 2010 compared with 6 percent for the private institutions. That neither of the public flagships plans to increase the size of its entering class poses a social dilemma for equalizing access to under-represented groups. The demographic composition of future college cohorts depends not only on who graduates from what high schools, but also the admission criteria used by public and private colleges and universities. Herein lies the formidable challenge posed by the *Hopwood* decision that prohibits consideration of race or ethnicity in admissions decisions. The top ten percent law is an attempt to restore diversity at the competitive institutions following the judicial bar on affirmative action; its success in doing so is the focus of the rigorous assessment that follows.

ADMISSION AND ENROLLMENT TRENDS PRE- AND POST- *HOPWOOD*

Following the *Hopwood* decision, the Texas legislature directed the Texas Higher Education Coordinating Board (THECB) to study its impact on applications, offers of admission,

[8] We use the term Asians rather than Asian Americans because a large share of the adult Asian population is foreign born.

and enrollment at Texas public institutions of higher education. The Coordinating Board (1998: Executive Summary, p.1) concluded that "The *Hopwood* decision has had a negative impact on the number of African-Americans and Hispanics applying for, being admitted to, and enrolling in the most prestigious and the most selective public higher education institutions and programs in Texas…" Their report was based on trends up to 1997—including just one year after the *Hopwood* ruling and before H.B. 588 went into effect. The impact of the top ten percent law in restoring diversity at selective Texas college campuses was not considered because the 1998 cohort (class of 2002) was the first admitted under the guidelines stipulated by H.B. 588.

Absent rigorous evaluation of application trends and admission decisions, politicians and university administrators focus on final enrollment outcomes since 1997, while media pundits cover the real or imagined effects by documenting particular admissions decisions that support widely held, but unsubstantiated beliefs (Nissimov, 2000; Yardley, 2002).[9] The lion's share of attention has focused on the University of Texas at Austin (UT) and Texas A&M University in College Station (A&M) because they have the most selective admissions policies among Texas public institutions; because both institutions reported that race and ethnicity were considered in their admissions decisions prior to the *Hopwood* decision; and because the demand for slots at these two universities is greatest compared with other public two- and four-year institutions (THECB, 1998).[10] Private institutions in Texas are bound by the *Hopwood* decision, but not by H.B. 588.

Using administrative data provided by the admissions offices from UT and A&M, we examine application, admission, and matriculation trends before and after the *Hopwood*

[9] We have identified over twenty articles and opinion pieces from 1997 through 2000 that discuss changes in Texas college admissions in national and leading regional newspapers.

[10] THECB (1998) identifies eight selective public undergraduate institutions, including the two flagships, and the University of Texas at Dallas, the University of Houston, Texas A&M University-Corpus Christi, the University of North Texas, Southwest Texas State University, and Texas Tech University. We plan to analyze records for 16-18 colleges and universities of varying selectivity, including several private institutions. Data collection for other institutions is not yet complete.

decision.[11] The data consist of individual student records from in-state applicants, admittees, and enrollees at each institution, albeit for slightly different time periods for each university. The UT data are for the years 1990-2000 inclusive, and the A&M data are for the years 1992-2000, inclusive. We restrict the analysis to in-state students from high schools with at least ten seniors because out-of-state students are ineligible for admission under the top ten percent law. Although variable from year to year, approximately 11 percent of all applicants are non-Texas residents. In all, the administrative data files analyzed contain 240,920 applicants (113,365 and 127,555, respectively, from A&M and UT).

To monitor variation in admission and enrollment decisions across high schools, which is an important part of the controversy about the provisions of H.B. 588, school characteristics provided by the National Center for Educational Statistics (www.nces.ed.gov/ccd/data) were appended to the individual administrative records. Appended measures include the percentage of students who are African American and Hispanic, rural-urban location, the percentage of students who receive subsidized lunch, and whether schools include immigrant students. Because NCES records cover only public schools, applicants from private high schools for whom school characteristics are missing were assigned mean values for the continuous measures and were designated as attending urban schools with no immigrants. To minimize biases that result from non-random missing data, all imputations are flagged in the regression analyses and excluded from the descriptive tabulations.[12]

In-state and out-of-state admissions rates differ significantly for both institutions. The in-state admissions rate is about 75 percent for each campus, but the out-of-state admissions rate is much lower—approximately 50 percent. Therefore, the admissions rates reported below are

[11] Before the data were released, all identifying information was removed from the files in accordance with IRB guidelines at UT, A&M, and the institutions of the investigators. It is likely that there is duplication in these files because many students apply to both UT and to A&M. This overlap does not affect the analyses statistically because both the institutional files are analyzed separately.

[12] Missing value substitution does not affect the estimates or inferences. Only 4 and 5.5 percent, respectively, of applicants to A&M and UT were from private high schools.

higher than the averages reported in total campus summaries. Furthermore, we exclude summer admission cohorts because fall admissions are the source of most public controversy over changing admissions plans; because the missions of summer admissions programs have changed over time; and because summer admission to both campuses is often easier to pursue than fall admission. Summer applicants would increase the size of applicant cohorts by three to five-hundred students at Texas A&M and between 500 and 1000 students at UT-Austin, with greater numbers of summer applicants and enrollees following the *Hopwood* decision.[13]

The admissions decision is far easier to study than the application decision because potential students must initiate contact with an institution as an applicant and they generate a "paper trail" that can be subjected to statistical analysis.[14] Our analysis of administrative records builds on that paper trail by examining whether the probability of admission and enrollment changed after affirmative action was banned. Although it is tempting to evaluate the consequences of the changed admission criteria on the basis of who actually enrolls, to do so masks important information about how probabilities of admission and enrollment have changed over time and for which demographic groups.

Trends in Applications, Admissions, and Enrollment

For perspective, the UT-Austin campus is the largest in the U.S., featuring a student body of just under 50 thousand in 2000; Texas A&M enrollment was just over 45 thousand in that year. Undergraduates represent 76 and 82 percent, respectively, of their student body, and the

[13] The composition of summer applicants and enrollees also has changed over time, with higher shares of affluent, nonminority students opting for this route in recent years.

[14] The importance of this point can not be overstated. Estrada claimed that Texas graduates 21 thousand students ranked in the top ten percent of their classes, yet only 11 thousand enroll in Texas public colleges and universities. Whether or where the rest enroll can not easily be discerned from administrative data. As a further part of our current study, therefore, we conducted a representative survey of Texas public high school seniors and sophomores to learn more about college decision-making. See www.texastop10.princeton.edu/surveys.

freshman class alone constitutes about one quarter of all students.[15] Changing admissions criteria can influence the size and the composition of applicant pools if prospective applicants perceive higher or lower acceptance probabilities as they learn about the *Hopwood* decision and the provisions of the top ten percent law. For example, minority students may perceive a lower chance of admission after affirmative action was eliminated, even if they are highly qualified, or they may believe that needed financial aid will not be forthcoming since it also can not be targeted. Furthermore, if students assume that NOT ranking in the top ten percent of their class precludes their admission, then they may be disinclined to apply. Alternatively, high achieving students with average test scores may have been disinclined to apply before the *Hopwood* decision and more likely to do so after H.B. 588 was passed.

Figure 1, which depicts application, admission and enrollment trends for *in-state students* during the 1990s, reveals many similarities between institutions. Both universities received over ten thousand applications annually over the observation period, and the number of applications rose gradually over time, except for a significant dip at UT in 1997, the year following the *Hopwood* decision, and at A&M a more modest dip in 1998, the year after H.B. 588 was implemented.[16] Since 1998 the number of applicants has risen steeply at both institutions, but especially at A&M.

Figure 1 About Here

The most pronounced changes in fall application trends begin after fall 1996, which also was the last class benefiting from affirmative action. However, this early change is probably not related to the law school's legal battle, but possibly to the newly implemented three-essay requirement that took effect in 1997. The following year, the number of required essays was

[15] For A&M, see www.tamu.edu/OPIR/reports/student enrollment profile, fall 2000; for UT see www.utexas.edu/student/admissions/stuprofile/2001.html.

[16] Although the top ten percent law was passed during the 1997 session (January-May) of the Texas legislature, its implementation did not affect the class entering in fall 1997, whose applications were being received even as the legislature met. The first affected class matriculated in 1998.

lowered to two.[17] During the observation period, the fall admission cohort rose 10 percent at A&M and 31 percent at UT, while fall enrollments increased approximately 12 and 25 percent, respectively. The application and admission figures depicted in Figure 1 imply institutional admission rates in the mid- to low 70s, which is generous for the two most selective public institutions. Of course, faster growth in the applications relative to admissions implies higher rejection rates. Since 1998, as the number of applications rose the fall admission rate has been falling. In 2000, UT increased the size of the entering class in response to the rising share of applicants who graduated at the top of their class, (Faulkner, 2000), but the number admitted is expected to decrease in future years to stabilize the size of the student body. The institutional goal is to reduce the size of the UT freshman class by 1000, from approximately 8,000 to 7,000, including both fall and summer admittees.[18]

Following the *Hopwood* decision, both universities modified their outreach strategies to publicize the top ten percent law. For example, each year UT and A&M send all graduating seniors a letter signed by the governor that bears the names of all Texas public institutions (provided their districts cooperate by furnishing the addresses).[19] Furthermore, both institutions have engaged in unprecedented outreach activities and developed scholarship packages designed to attract students from schools throughout the state that historically sent very few, if any, students to their campuses (THECB, 1998). Most of these high schools have relatively large economically disadvantaged and minority student bodies. The most publicized program, UT's Longhorn Scholars, provides financial aid to the neediest students. Minority students can not be targeted for these scholarships, however. In 2002, A&M implemented the Century Scholars program, modeled after the UT Longhorn Scholars, which provides full scholarships to high

[17] Personal e-mail communication, Bruce Walker, 16 January, 2003.
[18] E-mail communication, Bruce Walker, 3 January, 2003. Figure 1 shows the matriculant class at about 6100 in 2000, but this excludes foreign, out-of-state, and summer matriculants.
[19] In an interview with Vice Provost for Enrollment Joe Estrada and Director of Admissions Frank Ashley on 21 October, 2002 at Texas A&M University, we learned that some high school administrators refuse to provide the names and addresses of seniors to receive the governor's letter without written parental consent. One of their largest recruiting areas refused to provide the names of graduating seniors.

performing students from 20 targeted lower achieving high schools each in Dallas and Houston—the State's two largest cities.[20] In return, the Century Scholars must agree to become A&M ambassadors for their own high schools.

Of course, the final composition of first-time enrollees, which is the focus of the media and public commentary, depends not only on the composition of applicant and admission pools, but also who actually matriculates. Yield rates are governed by many factors, but for students from low-performing schools, financial considerations loom large in their matriculation decisions.[21] Most college aspirants apply to multiple institutions that vary in selectivity. In deciding where to enroll, students (and parents) assess their favorable admission options and make subjective evaluations based on academic, economic, and noneconomic considerations.

Characteristics of Applicants, Admittees, and Enrollees[22]

Table 2 summarizes changes in the composition of students who applied, were admitted to, and enrolled at A&M and UT during the 1990s. By comparison to the demographic composition of Texas high school graduates (Table 1) African Americans and Hispanics were highly under-represented in the applicant, admittee and enrollee pools of the two public flagships and became more so post-*Hopwood*, with the sole exception of African American applicants to UT. By contrast, Asian American representation rose in all pools after 1996, with the sole exception of A&M matriculants. Although the changes in minority representation among applicants are statistically significant, the magnitude of most differences is substantively small. Nevertheless, because the volume of applications is very large and growing, the absolute number of students affected is substantial.

[20] Interview with Joe Estrada, associate vice provost, and Frank Ashley, director of admissions, Texas A&M University, College Station, Texas, October 21, 2002.
[21] Interview with Estrada and Ashley, October 21, 2002. Based on a survey of students admitted who do not enroll.
[22] The numbers reported exclude Native American applicants, admittees, and enrollees as well as students who do not report a membership category. Although the share of students who do not self-identify has been rising, it is a tiny share of the total—never exceeding 2 percentage points for any of the pools.

