Changes in Texas Universities' Applicant Pools after the *Hopwood* Decision

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Abstract:
This paper evaluates how the distribution of applicant and enrollee attributes at seven Texas universities changed after the *Hopwood* decision and the implementation of a policy guaranteeing admission to students with high class ranks. We analyze changes in the distributions of test scores and high school class ranks for underrepresented minority groups as well as white and Asian American applicants across institutions and between admission regimes. We show that these admissions policy changes, which have direct effects on only the most selective institutions, have substantial indirect effects at other institutions. Average test scores of applicants to less selective institutions rose following the change in admission criteria, as students with high test scores who did not qualify for the admission guarantee applied to a broader set of institutions. Furthermore, while the share of high rank applicants at UT-Austin rose, the pre-*Hopwood* assent in the test scores of their applicants stagnated.

Keywords: College affirmative action, race-neutral policies, application decisions

1. Introduction

The past two decades have witnessed broad swings in the legality of using affirmative action in university admissions and in the strategies used to boost minority enrollment. In 1996, the Fifth Circuit Court of Appeals ruled in the case of *Hopwood v. Texas* that the University of Texas School of Law was not permitted to "use race as a factor in deciding which applicants to admit in order to achieve a diverse student body" (*Hopwood v. Texas*, 78 F.3d 932, 962 (5th Cir. 1996)). The *Hopwood* decision banned affirmative action at all public universities throughout the Fifth Circuit beginning in 1997. In response to mounting public concern regarding the ensuing drop in minority matriculation to elite Texas public universities,[1] then Governor George W. Bush signed House Bill 588 ("Uniform Admission Policy") guaranteeing admission to all high school seniors with grades in the top-ten percent of their own high school classes to any public university within Texas. The Top-10% program began in the summer of 1998.

In 2003, the U.S. Supreme Court's decisions in the *Grutter* and *Gratz* cases upheld the constitutionality of non-formulaic affirmative action policies and thus invalidated the *Hopwood* decision.[2] While non-formulaic affirmative action may be permissible under federal law, voter referenda and administrative decisions in four states, California, Florida, Washington, and Michigan have banned race-based admissions in their public universities. Several states are poised to consider similar referenda in 2008. The University of Texas at Austin was the only Texas institution to reinstitute the use of affirmative action (beginning in 2005), but a legal challenge to their new policy is currently under way (Haurwitz, 2008).

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[1] Between 1995 and 1997, black, Hispanic, and Native American students' share of enrollment fell 20.3% to 16.0% at the University of Texas at Austin and from 19.9% to 13.4% at Texas A&M University (Long, 2007).

[2] In *Gratz v. Bollinger*, the Court found the University of Michigan's undergraduate admissions policy of assigning a set amount of additional points to applicants who are in underrepresented racial groups to be unconstitutional. However, the Court affirmed the right of admissions committees to consider race in the context of an individual's specific application, rather than giving a uniform, preferential treatment to all members of a racial or ethnic group. In *Grutter v. Bollinger*, the Court upheld the constitutionality of the University of Michigan Law School's admissions policy, in which the committee factors-in an applicant's race without an explicit formula, in order to come up with a "critical mass" of students of various races.

The elimination of affirmative action in Texas, and subsequent policy changes, have altered the composition of students admitted to the public universities in the state. Most of the policy and research attention has been focused on the *direct* effects on admissions of the policy changes, conditional on application, and concomitant shifts in the composition of freshman enrollment. But changes in admission criteria also create incentives for students to alter the set of schools to which they apply in response to perceived changes in their admission probabilities. To the extent that such changes in application behavior occur, the *indirect* effects of the policy shift on the composition of admitted and enrolled students may be larger than the direct effects.[3] In particular, Texas' uniform admission policy, which guarantees automatic admission to any public university in the state to students who graduate in the top-decile of their high school class, constrains the freedom of institutions to shape their freshman classes. Consequently, as the share of applicants qualified for the guarantee rises, the characteristics of the applicant pool will increasingly mirror the freshman cohorts.