Table 2 About Here

Concerns that seniors who do not graduate in the top decile of their class may be discouraged from applying to the public flagships find mixed support. At UT, the share of top ten percent applicants remained unchanged, but A&M witnessed a 2.8 point *decline* in the number of applicants who *did* graduate in the top decile of their senior class. By contrast, the share of A&M applicants who graduated in the second decile of their senior class remained unchanged, while the respective UT share fell slightly (1.4 points). Because the top ten percent law guarantees admission, it is conceivable that some top ten percent graduates who would have applied to A&M as a backup to UT (or vice versa) no longer considered multiple applications necessary.[23]

Mirroring trends in applications, shares of admitted students who are African American and Hispanic fell at both institutions after *Hopwood*, while the Asian American share of admitted students rose 4.2 percentage points at UT and a scant half percent at A&M. African American representation in the admit pools of the public flagships, which was very low relative to the population of high school graduates before *Hopwood*, fell 1.4 and 0.4 points at A&M and UT, respectively, after 1996. More striking is the drop in Hispanic representation in the A&M and UT admission pools after race-sensitive admissions were declared illegal—3.6 and 3.2 points respectively, even as their eligible population shares rose appreciably. Increased Asian American representation among admitted UT applicants came at the expense of African American and Hispanic applicants because the share of white admittees remained essentially unchanged post-*Hopwood.* At A&M, white students reaped the greatest admission gains as the African American and Hispanic shares fell.

That the class rank composition of students admitted to the Texas flagship institutions changed very little after *Hopwood* is unremarkable because prior to 1996 ranking in the top

[23] This is an empirical question that can not be addressed with administrative data because, unlike graduate school records, students are not required to indicate which alternate universities they are considering. We plan to evaluate college decision-making based on the statewide survey of Texas college seniors conducted during spring, 2002.

decile of their senior class virtually ensured admission. This changed at UT in 1997, when essay requirements were introduced and before H.B. 588 went into effect. Both before and after race sensitive admissions were permitted, roughly three out of four students admitted to these selective campuses ranked in the top two deciles of their senior class. The only caveat is that A&M lost a slight edge in its ability to attract top ten percent graduates after *Hopwood*.

Most students apply to multiple institutions, hence only a fraction of admittees will actually enroll at either flagship. A&M's matriculant pool became significantly whiter after the *Hopwood* ruling, as the combined share of first time enrolled African American and Hispanic students fell by nearly five percentage points while the Asian American share remained unchanged. At UT the Asian American share of enrollees rose 4.2 percentage points after *Hopwood*, mostly at the expense of African American and Hispanic (2.8 points), but also white (1.4 points) admittees.

The variable "feeder school" indexes the top 20 high schools based on the total number of students admitted each to UT and A&M in 2000. Because of considerable overlap in feeder schools to both institutions, only 28 high schools are designated major feeders. In 2000, the 20 primary feeder high schools accounted for 12 percent of all A&M admits and 23.3 percent of enrollees; the corresponding figures for UT-Austin are 23 percent of all admits and 35 percent of all enrollees. Both institutions witnessed an *increase* in applications from the major feeder schools after 1996, and the shares of feeder school applicants admitted to both institutions also rose after *Hopwood*. Although the share of A&M enrollees from the major feeder schools was unchanged between admission regimes, the share of matriculants from major feeder schools *increased* at UT after 1996. Thus, there is no *prima facie* evidence that students from the traditional feeder schools have been hurt by the top ten percent law, as alleged in the public media (e.g., Nissimov, 2000; Yardley, 2002).

To summarize, changes in the demographic composition of applicant, admittee, and matriculant pools reveal many statistically significant, but substantively small differences before and after the *Hopwood* decision. However, the absolute numbers of students affected by the changed admission regime is substantial. Using the pre-*Hopwood* distribution as a standard, at UT the implications are 980 fewer African Americans and Hispanics (245 and 735, respectively) and 490 fewer whites enrolled, compared with 1,469 more Asian Americans enrolled. Disallowing race-sensitive admissions at A&M implied enrollment of 1,179 fewer African Americans and Hispanics (268 and 911, respectively) and 884 more whites, as well as 53 fewer Asian Americans.

The results reported in Table 2 are the product of three probabilities: the probability of applying; the probability of admission, contingent on application; and the probability of matriculation, conditional on admission.[24] Presumably, these chances differ for demographic groups. Accordingly, Table 3 reports the group-specific admission and enrollment probabilities at each institution before and after affirmative action was banned, including t-tests for differences between the two admission regimes.

Table 3 About Here

The consequences of the change in admission regime were not uniform among demographic groups or between institutions. White students' probability of admission *rose* at UT (74 vs. 81 percent), but not at A&M after affirmative action was banned. African American applicants' admission probability plummeted from 75 to 58 percent post-*Hopwood* at A&M, but declined less than 2 percent points at UT. The lower Hispanic admission probability at UT after 1996 was substantively trivial (albeit statistically significant), but Hispanic A&M applicants were significantly less likely to be admitted after the *Hopwood* decision—68 versus 80 percent.

[24] We can not estimate the probability of applying with institutional administrative records, which require information from high school seniors. For this purpose we have collected information about college decision-making from a representative sample of the 2002 Texas senior class.

Asian American students benefited most from the new guidelines at UT, where their chances of admission rose about 10 percentage points, but not at A&M.

That both flagships always weighed class rank heavily in their admissions decisions explains why the admission probability of top ten percent graduates approached certainty before 1996.[25] Allegations that the top ten percent law privileges students from low performing high schools while crowding out highly capable students from affluent schools are unsubstantiated (see Yardley, 2002; Nissimov, 2000). In fact, *the admission probability of students ranked in the second decile actually rose at both institutions, but most especially at UT*. This is just the opposite of the image portrayed by media pundits and parents of disgruntled students denied admission at the public flagships. Figure 1 suggests that the real problem is a growing demand for a relatively fixed number of slots. After the *Hopwood* decision applicants from the major feeder high schools were more likely to be admitted to UT, but not to A&M.

Although the political and legal debates about affirmative action and the top ten percent law are about *who* is granted and denied *admission* to the most selective institutions, judgments about the success of these policies are usually made on the basis of actual enrollment. Table 3 reveals that changes in matriculation probabilities partially offset the lower admission probabilities for some groups post-*Hopwood*. That enrollment probabilities did not decline for African Americans and Hispanics at either institution after 1996 testifies to the success of new outreach strategies to recruit admissible applicants from high schools that lacked strong college traditions. For African Americans, the probability of enrollment conditional on admission was virtually unchanged by the post-1996 admission regime. However, Hispanic and Asian American students admitted to UT were more likely to enroll post-compared to pre-*Hopwood*. Likewise, the enrollment probability of white students admitted to both institutions rose after 1996.

[25] Because the top ten percent law did not go into effect until 1998, top ranked students were not admitted with absolute certainty in 1997. This explains why the probability is not exactly 1 in Table 3.

Top ten percent graduates were slightly more likely to enroll at UT after 1996 compared with the pre-*Hopwood* era, but at A&M they were equally likely to do so. Between 1997 and 2000, three in five top ten percent applicants admitted to either institution actually matriculated. More noteworthy is evidence that students ranked in the second decile were five percent *more* likely to enroll at UT following the *Hopwood* decision, and two percent more likely to do so at A&M. However, students from the dominant feeder schools were significantly less likely to matriculate at A&M after *Hopwood*, but equally likely to enroll at UT, conditional on being admitted.

The admission and enrollment probabilities provide a coarse appraisal of the consequences of changed admission policies for students of varying race, ethnicity, class rank and type of school attended. However, the comparisons are less instructive about net impacts because demographic groups' class rank distribution depends on school segregation patterns as well as individual academic achievement. Furthermore, students ranked in the top ten percent of their class had a very high likelihood of admission before *Hopwood*, hence the net impact of the change in admissions criteria can not be clearly discerned from aggregate distributions or crude probabilities. The core political and legal question, of course, is how many and which students accepted under affirmative action would risk rejection had they applied post-*Hopwood*, and vice versa. To address this question we turn to a multivariate analysis of admissions and enrollment decisions and simulate non-overlapping groups.

MULTIVARIATE ANALYSES

The repeated cross-sectional data spanning the period before and after the *Hopwood* decision approximates a quasi-natural experiment for evaluating the statewide change in the admissions regimes of selective public universities. Figure 2, which depicts the "non-overlapping groups" framework, identifies four mutually exclusive groups of students based on their admission chances under both regimes. These include two "overlapping groups," namely

students who are admissible under either regime and students who would be denied admission under either regime, and two "non-overlapping groups," namely applicants at risk of *denial* under affirmative action who likely would be *admitted* under the top ten percent law, and students likely to be *admitted* under the regime permitting affirmative action who are at risk of denial under the top ten percent law. The latter two groups are of greatest interest because their status depends most directly on the change in admission policy.

Figure 2 About Here

Because students apply for college admission under either (but not both) regime, we cannot directly compare odds of acceptance before and after the *Hopwood* ruling for individual applicants. Therefore, we use regression techniques to simulate the non-overlapping groups, focusing on pre-*Hopwood* applicants whose admission decision is known and assessing their likely outcomes post-*Hopwood*. This strategy allows us to characterize applicants "at risk" of being admitted (denied) after the *Hopwood* decision who were denied (admitted) before 1996—that is, the "non-overlapping groups."

Models

Because admission was virtually certain for top ten percent graduates before 1996 and judicially guaranteed after that date, it is statistically meaningless to predict their acceptance during the latter regime. Therefore, the statistical models predicting admission before and after 1996 exclude top ten percent graduates, focusing on applicants ranked below the 90th percentile.[26] Analyses of enrollment, however, do not require this restriction because the matriculation decision is an individual option rather than an institutional choice constrained by law.

[26] The point estimates for all of the covariates except for the rank and minority groups are virtually identical whether or not the top ten percent applicants are included. The difference coefficients for the rank variable simply reflect the change of reference category.

To simulate the non-overlapping groups, we estimate separate logistic regression equations predicting the log odds of admission (enrollment) to each university before and after the *Hopwood* ruling, conditional on application (admission). That is,

$$\text{Log } [p/(1-p)]_b = X_b\beta_b, \quad (1)$$

$$\text{Log } [p/(1-p)]_a = X_a\beta_a, \quad (2)$$

where the "b" and "a" subscripts refer to the time period before and after the *Hopwood* decision, respectively, and X is a vector of covariates that influence decisions to admit (enroll). Because race cannot figure into college admission decisions after 1996, we expect that African American and Hispanic admission odds will decline relative to whites ($\beta_a<\beta_b$), net of other covariates that are systematically related to college admissibility. Whether the likelihood of matriculation changes as well and for whom is an empirical question, but we have no theoretical basis for *a priori* expectations.

The covariates of admission (enrollment) include four student attributes, namely group membership, class rank, feeder school status, standardized test scores, several high school characteristics, and year. Group membership is indexed by a series of dummy variables for African Americans, Asian Americans, and Hispanics, using whites as a reference group; class rank is measured in three percentile categories that contrast students ranked in the top two deciles against those at or below the 79th percentile; feeder school status denotes whether the applicant attended one of the 28 dominant feeder schools; and test scores are represented as continuous percentile rankings.[27] The models also control for sex of applicant, using males as the reference category.

High school characteristics used to predict the odds of admission (matriculation) include rural location, the minority composition of the student body, the share of students receiving free

[27] These rankings were computed from the applicant records rather than the actual score reports. As such, they reflect the norm of applicants to the Texas public flagships.

or reduced lunches,[28] and a dummy variable indicating whether applicants attended schools with immigrant students. Controls for high school racial and socioeconomic composition (i.e., free lunch recipients) and the location index are used to gauge changes in sources of applicants and enrollees between admission regimes. Including application year as a control monitors annual variation in the number of applicants to each institution as well as other unmeasured changes in the admissions system that are not detectable with administrative records (e.g., the essay requirement). Appendix Table A reports means and standard deviations of all covariates included in the multivariate analyses.

Admission Probabilities, pre- and post-Hopwood

Table 4 reports how the relative odds of admission for students ranked below the 90th percentile of their class changed at A&M and UT after the *Hopwood* ruling.[29] Although African Americans and Hispanics were under-represented at the two flagship campuses relative to their population shares before the *Hopwood* decision, their under-representation would have been even greater in the absence of race-sensitive policies. Before *Hopwood*, the odds of admission to A&M for African Americans and Hispanics ranked below the top decile of their class were 4.0 and 3.9 times the corresponding odds for statistically equivalent whites, and at UT the respective odds were 4.8 and 4.2. After *Hopwood*, African Americans and Hispanics ranked below the top decile of their class had 30% *lower* odds of admission to A&M than whites, everything else being equal. At UT, however, there were no significant ethnic differences in the admission odds of students ranked below the top ten percent of their class after affirmative action was banned. Asian Americans who applied to A&M before 1996 had 20 percent lower odds of admission than whites with similar test scores and class rank; after *Hopwood* they had 49 percent lower odds of

[28] Because the administrative records lack family economic characteristics, we proxy these influences with school-level attributes (e.g., percent of students that receive free or subsidized lunches).
[29] The logit estimates with asymptotic standard errors are reported in Appendix B.

admission than whites, so their relative disadvantage increased. At UT, however, the slight admission disadvantage of Asian Americans relative to comparable white applicants was eliminated after the *Hopwood* ruling.

Table 4 About Here

Test scores, which *are* considered in the admissions decisions of all students ranked below the 90th percentile, significantly influence the odds of admission to the Texas flagships. For applicants not ranked in the top ten percent of their class, each percentile increase in standardized test scores increased the odds of admission before *Hopwood* by 17 and 21 percent at A&M and UT, respectively; after affirmative action was judicially banned, these odds dropped to 11 and 20 percent, respectively. Even more striking are the greatly increased odds of admission to UT post-*Hopwood* for applicants ranked in the second decile (80th-89th percentile) of their class relative to their statistical counterparts ranked below the 80th percentile. Specifically, before 1996 the odds of admission to UT for applicants ranked in the second decile were 4.4 times the odds of their statistical counterparts ranked below the 80th percentile, but after 1996 this odds ratio skyrocketed to 8.4. However, at A&M, the admission advantage of second decile applicants relative to lower ranked applicants remained practically unchanged before and after *Hopwood* and H.B. 588, other things being equal.

The results for high school contexts are instructive about changes in higher educational opportunity in Texas. Several findings are noteworthy in light of the growing controversy about how the top ten percent policy allegedly restricts access to the public flagships for applicants from affluent schools. The ethno-racial composition of applicants' high schools did not influence the odds of admission at either institution before or after 1996, indicating that students from highly segregated schools were not accorded preferential admission status either prior to or after the *Hopwood* decision. However, applicants from economically disadvantaged high schools enjoyed a modest admissions advantage before *Hopwood* at A&M, and at both institutions after

the decision. Specifically, a 10 percent increase in the proportion of students who received subsidized lunches raised the odds of admission to UT after 1996 by 11 percent, and the odds of admission to A&M by 9 percent before and by 22 percent after *Hopwood*.[30] Most likely, this reflects the outreach activities targeted to low income public high schools by officials at both institutions. Equally impressive are the increased odds of admission for applicants from rural high schools. Before *Hopwood* they had a slight advantage over comparable urban students (7 and 3 percent higher odds of admission at A&M and UT, respectively), but after *Hopwood* their relative advantage increased to 45 percent higher odds at A&M and 50 percent higher odds at UT. This result supports Montejano's (2001) claims that the biggest impact of the top ten percent law is in diversifying the geographic composition of students admitted to the public flagships.

A&M applicants from feeder high schools have no apparent admission advantage relative to graduates from nonfeeder schools either before or after affirmative action was banned. However, it is puzzling that UT applicants from the major feeder high schools experienced lower admission odds than their statistical counterparts who attended nonfeeder schools at both time periods. This counter-intuitive result occurs because of the strong relationship between feeder school attendance and high standardized test scores. With test scores removed from the models, the feeder high school index significantly increases the odds of admission at both institutions relative to students from nonfeeder schools by 18 and 27 percent at A&M and UT, respectively.[31] This indicates that for students not ranked in the top ten percent of their class the feeder school advantage operates through other attributes considered by admission officers.

Nevertheless, allegations abound in the public media that the top ten percent law is a disguised affirmative action plan that privileges highly ranked students from low performing high schools relative to applicants from affluent high schools that offer more rigorous curricula. To address this politically contentious issue, we first tabulate the probability of admission by

[30] Derived by exponentiating the logistic coefficient multiplied by 10. See Appendix B.
[31] Results available upon request.

decile rank before and after 1996, and subsequently compute statistical interactions between second decile rank and both group membership dummy variables and feeder school status that control for attributes that may influence the admission decision for applicants not ranked at the top of their class. In effect, the disaggregated admission probabilities relax the implicit assumption in Table 3 that rank-specific admission probabilities are uniform among demographic groups and feeder school applicants.

Table 5 displays the distribution of applicants according to their class rank (top two deciles versus the rest) and the corresponding admission rates. Pre-*Hopwood*, white applicants to A&M who ranked in the top ten percent of their class had a slightly higher chance of admission compared with other groups, but not at UT, where the admission rates were more uniform among top ten percent graduates. Post-*Hopwood*, the admission probability of the highest achieving students were equalized along race and ethnic lines. UT applicants from the major feeder high schools who were ranked in the first and second decile of their class faced admission chances of only 92 and 89 percent, respectively before the *Hopwood* decision; after 1996, the admission rate of these students reached 100 percent. Hence, the public outcry about their worsened admission prospects is unwarranted. These applicants exercise their advantages through the required essays and their higher test scores.

Table 5 About Here

The controversy about the changed admissions guidelines apparently revolves around the fate of applicants ranked in the second decile of the class rank distribution, but also the third decile and below. Yet, the tabular results question the justification for the mounting criticisms about H.B. 588. When affirmative action was legal, feeder high school applicants to A&M who were ranked in the second decile of their class did face a more favorable admission probability than after its demise, 93 versus 87 percent, but the share of applicants ranked in 80^{th} to 89^{th} percentile also fell, so the net decline in the share admitted was only 3 percentage points.

Furthermore, this drop occurred during a period when the number of applications to A&M skyrocketed (Figure 1). The A&M admission probability of applicants from major feeder high schools who ranked at the third decile or below also fell—from 59 to 52 percent after *Hopwood*, but the share of A&M feeder school applicants ranked at or below the third decile rose appreciably, from 55 percent before 1996 to 62 percent after that date. These off-setting changes in the number of applicants and the probability of admission completely offset each other. Thus, criticisms that top ten percent applicants from low performing schools "crowd out" qualified applicants ranked in the second decile is without merit.

The imprint of race-sensitive admissions prior to 1997 is evident in the admission probabilities of African American and Hispanic applicants ranked below the top ten percent. Among African American and Hispanic applicants to A&M who ranked in the second decile of their class, about 86 percent were admitted pre-*Hopwood*, compared to 80 percent of whites and only 73 percent of similarly ranked Asian American applicants. Despite their higher admission probability, their numbers were dwarfed by the much smaller applicant pool compared to whites (Table 2). After *Hopwood*, the A&M admission probability of second decile African American and Hispanic applicants fell 8 to 12 points, respectively, below that of comparably ranked white students. Furthermore, among applicants ranked at the 79th percentile or below (third decile), disparities in admission probabilities favoring whites widened even more after affirmative action was banned.

At UT, a similar story emerges except that disparities in pre-*Hopwood* admission probabilities between minority and white applicants were considerably smaller—almost negligible. Post-*Hopwood*, Asian American UT applicants ranked below the top decile faced a slightly higher admission probability than whites, but considerably higher than either African American or Hispanic applicants. The differences in admission probabilities favoring whites and

Asians over African Americans and Hispanics are on the order of 12 to 15 percent points for second decile graduates, and even higher for applicants ranked below the 79th percentile.

Because these admission probabilities do not take into account other student and school attributes that are systematically related to the odds of admission, we model the statistical interactions portrayed in Table 5. Table 6 reports the odds ratios corresponding to these probabilities that have been purged of the effects of the other covariates that influence admission decisions.[32] The odds ratios in the top panel reflect the admission odds for minority (compared to white) and feeder high school applicants (compared to applicants from other schools) who ranked at or below the 79th percentile of their class. The middle panel shows the effect of ranking in the second decile, compared to below the 80th percentile, for white applicants who did not attend one of the major feeder schools. The lower panel odds ratios can be interpreted as *additional* effects of being in the second decile, compared to below the 80th percentile, for minorities or for students who attended a major feeder high school.

Table 6 About Here

That the main effects for minority groups and feeder high school applicants are very similar to the odds ratios reported in Table 4 inspires confidence in the robustness of the estimates.[33] A statistically insignificant interaction term implies that the second decile advantage is the same for applicants from the various ethnic or feeder school categories, or equivalently that the ethnic or feeder school differential is the same at the second decile as it is for applicants below the 80th percentile in class rank. Two findings are particularly noteworthy. First, with the sole exception of UT African Americans post-*Hopwood*, the race/ethnic interaction terms with class rank do not reach statistical significance. The only significant term implies that the post-*Hopwood* advantage of second decile applicants relative to applicants ranked below the 80th

[32] The full results are available in Appendix C.
[33] Further confidence derives from the virtually identical estimates that result if each interaction term is introduced separately.

percentile is 42 percent smaller for African Americans than for whites, everything else being equal. Second, the significant interaction terms with feeder school status indicate that applicants ranked in the second decile of a major feeder high school class faced a significantly *higher* chance of acceptance than applicants ranked in the second decile of a non-feeder school before the *Hopwood* decision at both institutions—on the order of 111 percent at A&M and 28 percent at UT. This advantage vanished after 1996 at A&M, but it increased 32 percent at UT. Thus, even after taking into account other factors that govern admissions, the inferences from Table 5 hold up. At least for UT, the media hype criticizing H.B. 588 for disadvantaging applicants from the major feeder high schools who were not ranked in the top ten percent of their class is groundless. At A&M, this playing field has been leveled, and there is no evidence that second decile students from the major feeder schools are disadvantaged in their odds of admission.

Several additional results warrant comment. Before the *Hopwood* decision, white applicants who were ranked in second decile of their class (the "top 11 – 20 percent") had odds of admission to A&M or UT 4.1 and 4.3 times, respectively, the corresponding odds for white applicants ranked below the second decile. After affirmative action was banned, these odds ratios rose to 4.6 at A&M and a whopping 7.9 at UT. (Because of the lack of significant interactions, these ratios apply also to the various minorities, except for African Americans applying to UT post-*Hopwood* UT.) Furthermore the odds ratios for minority applicants imply that "affirmative action" decisions largely involved students ranked below the 80th percentile of their class. Before *Hopwood*, the odds of admission for African American applicants to A&M and UT who were ranked below the second decile of their class were, respectively, 4.1 and 4.9 times the corresponding odds for similarly ranked white applicants. After affirmative action was banned their odds were not significantly different from whites at UT and 30% *lower* than for whites at A&M. Similarly, Hispanic applicants ranked below the 80th percentile of their class were admitted to A&M and UT with odds 3.7 and 4.1 times those of similarly ranked whites.

These odds were equalized at UT post-*Hopwood*, but fell 25 percent below equality at A&M. Asian American applicants ranked below the second decile confront similar admission odds as whites at UT throughout the period, but at A&M Asian Americans ranked below the second decile were less likely to be admitted than similarly ranked whites, particularly after *Hopwood*.

Overall, the results predicting admissions probabilities during the 1990s reveal substantial changes in the structure of opportunities for African American, white, Hispanic and Asian origin applicants. On the one hand, H.B. 588 leveled the playing field for students ranked in the top decile of their class by equalizing their nearly equal odds of admission pre-1996. This change actually benefited high achieving minority students who may have been rejected for low test scores or poor essays before the top ten percent law was implemented in 1998. On the other hand, *Hopwood* reversed the favorable admission probability enjoyed by minority applicants who graduated in the second decile of their class. This reversal benefits white applicants, and especially Asian Americans seeking admission to UT. Applicants from the major feeder schools who do not rank in the top decile of their class also significantly increased their admission chances at UT after affirmative action was banned.

In the arena where admissions officers exercised greatest discretion, namely *below* the second decile of the rank distribution, current guidelines completely eliminate any minority admission advantage at UT, and produce a clear race and ethnic penalty at A&M, particularly for Asian Americans. The admission advantage enjoyed at A&M by second decile feeder high school applicants prior to the *Hopwood* decision was eliminated after 1996, while at UT their admission advantage was doubled! Moreover, the admission advantage of white applicants ranked in the second decile of the class rank rose slightly at A&M, and was almost doubled at UT after race sensitive admissions were prohibited. Obviously, the top ten percent plan is *not* a disguised affirmative action plan.