Whether and how much this transpired in Texas is an empirical question, which we address by answering two questions: First, have high school seniors responded to the admission policy change by altering their application behavior in ways that change the aggregate characteristics of applicant pools? Second, have changes in applicant pools transformed the characteristics of the universities' admitted and enrolled students? We are particularly interested in establishing whether changes in applicant pools altered the ethno-racial composition of admitted and enrolled students and if these changes were uniform across institutions that differ in the selectivity of their admission criteria.

Most knowledge about how affirmative action influences students' application behavior is based on pooled cross-sectional studies about where students sent their SAT score reports after several states banned affirmative action. These studies generate inconsistent findings. Card and Krueger (2005) find no evidence for a change in the number of score reports sent, the average SAT score of students' least selective college (i.e., "safety school"), or the largest underrepresented minority share among the

[3] See Brown and Hirschman (2005) for simulation evidence showing the potential importance of applicant responses.

colleges where highly qualified minority students (i.e., those whose SAT score was above 1150 or who self-report having an A/A+ grades) from California and Texas sent their test scores. Given this evidence, they conclude that the elimination of affirmative action did not have adverse effects on the applications of highly qualified minority students. Long (2004) evaluates shifts in SAT score-reporting behavior for *both* higher- and lower-qualified minority and non-minority students; he finds changes in where minority and non-minority students sent their SAT scores consistent with an increasing quality gap between minorities and other applicants.[4] A shared limitation of both papers is their focus on where students send their SAT score reports rather than where students actually applied. Neither directly tests how the policy changes affected the aggregate characteristics of the pool of applicants received by the states' universities.

Using administrative records for several public Texas universities, we find that the admission regime change after 1996, and the top 10% law in particular, had a sizable effect on applicant behavior that modified the distribution of applicant characteristics to the state's public institutions. First, the number of applications submitted soared, for reasons we discuss below. In the main, the distributions of applicant characteristics to the flagship institutions (UT-Austin and Texas A&M) were not dramatically changed. The share of applicants in the top-10% of their class modestly increased at UT-Austin (UT), particularly for underrepresented minorities, and modestly declined at Texas A&M (TAMU). UT witnessed stagnation in the SAT/ACT distribution of its applicants (reversing a pre-policy upward trend), while the test scores of TAMU applicants continued a slow upward drift. These outcomes suggest a slight movement of top-10% students with lower test scores toward UT and (perhaps) away from TAMU. The relatively steady composition of applicants to these institutions combined with the soaring number of applications and the Top-10% policy reduced the admissions

[4] Thomas (2005) examines where Texas students sent their SAT scores in 1998, with particular attention on score reports sent to Texas five "selective" public universities (defined using Barron's Profiles of American Colleges). Controlling for the student's sex, academic qualifications, type of high school, family income, parents' education levels, number of courses in various high school subjects, and intended college major and degree, she finds that black and Hispanic students are significantly less likely to send their SAT scores only to selective Texas universities, and significantly more likely to send their SAT scores only to selective out of state universities. She argues that these results may indicate a response to *Hopwood*. However, she does not have data for pre-*Hopwood* cohorts to test for changes.

slots available to non-top-10% students at these institutions, but particularly at UT where the growth of rank-eligible applicants rose appreciably.[5] Despite the changes in the admissions policies and the subsequent changes in application behavior, test score gaps between underrepresented minority students (URMs, i.e., blacks, Hispanics, and Native Americans) who enrolled at UT-Austin and their white and Asian American (non-URM) classmates remained constant. At Texas A&M, the test score gap between enrolled minority and nonminority students narrowed slightly.

Our results indicate that the change in college admission regimes had a more substantial impact on the test score attributes of applicants to institutions less selective than either UT or TAMU. Notably, the SAT/ACT scores of applicants substantially increased at these institutions. Moreover, Texas Tech University, which is slightly less selective than UT and TAMU, experienced both a large increase in the test stores of their applicants and a large *decrease* in the share of their applicants who were in the top-10% of their high school classes. Thus, it appears that students ineligible for the automatic admissions guarantee shifted their applications towards less selective institutions.