The non-overlapping groups framework displayed in Figure 2 summarizes the "costs" of the change in admission regimes by identifying groups that are most likely to be affected by changes in college admissions after the *Hopwood* decision. In the simulation we use the estimates predicting admission odds for the post-*Hopwood* years (Table 4) and apply them to the pre-*Hopwood* applicant pools to identify students at risk of changing admission status across regimes.[34] Typically, such exercises use mean values of the covariates to estimate differences in the probability of admission. The major problem with assessing differences based only on mean values is that the average student so derived does not exist. Accordingly, we use actual student characteristics to derive profiles of students "at risk" of changing admission status under the two admissions regimes, namely the "non-overlapping" groups. The average admissions rate for in-state students at each campus is around 75 percent for the period analyzed. Therefore the simulation exercise classifies students as having a high probability of rejection (acceptance) if their admissions chances fall below (rise above) the overall acceptance rate of 75 percent. That the pattern of results does not change if the threshold is lowered to 50 percent inspires confidence in the robustness of the results. Nevertheless, a lower acceptance rate implies that a greater number of students are affected, which is likely in the future if the number of applications continues to rise. This consideration is crucially important in view of the trends depicted in Figure 1, which show a steady rise in the number of applicants but not admittees.

Table 7, which presents the simulation results, shows highly consistent patterns across institutions. First, on both campuses, the change in admissions regime potentially affects only about one-quarter of the pre-*Hopwood* applicant pool (27 and 24 percent at A&M and UT, respectively). Stated differently, at least three out of four pre-*Hopwood* applicants would have received the same decision had they applied after 1996—that is, the overlapping groups or

[34] Students ranked in the top decile of their class were excluded from this exercise because their admission odds are known to be extremely high before *Hopwood* and certain after 1997. Table 5 confirms no group differences in the odds of admission for the highest academic achievers at either institution.

decisions.[35] The large number of students potentially affected by the changed admissions guidelines partly explains the public criticism of the top ten percent law, which is probably also blamed for denials that likely would have obtained even under the affirmative action regime. Although a relatively small subset of the total applicant pool, rejected students in the non-overlapping group and their parents are the source of most complaints about the "unfairness" of the top ten percent law.

Second, among the non-overlapping groups, namely students at risk of a different decision before and after affirmative action was banned, the number of rejected applicants potentially at risk of acceptance is 2.4 (UT) to 3.2 (A&M) times the number of accepted students at risk of rejection post-*Hopwood*. This is politically significant because, with a relatively fixed number of admission slots, an even substitution of rejected for accepted applicants among the non-overlapping decisions pre- and post-*Hopwood* would still require rejecting more than half of the "potentially admissible applicants" under the new regime. Moreover, based on sheer numbers, the potential for disgruntlement, whether justified or not, is appreciably greater for the applicants rejected before 1996 who might have been accepted had they faced the post-*Hopwood* admission criteria.

Table 7 About Here

There are also similarities between institutions in the composition of the simulated groups. Consistent with the results reported in Tables 5 and 6, students ranked below the top decile of their senior class who were admitted pre-*Hopwood* and are at risk of post-*Hopwood* rejection are significantly more likely to be African American and Hispanic, and less likely to be white. At A&M, these applicants also are more likely to be Asian American than white, but not at UT, where students admitted before 1996 designated at risk at rejection after affirmative action was banned are less likely to be Asian American. At both institutions pre-*Hopwood*

[35] The overlapping groups are the sum of the "no" columns—i.e., no decision change—within institution divided by the total number of applicants.

admittees who are at risk of rejection post-*Hopwood* are slightly *less* likely to hail from the major feeder schools (12.5 vs. 16.9 percent at A&M and 23 vs. 25 percent at UT), contrary to the opinions of parents whose children attend these schools.

These results can be used to estimate the approximate effect of affirmative action on admission outcomes before the *Hopwood* decision. Representing approximately 7 percent of all applicants at both institutions, African American and Hispanic students classified in the non-overlapping group that was accepted before 1996 but was at risk of rejection after the *Hopwood* ruling imply that a *maximum* of 5 percent of all acceptances might be attributed to affirmative action at both institutions.[36] This assumes that *all* African American and Hispanic students were admitted using race sensitive criteria, which is highly unlikely.

For the pool of pre-*Hopwood* rejects at risk of acceptance post-*Hopwood*, about half the rejected students are likely to change admission status after affirmative action is banned. This group, which comprises 53 percent of rejected applicants at A&M and 44 percent at UT who are at risk of acceptance post-*Hopwood* is almost the mirror opposite of the alternative risk group. Compared with the overlapping pool of students rejected before affirmative action was banned, those at risk of acceptance post-*Hopwood* are disproportionately white (88 and 78 percent at A&M and UT, respectively), while African American and Hispanic students combined represent only 7 to 10 percent of this pool at A&M and UT, respectively.

Changes in the admission fate of students ranked at or below the third decile are also instructive about the impact of the *Hopwood* decision. Before 1996, admission probabilities of students ranked at or below the third decile are below average at both institutions, respectively 52 and 53 percent, respectively, for A&M and UT before *Hopwood*; after 1996 these admission probabilities fell at A&M to 47 percent and rose at UT to 59 percent (see Table 5). Thus, it is unsurprising that a large share of the applicant pool ranked at or below the third decile before

[36] To illustrate this calculation using A&M, [(.146 + .287) * 2440]/22,670.

1996 was at risk of rejection after that date. The difference between the overlapping and non-overlapping pools was in excess of 40 percent at both institutions. In absolute terms, this group is the smallest of the four possible pools depicted in Figure 2, which further underscores that affirmative action involved a relatively small share of the admit pool.

The non-overlapping groups method is a simple, but powerful, method for characterizing the consequences of the change in admission opportunities when criteria for acceptance change. These results are germane for court cases concerned with the plight of rejected students seeking legal redress when denied admission to selective universities on the grounds that their rights of equal protection have been violated. The simulation also reveals an important supplementary piece to descriptions of admission and matriculant pools. Despite allegations that the top ten percent law is a disguised affirmative action plan, the current admissions guidelines in Texas open up opportunities for large numbers of students from relatively advantaged ethnic groups (Asian Americans and Whites). We discuss the implications of these findings in the concluding section.

Admission, of course, does not guarantee enrollment, which depends also on the number and types of offers received by applicants, including financial aid and scholarships. Because the "success" of the top ten percent policy has been evaluated mainly on who actually matriculates, we examine how these odds have changed under the two admission regimes.

Enrollment Probabilities

Table 8 presents the relative odds of enrollment at Texas A&M and UT-Austin for those students who were admitted to each institution using the same covariates as in Table 4.[37] Because enrollment is not guaranteed for top ten percent applicants, it is not necessary to exclude them from the prediction analyses. Group differences in the odds of matriculation reveal the last piece

[37] Appendix D contains the full logit results.

of process shaping campus diversity. For African Americans, Hispanics and Asian Americans admitted to A&M, the net odds of enrollment relative to whites, which were well below unity for all groups before *Hopwood*, eroded further after 1996. Specifically, Hispanics admitted to A&M were only half as likely as similarly qualified white admittees to matriculate, but African Americans and Asians were approximately one-third as likely to do so. At UT the odds ratios for enrollment conditional on admission changed very little for Hispanics and Asian Americans, and dropped about 17 percent for African Americans. Admitted white applicants are significantly more likely to enroll than African Americans and Hispanics granted admission to UT, but after 1996 Asian Americans accepted to UT were about 16 percent more likely to matriculate than their white statistical counterparts.

Table 8 About Here

Odds ratios for class rank and test scores show that admitted students ranked in the second decile or below the 80 percentile of their high school class are slightly more likely to enroll at A&M post-*Hopwood* compared with students who graduate in the top ten percent of their class. At UT, however, the odds of enrollment for second decile students relative to their top ranked statistical counterparts rose from 26 to 31 percent following *Hopwood*. Conceivably, students with the highest class rank receive more offers of admission than their lower achieving counterparts and a nontrivial share of those admitted to the public flagships opt to go elsewhere. This would explain why enrollment odds are highest for students ranked below the 80^{th} percentile relative to top ten percent graduates—nearly 22 percent higher at A&M and 44 to 33 percent at UT, before and after *Hopwood*, respectively.

The results for test scores also suggest that admitted students with the highest scores have a greater array of educational options and are less likely to enroll at the public flagships than admitted students with less stellar credentials on standardized exams, other things being equal. Moreover, and despite criticisms that H.B. 588 has crowded out qualified students from the

major feeder schools, the enrollment odds ratios indicate that lower shares of those admitted are electing to enroll. After *Hopwood*, feeder school admittees were equally likely to matriculate at both institutions as similarly qualified admittees from nonfeeder schools. However, pre-*Hopwood*, feeder high school admittees had 17 percent higher odds of enrolling at A&M and 5 percent higher odds of enrolling at UT than students from nonfeeder schools.

Consistent with claims about greater geographic diversity of post-*Hopwood* freshman classes, the odds that rural high school students who are admitted to the public flagships actually matriculate, compared to urban students, rise after 1996 (Montejano, 2001; Torres and Hair, 2002). Post-*Hopwood,* A&M and UT admittees from rural high schools enroll with odds 19 to 18 percent, respectively, above their counterparts from urban schools. The odds that admitted students enroll at one of the flagships also depend on the minority composition of the school. At A&M, a 10 percent increase in the minority composition of an admittee's high school lowered the odds of enrollment by 4 percent before 1996 and by 5 percent afterwards.[38] At UT, a 10 percent increase in the minority composition of a high school decreased the enrollment odds of admitted students by about 3 percent before *Hopwood*, but after H.B. 588 was in place, the enrollment likelihood was equalized among applicants from schools with different race and ethnic make-up. Furthermore, admitted students who attended schools with immigrant student populations were slightly less likely to enroll at UT after the *Hopwood* decision, but no comparable result obtains for A&M. The valiant efforts of UT to recruit admitted students from schools with large minority student bodies appear to pay dividends by increasing the enrollment odds of their students. Conceivably the odds that students from minority schools actually matriculate might have fallen at UT had the Longhorn Scholars program not been implemented

[38] Logit coefficients were multiplied y 10 prior to taking their log.

concurrently with H.B. 588. Presumably, the recently implemented Century Scholars program will have a similar impact on A&M.[39]

Because the odds ratios reported in Table 8 assume that matriculation probabilities are uniform among demographic groups and applicants from feeder schools, relaxing this assumption is instructive about how the change in admission policy operates to diversify the flagship campuses. Accordingly, Table 9 reports the classification of fall admittees to the public flagships by their class rank and rank-specific enrollment probability before and after the *Hopwood* decision. After 1996, the share of African American and Hispanic admittees who ranked in the top ten percent of their class rose appreciably, 8 percentage points each at A&M compared with 10 and 5 point increases, respectively, at UT. Concomitantly, the portion of African American and Hispanic admittees ranked at or below the third decile fell 7 percentage points post-*Hopwood* at A&M compared with 8 and 3 points, respectively, at UT. Using this measure of merit, the admitted pool of both minority groups became more selective. By contrast, after affirmative action was banned, the Asian American and white share of top decile students fell at both institutions, while the share of admittees ranked at or below the third decile rose. Thus, the white and Asian pools became less selective on class rank. After 1996, the share of top decile admittees hailing from the major feeder schools fell at both institutions, but the portion of accepted applicants from the feeder high schools who ranked at or below the third decile of their class rose. Thus, the average class rank of admitted students from feeder schools also fell post-*Hopwood*.

Table 9 About Here

Of course, who actually enrolls determines the actual composition of the entering fall class, which is a product of the rank distribution and the matriculation probability. The right panel of Table 9 reveals that after affirmative action was prohibited, top decile African

[39] The Century Scholars program was not in place at the time our data series ended.

American, Hispanic and Asian American admittees were less likely to enroll at A&M, but more likely to do so at UT. In fact, the enrollment probability of top decile Hispanic admittees to UT rose a whopping 8 points after 1996, whereas the enrollment probability of top ranked African American and Asian American UT admittees rose about two points—a rise comparable to the increased matriculation probability of top decile white students.

Institutional differences in the enrollment probabilities of top decile minority students after 1996 reflect the impact of UT's Longhorn Scholars program, which was in place when H.B.588 went into effect, and provided the financial resources for many admitted, low-income students to matriculate. That the Century Scholars program did not go into effect until 2002 provides a lesson about the limited effectiveness of the top ten percent plan to diversify college campuses: *unless accompanied by viable financial aid packages that make college affordable for high achieving students from racially segregated and economically disadvantaged schools, the potential of H.B.588 to offset the losses of minority students following the ban on affirmative action will be minimal.*

Enrollment probabilities of students ranked at or below the third decile of their senior class rose slightly at A&M after 1996, except for Asian Americans, who witnessed no change. Conditional on admission, African Americans ranked at or below the third decile were more likely to matriculate at A&M in the post-affirmative action regime compared to the pre-*Hopwood* period, but these higher enrollment probabilities resulted in fewer African Americans in the freshmen classes for two reasons. First, the share of admitted African Americans ranked at or below the third decile was seven points lower after 1996, and second, the higher enrollment probability of lower ranked students did not offset the lower enrollment probability of higher ranked students.[40] The higher post-*Hopwood* matriculation probabilities of Asian Americans

[40] Multiplying the corresponding proportions admitted and enrollment probabilities shows, for example, that the matriculant pool for applicants in the third decile or below fell from 2.1 percentage points [from 18.5 percent (.496*.373*100) to 16.4 percent (.540*.304*100)] after *Hopwood*, whereas the corresponding matriculant pool

admitted to UT from all ranks of the grade distribution account for their rising presence at the Austin campus. The enrollment probability of admitted Hispanic students also rose slightly at both institutions post-*Hopwood*.

Also noteworthy, given the public controversy about how H.B.588 allegedly disadvantages students from the dominant feeder schools, are their enrollment probabilities after 1996. Students (and their parents) not institutions control matriculation decisions. At A&M, the enrollment probability of admittees from the major feeder schools fell at A&M—over 7 percentage points for students ranked at either the top or the bottom of class distribution, and 12 points for those ranked in the second decile of their class. By comparison, the enrollment probability of UT admittees from the major feeder schools fell only slightly after 1996--about .5 percentage point both for those ranked at the top and below the second decile, while rising 3 points among admitted applicants from these schools who ranked in the second decile of their class.

These comparisons assume that applicants are similar in several other attributes that govern their decision to matriculate. Table 10 relaxes this assumption by reporting odds ratios that have been purged of other individual and school characteristics that influence matriculation decisions. Specifically, these odds ratios reveal the enrollment odds of minority and feeder school admittees who were ranked in the second decile of their class relative to their white counterparts ranked in the top ten percent of their class before and after affirmative action was judicially banned. Of the 16 possible interaction terms, three attain statistical significance for UT and only one does so for A&M. The latter implies that post-*Hopwood* feeder school admittees in the second decile were *less* likely to matriculate than similarly ranked students from non-feeder schools. Before 1996, these odds were equal. However, top ten percent admittees to A&M from major feeder schools had 15 and 8 percent higher odds of matriculating, respectively, before and

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hailing from the top decile rose by only .5 percentage points [from 19.2 percent (.412*.465*100) to 19.7 percent (.492*.4*100)].

after *Hopwood,* respectively, compared to top ten percent admittees from non-feeder schools. No differences in the enrollment probabilities of first or second decile feeder high school students admitted to UT obtain for either period, indicating that the change in admission regime did not influence the decisions for admitted students.

Table 10 About Here

In light of claims that H.B. 588 is a disguised affirmative action plan, two results for UT are particularly noteworthy. First, before the *Hopwood* decision, white students ranked in the second decile of their class who were admitted to UT had 27 percent higher odds of matriculation than their race counterparts ranked in the top decile of their class; afterwards, they had 39 percent higher odds of matriculation. Thus, conditional on admission, the enrollment odds of white students ranked just below the top ten percent of their class actually *rose* after H.B.588 was implemented. This result contradicts the anecdotes proliferated in public media accounts, especially those predicting a "brain drain" to non-Texas institutions.

Second, the significant interactions with class rank reveal why Asian American students appear to be the main beneficiaries of the top ten percent policy at UT. Prior to 1996, Asian American admittees ranked in the second decile of their class had 24 percent higher odds of matriculation than their white statistical counterparts who were also ranked in the second decile of their class; this relative difference increased to 30 percent after the *Hopwood* decision. By comparison, the higher matriculation odds of top ten percent Asian American admittees compared to top ten percent whites fell slightly, from 10 percent higher before 1996 to 8 percent higher after 1996. Matriculation odds of Hispanic and African American admittees to UT who ranked in the top decile of their class also rose slightly after 1996, relative to top ten percent whites, but remained significantly below parity. At A&M, enrollment odds of admitted African American and Hispanic students ranked in the top decile of their class fell slightly after 1996 relative to similarly ranked whites, and remained well below parity. Post *Hopwood* the odds of

matriculation at UT for top ten percent Hispanic graduates are half the odds of top ten percent whites. The corresponding odds for top ten percent African Americans are 61 percent below the odds of top ten percent whites.

On the whole, these results underscore the importance of recruitment strategies and financial aid packages to make it possible for high achieving students to matriculate at the Texas flagships. Students with high class rankings and relatively high test scores are slightly less likely to enroll at the two flagships than those admitted with lower academic credentials. The significant differences in net enrollment probabilities of admitted minority applicants compound the disadvantages produced by the more dramatic changes in admissions probabilities post-*Hopwood*.

DISCUSSION

Based on the two largest public universities in Texas, the foregoing analysis of how changes in admission criteria influence the diversity of college campuses is incomplete because UT and A&M enroll only 23 percent of the student body attending four year public institutions in Texas (THECB, 2001). Many more Texas students set their college aspirations on one or both of the public flagships than can be admitted. As the college-age population continues to grow, increasing numbers will be disappointed by their admission decision even if there are no further changes in admission criteria.

Since affirmative action was judicially banned in 1996 and H.B.588 was implemented in 1998, both universities have been prime targets of media scrutiny to characterize the consequences of the changed admission regimes. In part this is because UT and A&M are the only two public campuses that exercised race-sensitivity in their decision-making before 1996. For this reason the discoveries reported here are highly instructive for the ongoing legal

discourse about alternatives for diversifying college campuses in the absence of permitting consideration of race or national origin.

Using several different methods to produce the results, we reveal many consistent patterns. First, in light of the rapidly changing demography of the State of Texas, changes in the number of applications from minority students to both flagships warrant concern about the future contours of inequality in Texas. The observed trends in applications from under-represented groups run counter to the trends in the growth of the college-age population. In particular, the percentage of Hispanic applicants at both campuses decline slightly after the 1996 *Hopwood* ruling, as did the share of African American applicants at A&M. Yet, the college-age Hispanic population increased 10 percent points during the decade.

Second, *the top ten percent admission policy is not an alternative to affirmative action and by itself can only achieve minimal campus diversity, even in the presence of high levels of school segregation*. The post-*Hopwood* admission criteria produced fewer African American and Hispanic admittees at both flagship campuses. Asian Americans and Whites appear to be the greatest beneficiaries of the ban on affirmative action, despite prodigious outreach efforts by the senior officers of both flagships to broaden access to qualifying students throughout the state. The rise in the representation of Asian Americans (relative to their size in the applicant and admissions pools) is especially marked at UT post-*Hopwood.* Both a higher admission probability and higher odds of matriculation explain the growing presence of Asian Americans at UT, but it is not clear why a comparable outcome is not reproduced at A&M. Comparisons with other Texas public institutions as well as interviews with admissions officers at these and other selective private universities should provide further insight.

Third, because students ranked in the top ten percent of their class have been admitted with near certainty before 1995, and with certainty after 1997, the race and ethnic differences in the probability of admission both before and after the *Hopwood* ruling are trivial for these

students. Furthermore, African Americans and Hispanics ranked at the second decile were no more or less likely to be admitted than white students with similar test scores and school backgrounds at either institution before or after 1996. *Rather, the consequences of ending affirmative action largely play out among applicants ranked below the second decile.* The non-overlapping groups analysis indicates that no more than three percent of all admitted students were "affirmative admits." However, the *Hopwood* ruling abolished advantages of admission enjoyed by African Americans and Hispanics ranked below the second decile of their class and transformed them to advantages for whites and Asian Americans. For these students, test scores, essays and extra-curricular activities that are associated with financial advantages figure heavily in the admission decision.

Fourth, *the top ten percent law is NOT a disguised affirmative action policy*. The non-overlapping groups simulation reveals that African American and Hispanic students are disproportionately at risk of rejection, not acceptance, under the top ten percent policy. Whites are likely to be in groups at risk of rejection under the affirmative action regime, but are advantaged relative to African Americans and Hispanics after 1996. This is because their odds of admission are higher among those ranked at the 79th percentile or below. Moreover, using the pre-*Hopwood* distributions as a social benchmark for college campus diversity is generous, because it assumes that the population from which applicants are drawn remained stable, which Table 1 clearly disproves. As the pool of potential applicants grows (because of the young age structure of the state) and becomes more diverse (because of differential fertility and immigration), restoring UT and A&M campus diversity to pre-*Hopwood* levels requires exceeding the 1996 shares of African American and Hispanic applicants, admittees, and enrollees. From this vantage point, the success of H.B.588 in restoring campus diversity is minimal at best because the 1996 metric becomes more obsolete with every passing year.

Fifth, the enrollment analyses forcefully demonstrate that by itself, *the top ten percent plan is NOT an alternative to race-sensitive admissions for campuses striving to diversify their student populations*. Rather, it is a merit-based admission plan that emphasizes high school academic attainment in the admission decision while de-emphasizing standardized achievement tests for top ranked students. The rationale for this emphasis is grounded in a large body of literature showing that high school grades are one of the best predictors of long term success in college while standardized test scores predict freshman grades (and little else). Unless qualified minority students who are admitted to the public flagships actually enroll, both institutions will weaken their reach in educating a leadership class for the State's growing minority—soon to be a majority—population.

Of course, many unanswered questions remain. For example, it is unclear whether high school students altered their college plans after H.B. 588 was passed, and how or why they did so. An analysis of administrative records also can not reveal how many students did not bother applying to Texas 4-year universities and instead opted to apply only to community colleges or to out-of-state institutions, nor how many top ranked students elect to apply only to one rather than several institutions. To address these and a myriad of other related questions about college decision-making we have conducted a representative survey of Texas high school seniors and sophomores as of 2002, from which we will seek answers about application and matriculation decisions that can not be gleaned from administrative data.

We are currently extending analyses of administrative records to 18 other colleges and universities in Texas, including several private four-year institutions. In addition to continuing the analysis of non-overlapping groups and extending it to wider constellations of student characteristics, we intend to chart whether students who are typically admitted at different types of institutions subsequently direct their interests to the flagship public schools or out-of-state institutions in response to the change in college admissions opportunities afforded by H.B. 588.

Although confined to the State of Texas, these analyses track the real and persistent consequences that result from the changing configuration of educational opportunity in the nation.

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Table 1. Selected Demographic Characteristics of Texas Population, 1990-2000
(in percent)

	1990	2000
Population Composition		
White	60.6	52.4
African American	11.6	11.3
Asian American	1.8	2.7
Hispanic/Latino	25.5	32.0
Other	0.4	1.6
Total	100.0	100.0
College-Age Population (18-24 years old)		
White	53.3	43.5
African American	13.3	12.3
Asian American	2.1	2.9
Hispanic/Latino	30.9	40.0
Other	0.4	1.3
Total	100.0	100.0
% High School Graduates (25 years old and older)		
White	81.5	87.2
African American	66.1	75.8
Asian American	79.1	80.6
Hispanic/Latino	44.6	49.3
Statewide Average	72.1	75.7
Nationwide Average	75.2	80.4
Composition of High School Graduates		
White	54.8	51.5
African American	12.2	12.9
Asian American/Other	7.1	3.5
Hispanic/Latino	26.0	32.1
Total	100.0	100.0
% College Graduates (25 years old and older)		
White	25.2	30.0
African American	12.0	15.3
Asian American	41.3	47.2
Hispanic/Latino	7.3	8.9
Statewide Average	20.3	23.2
Nationwide Average	20.3	24.4

Notes: White refers to Non-Hispanic/Latino White. Asian American refers to Asian Americans and Asian American Pacific Islanders. Composition of High School Graduates draws data from Texas Education Agency statistics for the Classes of 1991 and 2000, respectively.