In the next section, we develop a model to theoretically predict the changes in applicant pools. We then describe our empirical methods for analyzing these changes, discuss our administrative data, and present the results. The concluding section discusses the policy implications of our findings.

2. Model Predicting Changes in Applicant Pools

Despite their intended goals, social policies often are imbued with ambiguous theoretical implications because single-minded objectives, such as restoring diversity at selective college campuses, neglect factors that can produce formidable unintended consequences. The Texas top-10% policy is a case in point. In their zeal to protect the hard-won diversity at the public flagships, legislative architects ignored several important factors that influence college enrollment, notably: (1) growth in the college-

[5] Administrators at less competitive institutions, particularly those with virtually open-door admissions policies have less latitude in shaping their incoming classes, which largely depend on the applicant pool.

age population; (2) the carrying capacity of the State's 4-year post-secondary system; and (3) the political significance of disregarding SAT scores for rank-eligible students in light of the consequences of rising competition for a fixed number of slots at the public flagships.

The demography of higher education in Texas is notable because the number of public high school graduates rose 33 percent between 1997 and 2005, the period when affirmative action was judicially banned and the top-10% law implemented. This increase compares with only 19 percent growth in the number of public high school graduates in the rest of the nation.[6] As important, this rapid growth was accompanied by an equally profound change in the ethno-racial make-up of graduates. Despite their above-average drop-out rates, the Hispanic share of high school graduates rose from 29 to 35 percent of the total, while the white share dropped from 56 to 48 percent (Texas Education Agency, 1995; 2005).

Even if the probability of applying to college did not change over time, these shifts imply growth in the demand for college access, and potentially in the composition of applicants. Not only did the expansion of higher education in Texas fail to keep pace with the growth of the high school graduates, but the state also witnessed a shift in the composition of college enrollment. Before the judicial ban on affirmative action was imposed, enrollment in 2-year institutions surpassed that in 4-year institutions (Tienda, 2006). Thus, as overall demand for college surged, applications rose at both 2- and 4-year institutions; moreover, demand for slots at 4-year institutions was further intensified by community college transfer students seeking to complete baccalaureate degrees. As the most selective public 4-year institution, the UT-Austin campus received a disproportionate share of students qualified for automatic admission. Many have incorrectly blamed the "college squeeze" on the change in admission regimes, rather than changes in supply and demand (Tienda and Sullivan, 2008).[7]

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[6] Authors' calculation based on data in the *Digest of Education Statistics* (Snyder and Hoffman 2000 and Snyder, Dillow, and Hoffman 2007)

[7] For example, growing dissatisfaction with the top 10% law since 2002 has focused on the saturation of UT with automatically admitted students, which was a direct outcome of the provision that allowed students to select their campus, with no cap on the number of students per institution.

If affirmative action was deemed unacceptable because it gave preference to underrepresented minority students who averaged lower standardized test scores than their white and Asian counterparts, the top-10% law has been criticized for privileging high-performing students from low performing schools. Because high schools differ in their college-going traditions and ethno-racial as well as socioeconomic composition, the direct and indirect impacts of the law are unclear. For students who are in the top-10% of their class, the policy change will produce two effects. First, because the top-10% law guarantees admission to any Texas public, post-secondary institution, for rank-eligible students who prefer to attend one of the public flagships, we should observe a shift of applications away from other institutions to UT and TAMU. Presumably this effect will be largest for students with middling SAT/ACT scores, who, in the absence of the policy changes, may not have expected to be admitted.[8] Second, given both the pecuniary and non-pecuniary cost of application and the elimination of admissions uncertainty, top-10% students should be less likely to apply to more than one in-state, public university.[9] This second effect may lower the number of applications by top-10% students to the flagship institutions, as there would be little need to apply to both UT and TAMU. These hypothesized effects imply a decline in the number of top-10% students applying to less selective institutions, but an ambiguous change in the number of applications from rank-eligible students to the flagships.