Sources: Population Composition: U.S. Census Bureau, 2001: Tables P3-P4; 1991: Tables P6-P10. Age Population: U.S. Census Bureau, 2001: Tables PCT12a, PCT12b, PCT12d, & PCT12h; 1991:Tables P12a, P12b, P12c, P12d, P12g, P12h, P13a, & P13b. Percent High School Graduates: U.S. Census Bureau, 2002:Tables P148b, P148d, P148h, P148i, & P37; 1991: Table P57; 1990:420, 422, 423, & 424; Composition of High School Graduates: Texas Education Agency, 2001; 1992. Percent College Graduates: U.S. Census Bureau, 2002: Tables P148b, P148d, P148h, P148i, & P37; 1992: Table P57; 1990: 420, 422, 423, and 424.

Table 2. Composition of In-State Student Applicant, Admission and Enrollee Pools Before and After *Hopwood*: Texas A&M and UT-Austin.[a] (in percent)

Student Characteristics[b]	Applicants		Admittees		Enrollees	
	Pre-*Hopwood* 1992-1996	Post-*Hopwood* 1997-2000	Pre-*Hopwood* 1992-1996	Post-*Hopwood* 1997-2000	Pre-*Hopwood* 1992-1996	Post-*Hopwood* 1997-2000
Texas A&M University						
% African American	4.7	4.2*	4.7	3.3*	3.7	2.4*
% Hispanic/Latino	13.6	11.7*	14.7	11.1*	12.6	9.2*
% Asian American	5.6	6.4*	5.3	5.9*	3.5	3.7
% White	74.9	75.0	74.4	77.3*	79.3	82.6*
% Top Decile Rank	41.2	38.4*	52.4	50.7*	50.8	48.0*
% Second Decile Rank	21.9	21.3	23.5	23.2	23.7	23.8
% Feeder HS	12.0	14.9*	12.2	14.1*	14.2	14.3
N	59,327	54,038	44,062	38,960	26,787	24,140
University of Texas at Austin[c]						
% African American	4.6	4.6	4.4	4.0*	4.0	3.3*
% Hispanic/Latino	17.1	15.3*	17.8	14.6*	15.8	13.7*
% Asian American	12.7	16.0*	12.9	17.1*	13.6	17.8*
% White	65.2	63.6*	64.4	63.9	66.1	64.7*
% Top Decile Rank	42.5	43.2	53.0	53.6	49.4	50.0
% Second Decile Rank	21.1	19.7*	22.5	21.8	23.5	23.4
% Feeder HS	19.0	21.4*	18.4	20.6*	19.7	21.1*
N	80,118	47,437	59,631	38,071	34,992	23,642

a. Students from high schools with senior class size greater than 9 students.
b. The race/ethnic categories do not sum to 100% because the "other" category (Native Americans and unspecified membership) are not shown.
c. For UT, pre-*Hopwood* data refers to 1990-1996.
* $p \leq .001$ for pre- post-*Hopwood* comparison.

Table 3. Admission and Enrollment Probabilities at Texas A&M and UT-Austin Pre- and Post-*Hopwood*.

Student Characteristics	% Applicants Admitted				% Admittees Who Enroll			
	Texas A&M		UT-Austin		Texas A&M		UT-Austin	
	Pre-*Hopwood* [a]	Post-*Hopwood*	Pre-*Hopwood* [a]	Post-*Hopwood*	Pre-*Hopwood* [a]	Post-*Hopwood*	Pre-*Hopwood* [a]	Post-*Hopwood*
African American	74.9	57.7***	71.3	69.3	48.3	46.2	53.6	52.4
Hispanic/Latino	79.9	68.3***	77.7	76.3*	52.1	51.4	52.0	58.2***
Asian American	69.5	66.7**	75.8	86.1***	40.6	38.8	62.1	64.6***
White	73.7	74.3	73.6	80.6***	64.9	66.2***	60.2	62.8***
Top Decile Rank	96.2	99.5***	93.4	99.9***	59.3	59.0	55.0	58.6***
Second Decile Rank	80.8	82.0*	79.9	88.9***	62.0	64.1**	61.7	67.2***
Feeder HS	75.6	67.9***	72.1	77.5***	70.7	63.0***	62.8	63.5

a. 1992-1996 for Texas A&M; 1990-1996 for UT Austin.
*** $P \leq .001$; ** $P \leq .01$; * $P \leq .05$

Table 4. Admission Odds to Texas A&M and UT-Austin, Pre- and Post-*Hopwood*: Applicants Ranked Below the 90th Percentile of their Senior Class. (Odds Ratios)

Independent Variables	Texas A&M		UT-Austin	
	Pre-*Hopwood* (1992-1996)	Post-*Hopwood* (1997-2000)	Pre-*Hopwood* (1992-1996)	Post-*Hopwood* (1997-2000)
Group Membership				
African American	4.032***	.704***	4.779***	1.043
Hispanic/Latino	3.857***	.761***	4.190***	1.017
Asian American	.811***	.512***	.916*	1.094
Student Characteristics				
Feeder HS (=1)	.944	.984	.832***	.746***
Second Decile Rank	4.474***	4.684***	4.404***	8.424***
ACT/SAT Percentile Rank	1.171***	1.105***	1.210***	1.204***
School Characteristics				
% Minority in HS	1.000	.998*	.999	1.000
% Free Lunch Students in HS	1.009***	1.020***	1.000	1.011***
Rural HS (=1)	1.073	1.450***	1.034	1.497**
HS with Immigrants (=1)	1.034	.936	1.077*	1.015
Year[a]				
1991	--	--	1.015	--
1992	--	--	.640***	--
1993	1.004	--	.643***	--
1994	.360***	--	.587***	--
1995	.315***	--	.463***	--
1996	.314***	--	.101***	--
1998	--	2.358***	--	.385***
1999	--	.711***	--	.516***
2000	--	.386***	--	.230***
-2 Log L	34,434	37,105	43,637	24,089
% Concordance	85.0	80.8	86.3	87.0
N	37,111	35,347	48,051	28,880

a. Pre-*Hopwood* reference year is 1990 for UT and 1992 for A&M; Post-*Hopwood* reference year is 1997 for both institutions.
*** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$

Table 5. Classification of Applicants to Texas A&M and UT-Austin by Class Rank and Admission Probability, Pre- and Post-*Hopwood*

	Distribution of Applicants by Class Rank						Admission Probability by Class Rank					
	1st Decile		2nd Decile		3rd Decile +		1st Decile		2nd Decile		3rd Decile +	
Hopwood Decision:	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-
Texas A&M												
African American	33.4	29.2	18.9	16.4	47.8	54.3	92.6	97.0	85.3	71.7	58.6	32.3
Hispanic/Latino	40.5	38.5	18.5	16.9	41.0	44.7	94.7	99.2	86.9	75.9	62.1	38.9
Asian American	42.6	35.6	18.0	17.8	39.4	46.6	93.7	99.1	72.7	75.7	41.9	38.4
White	36.9	34.4	20.4	19.9	42.7	45.7	97.1	99.8	80.2	83.9	50.5	50.9
Feeder HS	23.8	19.1	21.3	19.4	54.8	61.5	98.6	99.9	93.2	87.1	59.1	52.1
N	22,216	18,691	11,793	10,337	25,318	25,010	21,392	18,605	9,535	8,480	13,135	11,875
UT-Austin												
African American	32.8	36.6	18.9	17.6	48.3	45.8	93.1	99.6	78.7	73.8	53.5	43.4
Hispanic/Latino	43.8	44.2	19.0	17.3	37.1	38.5	93.8	99.7	81.8	79.5	56.6	48.1
Asian American	51.5	48.7	18.1	16.4	30.4	34.8	92.0	99.9	75.3	92.4	48.6	63.8
White	37.4	35.7	20.4	18.4	42.2	45.9	93.7	99.9	80.4	91.1	52.5	61.3
Feeder HS	26.4	25.2	19.0	17.8	54.6	57.1	92.4	100.0	89.1	97.3	56.4	61.4
N	32,067	18,557	15,887	8,470	32,164	20,410	29,961	18,538	12,700	7,525	16,970	12,008

Table 6. Admission Odds to Texas A&M and UT-Austin, Pre- and Post-*Hopwood:* Rank Interactions for Minority and Feeder High School Applicants Ranked Below the 90th Percentile of their Senior Class.[a] (Odds Ratios)

	Texas A&M		UT-Austin	
Independent Variables	Pre-*Hopwood*[b] (1992-1996)	Post-*Hopwood* (1997-2000)	Pre-*Hopwood* (1992-1996)	Post-*Hopwood* (1997-2000)
Group Membership				
African American	4.075***	.695***	4.937***	1.172
Hispanic/Latino	3.718***	.745***	4.142***	1.052
Asian American	.797**	.512***	.962	1.071
Feeder HS (=1)	.848***	.974	.799***	.701***
Rank				
Second Decile Rank	4.086***	4.552***	4.331***	7.905***
Group x Rank				
African American	0.928	1.070	.852	.584**
Hispanic/Latino	1.188	1.098	1.038	.851
Asian American	1.056	1.006	.853	1.126
Feeder HS (=1)	2.109***	1.068	1.275**	2.591***
-2 Log L	34,387	37,099	43,622	24,023
% Concordance	85.0	80.8	86.3	87.0
N	37,111	35,347	48,051	28,880

a. Equations control for all additive terms reported in Table 4 (results not shown)
b. Pre-*Hopwood* data for A&M are 1992-1996 and for UT 1990-1996.
*** $p \leq .001$; ** $p \leq .01$

Table 7. Simulation of Non-Overlapping Admission Groups at Texas A&M and UT – Austin, Pre-and Post-*Hopwood*: Minority and Feeder School Applicants Ranked Below the 90th Percentile of their Senior Class. (in percent)

Independent Variables	Texas A&M						UT-Austin					
	Pre-*Hopwood* Accepts at Risk of Post-*Hopwood* Rejection			Pre-*Hopwood* Rejects at Risk of Post-*Hopwood* Acceptance			Pre-*Hopwood* Accepts at Risk of Post-*Hopwood* Rejection			Pre-*Hopwood* Rejects at Risk of Post-*Hopwood* Acceptance		
	Yes*	No	T-Test	Yes*	No	T-Test	Yes*	No	T-Test	Yes*	No	T-Test
African American	14.6	4.3	<.0001	2.0	7.0	<.0001	13.6	4.0	<.0001	2.6	7.5	<.0001
Hispanic/Latino	28.7	13.2	<.0001	5.4	15.3	<.0001	33.0	14.8	<.0001	7.7	20.1	<.0001
Asian American	7.5	4.0	<.0001	3.6	9.6	<.0001	6.1	10.2	<.0001	11.3	10.9	.3914
White	47.3	77.7	<.0001	87.6	66.1	<.0001	46.8	70.6	<.0001	77.9	60.7	<.0001
Second Decile Rank	1.7	46.9	<.0001	27.9	1.9	<.0001	4.3	47.7	<.0001	32.9	4.9	<.0001
Third Decile Rank and Below	98.3	53.1	<.0001	72.1	98.1	<.0001	95.7	52.3	<.0001	67.1	95.1	<.0001
Feeder HS	12.5	16.9	<.0001	14.1	9.1	<.0001	22.6	24.7	.0057	20.2	22.5	.0002
N	2,440	20,230		7,635	6,806		3,335	26,335		8,168	10,213	

***** Non-overlapping groups whose admission decision might change had they applied under the alternative regime.

Table 8. Enrollment Odds at Texas A&M and UT-Austin, Pre- and Post-*Hopwood*.

Independent Variables	Texas A&M		UT-Austin	
	Pre-*Hopwood* (1992-1996)	Post-*Hopwood* (1997-2000)	Pre-*Hopwood* (1992-1996)	Post-*Hopwood* (1997-2000)
Group Membership				
African American	.426***	.398***	.725***	.556***
Hispanic/Latino	.531***	.505***	.720***	.738***
Asian American	.408***	.375***	1.150***	1.162***
Student Characteristics				
Feeder HS (=1)	1.172***	1.037	1.053*	1.055
Second Decile Rank	1.045	1.062*	1.264***	1.306***
Third Decile Rank and Below	1.219***	1.216***	1.437***	1.333***
ACT/SAT Percentile Rank	.979***	.968***	.988***	.973***
School Characteristics				
% Minority in HS	.996***	.995***	.996***	.998
% Free Lunch Students in HS	1.002	1.006***	1.001	1.002
Rural HS (=1)	.992	1.189**	1.052	1.177*
HS with Immigrants (=1)	1.009	1.037	1.140***	1.100***
Year[a]				
1991	--	--	.962	--
1992	--	--	1.001	--
1993	1.089*	--	.994	--
1994	.627***	--	1.164***	--
1995	.496***	--	1.212***	--
1996	.540***	--	1.144***	--
1998	--	1.552***	--	.903***
1999	--	1.381***	--	.993
2000	--	1.273***	--	1.030
N	44,062	38,960	59,631	38,071

a. Pre-*Hopwood* reference year is 1990 for UT and 1992 for A&M; Post-*Hopwood* reference year is 1997 for both institutions.
*** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$

Table 9. Classification of Admittees to Texas A&M and UT-Austin by Class Rank and Enrollment Probability, Pre- and Post-*Hopwood*

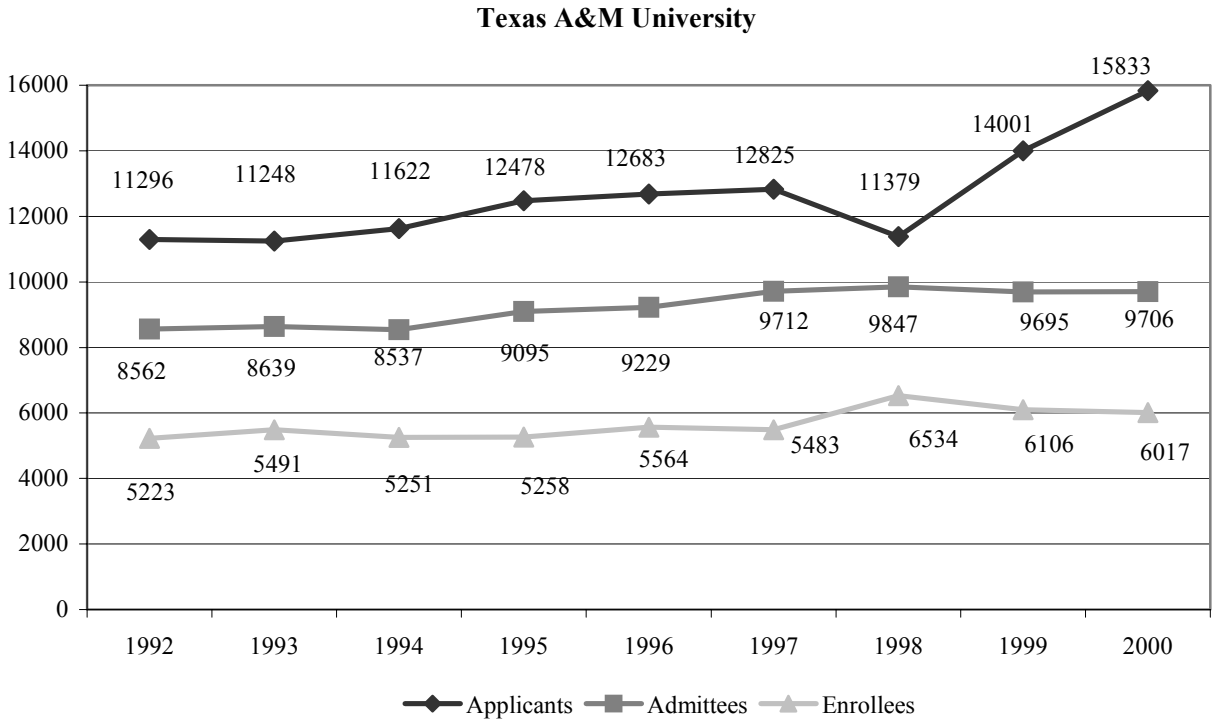
	Distribution of Admittees by Class Rank						Enrollment Probability by Class Rank					
	1st Decile		2nd Decile		3rd Decile +		1st Decile		2nd Decile		3rd Decile +	
Hopwood Decision:	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-
Texas A&M												
African American	41.2	49.2	21.5	20.4	37.3	30.4	46.5	40.0	49.8	49.6	49.6	54.0
Hispanic/Latino	48.0	55.8	20.2	18.7	31.9	25.4	48.0	46.3	53.6	55.5	57.3	59.3
Asian American	57.4	52.9	18.9	20.2	23.7	26.8	39.1	35.5	40.1	39.6	44.8	44.4
White	48.5	46.2	22.2	22.5	29.3	31.3	63.9	64.5	65.8	67.6	65.7	67.9
Feeder HS	31.0	28.1	26.2	24.9	42.8	47.0	65.3	58.1	72.0	60.3	74.0	67.3
N	21,392	18,605	9,535	8,480	13,135	11,875	12,678	10,967	5,913	5,444	8,196	7,729
UT-Austin												
African American	42.8	52.6	20.9	18.7	36.3	28.7	48.6	50.7	55.9	57.7	58.3	52.0
Hispanic/Latino	52.9	57.7	20.1	18.1	27.0	24.2	46.7	55.1	57.3	64.5	58.5	60.7
Asian American	62.5	56.6	18.0	17.6	19.5	25.8	58.2	60.6	68.9	73.5	68.4	67.4
White	47.6	44.3	22.3	20.8	30.1	34.9	57.1	59.6	62.0	66.7	63.6	64.4
Feeder HS	33.9	32.5	23.5	22.3	42.7	45.2	55.1	54.6	63.5	66.8	68.6	68.3
N	29,961	18,538	12,700	7,525	16,970	12,008	16,475	10,872	7,834	5,055	10,675	7,674

Table 10. Enrollment Odds at Texas A&M and UT-Austin, Pre- and Post-*Hopwood:* Rank Interactions for Minority and Feeder High School Students.[a] (Odds Ratios)

Independent Variables	Texas A&M		UT-Austin	
	Pre-*Hopwood*[b] (1992-1996)	Post-*Hopwood* (1997-2000)	Pre-*Hopwood*[b] (1992-1996)	Post-*Hopwood* (1997-2000)
Group Membership				
African American	.420***	.388***	.786***	.647***
Hispanic/Latino	.521***	.489***	.746***	.803***
Asian American	.410***	.380***	1.096**	1.078*
Feeder HS (=1)	1.150***	1.079*	1.021	.957
Rank				
Second Decile	1.022	1.059	1.269***	1.395***
Group x Rank				
African American	1.056	1.115	1.030	1.061
Hispanic/Latino	1.091	1.179	1.153**	1.117
Asian American	.977	.941	1.243**	1.300***
Feeder HS (=1)	1.080	.861*	.953	.975
-2 Log L	49,770	48,853	79,754	49,826
% Concordance	71.8	64.4	57.3	57.6
N	44,062	38,960	59,631	38,071

a. Equations control for all additive terms reported in Table 7 (results not shown)
b. Pre-*Hopwood* data for A&M are 1992-1996 and for UT 1990-1996.
*** $p \leq .001$; ** $p \leq .01$ * $\leq .05$

Figure 1: Applicant, Admission, and First Enrollment Trends at Texas A&M and UT Austin: In-State and Fall Admits, 1992-2000



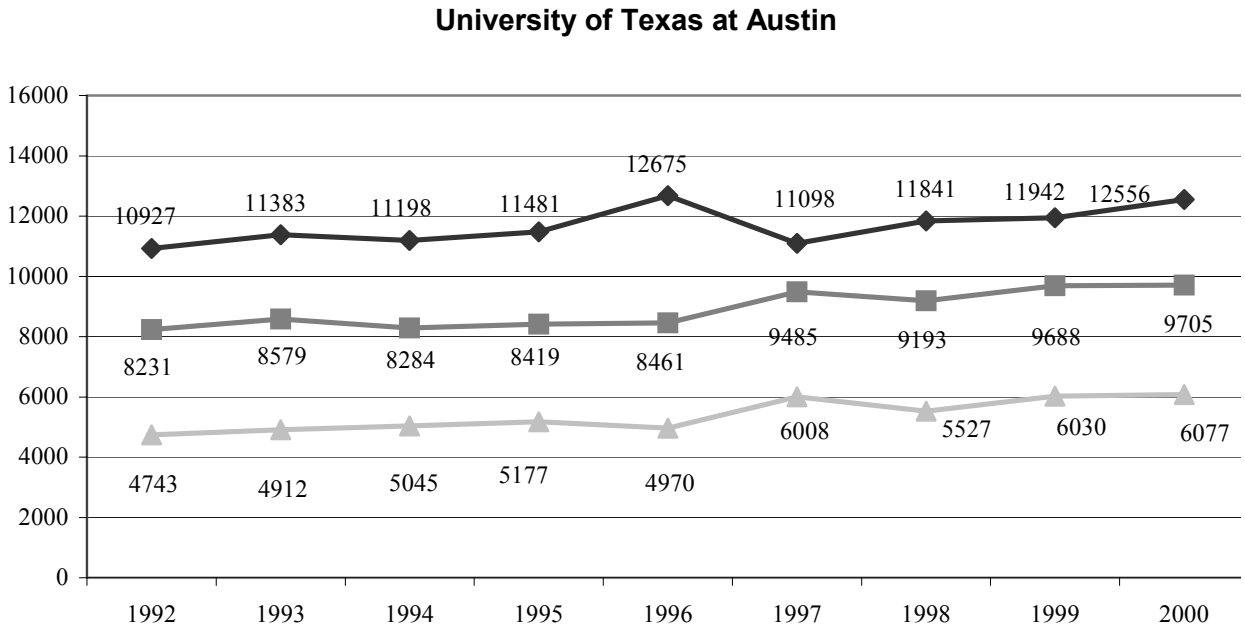
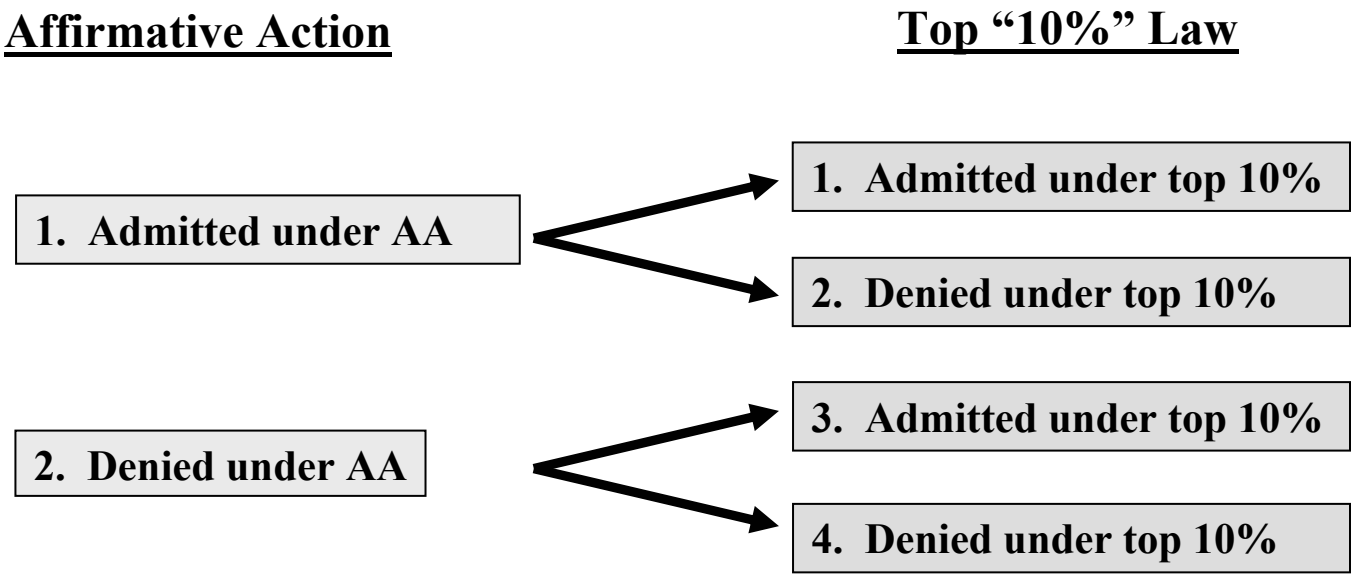


Figure 2: Hypothetical Outcomes from a Change in Admission Regime

(Arrows refer to movement between plans.)