Given the judicial ban on affirmative action, the effects of the top 10% law on application behavior will likely vary by race/ethnicity for students not eligible for the admission guarantee, and are potentially ambiguous for underrepresented minority applicants.[10] As shown formally in Long (2004),

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[8] Most studies find that applicants have a preference for institutions whose median student has a higher SAT/ACT score than their own. For example, Fuller, Manski, and Wise (1982) find that a student's preference for enrolling in a college rises with the institution's median SAT score up to a point, and then declines, with the utility-maximizing SAT level being above the student's own SAT score. Using data from a sample of students with high class ranks, Avery et. al. (2004) find that they typically chose to enroll in a college whose median SAT was above the average median SAT of the institutions where they were admitted. That is, when given a choice, students enrolled in institutions with higher SAT peers.

[9] They may still apply to more than one in-state, public university if they are unsure of their preferences or need to await financial aid information before making their enrollment decision.

[10] Using the same data, Long and Tienda (2008) find significant preferences given to black and Hispanic applicants at UT-Austin and Texas A&M in the pre-*Hopwood* years.

the elimination of affirmative action could either increase or decrease the number of applications a minority student sends to selective institutions. On the one hand, a minority student who did not qualify for automatic admission may not apply to the most selective institutions if she believed that her likelihood of admission was low and that the application was not worth the cost of applying. On the other hand, a minority student could increase the number of applications submitted to the most selective institutions in hopes of raising the likelihood of acceptance by one of them. Thus, the effect of the policy change on the number of applications sent by non-top-10% URMs to the flagship institutions is theoretically ambiguous.[11] Because these students have greater incentive to apply to so-called "safety" schools, we should expect them to increase their applications to other in-state, out-of-state, and private institutions. The net effect on application behavior of white and Asian American non-top-10% students also is ambiguous: the elimination of affirmative action modestly increases their admission probability to the flagships, but the top-10% program potentially crowds them out by reducing available slots. Thus, their response is unclear. Table 1 summarizes these predictions.

In addition to shifts in the ethno-racial composition of the applicant pools, changes in admission policies will potentially also change the distributions of applicants' SAT/ACT scores at Texas public universities. The greatest beneficiaries of the shift from affirmative action to the percent plan are students who graduate in the top-10% of their class, but have low SAT/ACT scores. Unlike the percent plans implemented in Florida and California, the Texas percent plan allows students to select which public institution to attend if they qualify for automatic admission. Assuming that students generally prefer more selective over less selective institutions, selective institutions should witness an increase in the number of applicants with below median SAT/ACT scores.[12] This admission boost

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[11] As an empirical matter, Long (2004) presents evidence that a higher likelihood of acceptance increases the number of score reports a student will send to a particular selectivity-level of college. This result implies that the elimination of affirmative action will prompt non-top-10 percent minorities to decrease their number of applications sent to the most selective colleges, and have the reverse effect for white and Asian American students.

[12] Deliberate recruitment of top performing students from high schools with low college going traditions (designated Longhorn and Century Scholar high schools) coupled with explicit disregard of the test scores would also likely contribute to a reduction in average test scores.

should be greatest for white and Asian top-10% graduates with test scores below their preferred institution's median score. Conversely, black and Hispanic top-10% students with low SAT/ACT scores will receive a smaller net boost in their admission probability because they were the main beneficiaries of affirmative action. Taken together, these changes indicate a shift in the distribution of applicants to the flagship universities towards those with lower SAT/ACT scores.

How changes in admission policies alter the distributions of applicants' SAT/ACT scores at less selective Texas public institutions is ambiguous. On the one hand, non-top-10% students with higher SAT/ACT scores may be inclined to apply to less selective institutions if they perceive themselves to be crowded out of the public flagships by students eligible for the guarantee. This effect should be pronounced for black and Hispanic students who also lose the edge provided by affirmative action. On the other hand, because some top-10% students will shift their applications toward the flagships and away from the less selective institutions, many of whom will have high SAT/ACT scores, the overall effect on the SAT/ACT distributions of the less selective institutions is ambiguous. Given the theoretically countervailing effects potentially triggered by changes in Texas college admission regimes, we use administrative data to estimate the net impacts. The next section discusses the methodology used to estimating these distributional shifts in the applicant pools.

3. Methods for Estimating the Changes in the Distributions of Student Characteristics

Our main interest is ascertaining whether and how the distribution of student attributes changed after the *Hopwood* decision that prohibited consideration of race and ethnicity in college admissions decisions and the implementation of the top-10% policy. We thus focus on comparisons of the distributions of applicants for the years 1996 and earlier with those of 1998 and later. The Fifth Circuit Court of Appeals *Hopwood* decision was delivered on March 18, 1996, which was after applications for the entering class in the fall of 1996 were submitted and mostly adjudicated. The *Hopwood* decision was in full force for the entering class in the fall of 1997, while the top-10% policy was in force for the entering class in the fall of 1998. Thus, the comparison of the period 1996-and-earlier with 1998-and-later allows for a full accounting of the effect of eliminating affirmative action and instituting the top-10% policy. We will refer to these periods as "pre-*Hopwood*" and "Top-10%". Because the growth and diversification of the college-eligible population was underway since before the *Hopwood* decision, we also test for differences in applicant characteristics between the years 1994 and earlier with 1995/1996, and discuss whether there appeared to be a trend in applications during the pre-*Hopwood* years.

We first use kernel density estimators to estimate and plot distributions of SAT/ACT scores and class ranks for all applicants and separately for URMs and non-URMs at each university for the pre-*Hopwood* and Top-10% periods.[13] ACT test scores were converted into their equivalent SAT test score values,[14] and for students who took both tests we use the higher of the two scores.[15] We discuss the shape of each distribution, noting first whether it changed and if so, identifying in what part of the distribution the college gained or lost applicants. The Kolmogorov-Smirnov test allows us to test the hypothesis that the pre- and post-policy distributions are equal. Following Hedges and Nowell (1999), we compute, for URMs and non-URM, the share of applicants who are among the bottom-20%, top-half, and top-20% of applicants to each university in each period. By comparing these shares across

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13 For the SAT distribution, we use an Epanechinov kernel with the following bandwidth proposed by Silverman (1986): 2.34×min{Standard Deviation of SAT/ACT scores, Interquartile Range of SAT/ACT scores/1.34} × $n^{-1/5}$, where n is the number of observations. Because the class rank percentile distribution is highly skewed, we use an adaptive Epanechinov kernel estimator. See Silverman (1986), Pagan and Ullah (1999), and Van Kerm (2003).

14 ACT test scores were converted into their equivalent SAT test score values using a conversion table provided by the College Board (Dorans, 2002), and for students who took both tests we use the higher of the two scores. This conversion table is valid for SAT scores after the College Board "re-centered" scores upwards in 1996, therefore we have re-centered prior year SAT scores before using this conversion. For UT-Pan American, UT-Arlington, UT-San Antonio, Texas A&M Kingsville, and Texas Tech, the data only include the sum of the SAT math and verbal scores. As a result, we do not have a natural method for re-centering the scores before 1996 (as SAT math and verbal scores were separately re-centered by the College Board). For the first four institutions above, using pre-1996 data for applicants with both SAT and ACT scores, we regressed the students' ACT scores on their combined SAT scores and SAT scores squared and cubed. We then predicted the students' ACT scores using their SAT scores and selected the higher value. We then converted the higher value into its re-centered SAT-equivalent value. However, Texas Tech only included data for either the student's SAT or the ACT score, but not both. Thus, to conduct the re-centering, we began with the re-centering conversion chart available from the College Board (1999). We summed the original math and verbal scores and summed the re-centered math and verbal scores (effectively, this assumes that an SAT score of X is composed of a math score of X/2 and a verbal score of X/2). We then regressed the summed re-centered scores on the summed original scores and these original scores squared and cubed. The regression results were then used to "re-center" the SAT scores for Texas Tech before 1996.