Appendix Table A. Variables included in the Multivariate Analyses (means and percents)

	Admissions Analyses[a]		Enrollment Analyses	
	Texas A&M	UT-Austin	Texas A&M	UT-Austin
Outcomes				
Admitted	59.4	64.0	--	--
If Enrolled/Admit	--	--	61.3	60.0
Group Membership				
If African American	4.8	5.0	4.1	4.2
If Hispanic/Latino	12.0	15.3	13.0	16.6
If Asian American	5.7	11.5	5.6	14.6
If Other Race	15.0	--	1.1	--
If Native American	0.6	0.5	0.4	4.0
If White	75.4	67.7	75.7	64.2
If Female	45.9	46.8	50.8	50.4
Student Characteristics				
If Feeder School Student	16.5	24.4	13.1	19.3
If Top Decile Rank	0	0	48.2	49.6
If Second Decile Rank	30.5	31.7	21.7	20.7
If Third Decile Rank and Below	69.5	68.3	30.1	29.7
ACT/SAT Percentile Rank	68.9 (8.8)	68.6 (10.0)	73.0 (8.9)	73.1 (9.8)
School Characteristics				
If HS with Immigrants	32.4	31.6	38.5	37.4
% Minority in HS	31.8 (20.7)	30.8 (20.7)	35.0 (23.1)	34.7 (23.5)
% Free Lunch Students in HS	15.6 (12.5)	14.3 (12.4)	18.2 (14.3)	16.8 (14.7)
If Rural HS	5.5	4.6	7.0	5.3

continues

Appendix Table A continued

Year				
1990	----	8.6	---	9.1
1991	----	8.3	---	9.0
1992	9.5	8.5	10.3	8.4
1993	9.5	8.9	10.4	8.8
1994	10.2	8.9	10.3	8.5
1995	10.9	8.9	11.0	8.6
1996	11.1	10.3	11.1	8.7
1997	11.2	9.3	11.7	9.7
1998	9.7	9.8	11.9	9.4
1999	12.9	9.3	11.7	9.9
2000	14.9	9.2	11.7	9.9
N	72,458	76,931	83,022	97,702

Note: Variables preceded by "If" are dummy variables; variables preceded by % are continuous variables. All years are dummy variables.

[a] Admission analyses exclude the top ten percent.

Appendix Table B. Logit Coefficients Predicting Admission to Texas A&M and UT-Austin, Pre- and Post-*Hopwood*: Applicants Ranked below the 90th Percentile of their Senior Class (Asymptotic Standard Errors).

	Texas A&M		UT-Austin	
Independent Variables	Pre-*Hopwood* (1992-1996)	Post-*Hopwood* (1997-2000)	Pre-*Hopwood* (1992-1996)	Post-*Hopwood* (1997-2000)
Group Membership				
African American	1.3944*** (.0678)	-.3505*** (.0642)	1.5641*** (.0571)	.0417 (.0755)
Hispanic/Latino	1.3499*** (.0464)	-.2730*** (.0427)	1.4326*** (.0382)	.0167 (.0486)
Asian American	-.2091*** (.0616)	-.6685*** (.0532)	-.0877* (.0407)	.0899 (.0506)
Female (=1)	.2876*** (.0275)	.3517*** (.0263)	.2109*** (.0245)	.5660*** (.0336)
Student Characteristics				
Second Decile Rank	1.4982*** (.0329)	1.5442*** (.0327)	1.4826*** (.0286)	2.1311*** (.0457)
ACT/SAT Percentile Rank	.1578*** (.0022)	.1000*** (.0018)	.1903*** (.0020)	.1860*** (.0027)
Feeder HS (=1)	-.0578 (.0406)	-.0158 (.0345)	-.1837*** (.0320)	-.2934*** (.0425)
School Characteristics				
% Minority in HS[a]	-.0001 (.0012)	-.0025* (.0012)	-.0011 (.0011)	.0003 (.0015)
% Free Lunch Students in HS	.0087*** (.0018)	.0199*** (.0021)	-.0001 (.0017)	.0106*** (.0025)
Rural HS (=1)	.0702 (.0537)	.3717*** (.0815)	.0332 (.0539)	.4032** (.1259)
HS with Immigrants (=1)	.0336 (.0344)	-.0659 (.0344)	.0743* (.0327)	.0145 (.0455)
Year[a]				
1991	--	--	.0153 (.0462)	--
1992	--	--	-.4462*** (.0459)	--

1994	-1.0219*** (.0470)	--	-.5332*** (.0453)	--
1995	-1.1544*** (.0469)	--	-.7700*** (.0457)	--
1996	-1.1580*** (.0465)	--	-2.2965*** (.0474)	--
1998	--	.8580*** (.0417)	--	-.9541*** (.0469)
1999	--	-.3410*** (.0356)	--	-.6616*** (.0478)
2000	--	-.9515*** (.0347)	--	-1.4712*** (.0482)
-2 Log L	34,434	37,105	43,637	24,089***
% Concordant	85.0	80.8	86.3	87.0
N	37,111	35,347	48,051	28,880

a. Coefficients and standard errors multiplied by 100.
b. Pre-*Hopwood* reference year is 1990 for UT and 1992 for A&M; Post-*Hopwood* reference year is 1997 for both institutions
*** $p \leq .001$; ** $p \leq .01$

Appendix Table C. Logit Coefficients Predicting Admission to Texas A&M and UT-Austin, Pre- and Post-*Hopwood:* Rank Interactions for Minority and Feeder High School Applicants Ranked Below the 90th Percentile of their Senior Class (Asymptotic Standard Errors).

	Texas A&M		UT-Austin	
Independent Variables	Pre-*Hopwood*[a] (1992-1996)	Post-*Hopwood* (1997-2000)	Pre-*Hopwood*[a] (1992-1996)	Post-*Hopwood* (1997-2000)
Group Membership				
African American	1.4050***	-.3645***	1.5968***	.1583
	(.0744)	(.0725)	(.0640)	(.0840)
Hispanic/Latino	1.3131***	-.2941***	1.4213***	.0503
	(.0507)	(.0480)	(.0424)	(.0535)
Asian American	-.2274**	-.6701***	-.0391	.0689
	(.0729)	(.0606)	(.0487)	(.0550)
Feeder HS (=1)	-.1648***	-.0259	-.2249***	-.3553***
	(.0437)	(.0372)	(.0346)	(.0441)
Rank				
Second Decile	1.4075***	1.5155***	1.4658***	2.0675***
	(.0381)	(.0399)	(.0367)	(.0608)
Group x Rank				
African American	-.0744	.0674	-.1596	-.5382**
	(.1623)	(.1497)	(.1293)	(.1739)
Hispanic/Latino	.1721	.0936	.0374	-.1618
	(.1060)	(.0969)	(.0784)	(.1117)
Asian American	.0547	.0062	-.1589	.1184
	(.1356)	(.1238)	(.0871)	(.1430)
Feeder HS (=1)	.7464***	.0659	.2427**	.9522***
	(.1182)	(.0923)	(.0785)	(.1645)
-2 Log L	34,387	37,099	43,622	24,023
% Concordance	85.0	80.8	86.3	87.0
N	37,111	35,347	48,051	28,880

a. Pre-*Hopwood* data for A&M are 1992-1996 and for UT 1990-1996.
*** $p \leq .001$; ** $p \leq .01$

Appendix Table D. Logit Coefficients Predicting Enrollment at Texas A&M and UT-Austin, Pre- and Post-*Hopwood*.

Independent Variables	Texas A&M		UT-Austin	
	Pre-*Hopwood* (1992-1996)	Post-*Hopwood* (1997-2000)	Pre-*Hopwood* (1992-1996)	Post-*Hopwood* (1997-2000)
Group Membership				
African American	-.8541*** (.0521)	-.9222*** (.0608)	-.3218*** (.0424)	-.5863*** (.0558)
Hispanic/Latino	-.6332*** (.0331)	-.6834*** (.0366)	-.3292*** (.0252)	-.3041*** (.0338)
Asian American	-.8960*** (.0483)	-.9811*** (.0460)	.1397*** (.0263)	.1502*** (.0301)
Female (=1)	-.0363 (.0224)	-.0861*** (.0224)	-.0515** (.0174)	-.1560*** (.0222)
Student Characteristics				
Feeder HS (=1)	.1583*** (.0351)	.0365 (.0331)	.0517* (.0243)	.0535 (.0304)
Second Decile Rank	.0437 (.0292)	.0598* (.0292)	.2340*** (.0224)	.2670*** (.0301)
Third Decile Rank and Below	.1978*** (.0301)	.1955*** (.0296)	.3622*** (.0227)	.2877*** (.0300)
ACT/SAT Percentile Rank	-.0210*** (.0014)	-.0320*** (.0014)	-.0125*** (.0010)	-.0270*** (.0014)
School Characteristics				
% Minority in HS	-.0040*** (.0009)	-.0054*** (.0009)	-.0038*** (.0007)	-.0017 (.0009)
% Free Lunch Students in HS	.0016 (.0013)	.0063*** (.0015)	.0007 (.0010)	.0018 (.0015)
Rural HS (=1)	-.0084 (.0418)	.1734** (.0565)	.0507 (.0359)	.1632* (.0716)
HS with Immigrants (=1)	.0091 (.0271)	.0366 (.0278)	.1314*** (.0224)	.0957*** (.0288)
Year[a]				
1991	--	--	-.0386 (.0308)	--
1992	--	--	.0015 (.0315)	--

1995	-.7009*** (.0356)	--	.1922*** (.0316)	--
1996	-.6168*** (.0357)	--	.1341*** (.0325)	--
1998	--	.4397*** (.0307)	--	-.1023*** (.0307)
1999	--	.3230*** (.0307)	--	-.0075 (.0305)
2000	--	.2411*** (.0303)	--	.0291 (.0306)
N	44,062	38,960	59,631	38,071

a. Pre-*Hopwood* reference year is 1990 for UT and 1992 for A&M; Post-*Hopwood* reference year is 1997 for both institutions.
*** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$

Appendix Table E. Logit Coefficients Predicting Enrollment to Texas A&M and UT-Austin, Pre- and Post-*Hopwood:* Rank Interactions for Minority and Feeder High School Students.[a] (Asymptotic Standard Errors)

	Texas A&M		UT-Austin	
Independent Variables	Pre-*Hopwood*[b] (1992-1996)	Post-*Hopwood* (1997-2000)	Pre-*Hopwood*[b] (1992-1996)	Post-*Hopwood* (1997-2000)
Group Membership				
African American	-0.8665*** (0.0584)	-0.9472*** (0.0682)	-0.2410*** (0.0468)	-0.4360*** (0.0607)
Hispanic/Latino	-.6512*** (0.0365)	-0.7160*** (0.0404)	-0.2927*** (0.0272)	-0.2192*** (0.0364)
Asian American	-0.8918*** (0.0535)	-0.9679*** (0.0516)	0.0914** (0.0288)	0.0749* (0.0326)
Feeder HS (=1)	0.1396*** (0.0402)	0.0762* (0.0379)	0.0205 (0.0271)	-0.0437 (0.0332)
Rank				
Second Decile	0.0222 (0.0353)	0.0578 (0.0345)	0.2382*** (0.0287)	0.3328*** (0.0382)
Group x Rank				
African American	0.0544 (0.1179)	0.1090 (0.1437)	0.0291 (0.1008)	0.0588 (0.1386)
Hispanic/Latino	0.0872 (0.0742)	0.1643 (0.0860)	0.1425* (0.0557)	0.1108 (0.0808)
Asian American	-0.0231 (0.1236)	-0.0608 (0.1128)	0.2172** (0.0686)	0.2625** (0.0805)
Feeder HS (=1)	0.0772 (0.0767)	-0.1500* (0.0726)	-0.0481 (0.0532)	-0.0249 (0.0667)
-2 Log L	49,770	48,853	79,754	49,826
% Concordance	71.8	64.4	57.3	57.6
N	44,062	38,960	59,631	38,071

a. Equations control for all additive terms reported in Table 7 (results not shown)
b. Pre-*Hopwood* data for A&M are 1992-1996 and for UT 1990-1996.
*** $p \leq .001$; ** $p \leq .01$ * $\leq .05$