15 Although we have no evidence that the Texas universities examined used the higher of the scores, this procedure is consistent in spirit with the findings of Vigdor and Clotfelter (2003), who note that for students who take the SAT test multiple times, there is a "widespread policy stated by college admissions offices to use only the highest score… for purposes of ranking applicants, ignoring the scores from all other attempts" (p. 2). Given this widespread practice, it seems reasonable to assume that most colleges use the higher value of the SAT and ACT score in making their admissions decisions.

racial/ethnic groups, we establish whether the qualification gaps for underrepresented minorities increased or decreased.[16] We repeat these same analyses using students' high school class ranks.[17]

4. Data

Data for the analysis come from individual administrative application records at the following universities:[18]

	Data Available For:			
	Applicants	Admittees	Enrollees	Mean SAT/ACT[19]
Univ. of Texas at Austin	1990-03	1990-03	1990-03	1,233
Texas A&M Univ.	1992-02	1992-02	1992-02	1,185
Texas Tech Univ.	1989-03	1989-03	1989-03	1,094
Univ. of Texas at Arlington	1994-02	1994-02	1994-01	1,040
Univ. of Texas at San Antonio	1998-04	1998-04	1990-04	979
Texas A&M Univ. at Kingsville	NA	1996-02	1992-02	883
Univ. of Texas-Pan American	1995-02	1995-02	1995-02	841

Table 2, which summarizes the data, reveals a tremendous increase in the number of applications submitted to these seven institutions. From 1998 to 2006, the total number of applications to these institutions rose 59 percent — far exceeding the aforementioned pace of growth in the number of Texas high school graduates in the state during this period (33 percent). This increase in applications might reflect the secular national trend in students submitting more applications (Breland et al., 2002) rather than a response to the policy change. Most universities in our data accommodated the growth in applications by increasing the number of admitted students, as evident in the modest declines in the

[16] We would like to thank Eric Grodsky and Michal Kurlaender for suggesting this analysis..

[17] For UT-Austin ,Texas Tech, and UT-San Antonio, the data included indicators of student's class rank percentile within ranges (e.g., 75th-90th percentile) when precise data on the student's class rank and/or class size was unavailable. We smoothed these students into the appropriate class rank percentile ranges (details are available from the authors). The shares of students whose class rank was imputed are as follows: UT-Austin (2.8%), Texas Tech (3.7%), and UT-San Antonio (5.0%). Given the small shares of students with these imputations, the results are highly robust to omitting these students.

[18] These data were collected by the Texas Higher Education Opportunity Project. For further information, see: http://www.texastop10.princeton.edu.

[19] Averaged across all admitted students for the years available. For UT-San Antonio this measure is an average over enrolled students in the years 1990-97 and admitted students in the years 1998-04. For Texas A&M Kingsville this measure is an average over enrolled students in the years 1992-95 and admitted students in the years 1996-02.

share admitted for each institution. However, between 2002 and 2006, acceptance rates fell at UT-Austin (from 76 to 58 percent) and UT-Arlington (from 89 to 77 percent).

In the immediate years after the *Hopwood* decision, the share of applicants who were underrepresented minorities remained relatively constant at UT-Austin and Texas Tech, and declined at Texas A&M, despite growth in the URM share of high school graduates in the state of Texas (Long 2007). However, during the past three years, the URM share of applicants at these institutions has risen rapidly.

The patterns of changes in the share of URMs who were accepted (shown in the 4th panel of Table 2) roughly tracks the patterns for all students (2nd panel). During the pre-*Hopwood* years, URMs enjoyed a higher probability of admission at both public flagships (unconditional on their attributes) than non-URMs. Beginning in 1997 — the year the judicial ban was fully in force and before the percent plan had gone into effect — URMs faced an unconditional admission disadvantage at both institutions. Although the admission disadvantage persists at TAMU, there have been no substantial differences in unconditional admissions rates of URMs and non-URMs at UT-Austin since 2000. Black and Hispanic applicants to Texas Tech and UT-Arlington have consistently had lower unconditional admission rates compared with white and Asian applicants, and these disadvantages have widened over time. The admissions rates for URM and non-URM applicants at UT-Pan American and UT-San Antonio, two institutions with much less competitive admissions than Texas Tech and UT-Arlington, are nearly equivalent in each year, while Texas A&M Kingsville admits nearly all applicants.

The fifth panel of Table 2 shows the share of applicants (with non-missing class rank percentile) who graduated in the top-10% of their high school class. Annual trend data (collapsed in Table 2 for parsimony) reveal that after the implementation of the top-10% policy, the share of top-10% applicants to UT-Austin crept upwards from 40 to 45 percent, reversing a downward pre-policy trend. At Texas A&M, the share of top decile applicants declined slightly from 40 to 37 percent, while at Texas Tech, the top-10% share dropped precipitously from 24 to 17 percent.

Finally, the last panel of Table 2 shows that the average SAT score of Texas high school students rose steadily from around 1,000 in the early-1990s to around 1,020+ in the mid-2000s.[20] However, the average ACT score remained relatively constant over this period.[21] Thus, we should expect to see, at most, modest increases in the SAT/ACT scores of applicants to these universities. The next section contains a deeper analysis of the changes in the applicant pools.

5. Estimation Results

5a. University of Texas at Austin

Figure 1 displays changes in the characteristics of applicants to UT-Austin, where the "A" panels show the change in the distribution of student's SAT/ACT scores and the "B" panels do so for the class rank distributions. The top "A" panel shows a rightward shift in the SAT/ACT score distribution. Comparing the blue solid line (<=1994) with the black dotted line (1995/1996) indicates that this shift occurred during the years prior to the *Hopwood* decision. Despite the modest growth in SAT scores statewide, there was no significant change in the SAT/ACT distribution after the *Hopwood* decision, as revealed by the difference between the dotted line and the red solid line (>=1998). Thus, if we assume that the pre-*Hopwood* trend would have continued, then the absence of a continued rightward shift during the top-10% years suggests that the policy change is likely responsible. This result is consistent with the prediction of a decline in SAT/ACT scores for the flagship institutions (as discussed in Section 2). The two bottom "A" panels compare the pre-1995/1996 period with the top-10% period, with separate analyses for URMs and non-URMs. Remarkably, there was no substantial change in the test score distribution for either group during this period.

The "B" panels of Figure 1, which portray changes in the distribution of class rank percentiles, clearly depict the consequences of the top-10% program on application behavior: the share of

[20] All SAT scores for the years before 1996 have been "re-centered" to make them comparable with latter years.
[21] Students in the state of Texas are more prone to take the SAT than the ACT. For the period 2003 to 2007, there was an annual average of 133,971 SAT and 73,440 ACT test takers in the state (authors' calculation based on data from the College Board and ACT, Inc. – see Table 2 "Sources").

applicants who graduated in the top-10% of their high school class rose as graduates ranked in the second- and third-decile of their high school classes fell as a share of applicants. The growth in the share of applicants who were in the top-10% appears to be entirely due to URM applicants, whereas the decline in the share of second-decile applicants appears to be mostly due to changes in the distribution of white and Asian applicants. Highly ranked minority applicants with low test scores were encouraged to take advantage of the admission guarantee. Aggressive outreach programs and fellowships targeted to rank-qualified applicants reinforced this behavior (Domina, 2007).

Table 3 shows the share of URMs and non-minority students who were in the bottom-20%, top-half, and top-20% of UT-Austin's applicant pools before and after the change in admission regime. Based on applicants' SAT/ACT scores, black and Hispanic students were greatly overrepresented among the bottom-20% of applicants and underrepresented in the top-half during the pre-*Hopwood* period (Panel A). The three columns on the right reveal that there was virtually no change in this degree of disadvantage under the top-10% regime, consistent with the modest changes in the SAT scores distributions reflected in Figure 1. During the pre-*Hopwood* period black and Hispanic applicants were at a slight disadvantage in their class-rank percentile, but not under the top-10% admission regime. That is, the distributions of class rank percentiles among URM and non-URM applicants were nearly identical after 1998, as indicated by the 1.0 ratio in the last column.

Panel B of Table 3 repeats this analysis, restricting the sample to admitted applicants. As expected, during the affirmative action regime, black and Hispanic applicants were overrepresented among admitted students with low SAT/ACT scores: 29 percent of admitted URMs compared with 5 percent of non-URMs were among the bottom-20% of applicants based on their SAT/ACT scores. These shares increased to 36 percent and 9 percent, respectively, during the top-10% period. In effect, the top-10% policy resulted in the acceptance of more applicants with low SAT/ACT scores compared with the pre-*Hopwood* regime, but a proportionately greater change in the share of low-scoring white and Asian admittees than low-scoring URM admittees. Panel C of Table 3 repeats this analysis for matriculants. Unlike for admittees, the SAT distribution among enrollees was virtually unchanged across time, such that URM enrollees were equally overrepresented among students with the lowest SAT scores in both the pre-*Hopwood* and top-10% periods. Under the top-10% regime, however, URM students were overrepresented among enrollees with high class ranks.

5b. Texas A&M University

Figure 2 depicts changes in the test score and class rank distributions of applicants to Texas A&M. The top "A" panel reveals a modest rightward shift in the SAT/ACT score distribution that was not restricted to either admission regime. Thus, unlike UT, TAMU did not experience a reduction in the SAT/ACT scores of their applicants, as predicted in Section 2. In fact, unlike UT-Austin, Texas A&M witnessed a rightward shift in the SAT/ACT scores of its black and Hispanic applicants. The "B" panels of Figure 2 partly explain this difference. Continuing a pre-top 10% trend, TAMU experienced a gradual drop in the share of applicants from the top decile of the class rank distribution. Thus, unlike UT, it appears that TAMU was not swamped with applications from top-10% graduates with low-test scores (Tienda and Sullivan, 2008).

Table 4 repeats the analysis from Table 3 based on applicants to Texas A&M. Panel A shows that the SAT/ACT score disadvantage of black and Hispanic applicants during the pre-*Hopwood* period continued through the top-10% regime. As at UT-Austin, URM applicants to Texas A&M were at a slight disadvantage in their class rank standing both before and after the judicial ban on affirmative action. Panels B and C of Table 4 indicate that URMs who were admitted to and enrolled in Texas A&M were less well prepared academically compared with their Asian and white classmates. This disadvantaged narrowed under the uniform admission period regime, however, driven in part by an increase in the share of white students in the bottom 20% of the SAT/ACT and class rank distribution.

5c. Texas Tech University

Between 1995 and 2003, the number of applications to Texas Tech doubled. This remarkable increase did not involve recruitment of less qualified applicants. Rather, as shown in Figure 3, the

SAT/ACT scores of applicants to Texas Tech increased appreciably, as the share of applicants with scores above 1100 surged from 39% to 49% during this period. This shift reversed a modest downward trend in standardized test scores at Tech prior to the change in admission regimes. Although gains in standardized test scores are evident among white and Asian American applicants, they are especially notable among black and Hispanic students applying to Texas Tech. The "B" panels of Figure 3, which reveal a drop in the share of top decile applicants and a concomitant rise in graduates whose class rank standing was in the 50th-70th percentiles, provide some insight into the source of the change. The decline in top-10% applicants was especially notable among white and Asian applicants. Thus, it appears that Texas Tech began receiving more applications from students who, in the pre-*Hopwood* years would have had high chances of acceptance at the flagship institutions (especially URMs with high SAT/ACT scores), and it lost applicants whose chances of admission to the flagships increased radically with the implementation of the admission guarantee (especially highly ranked Asian and white students with low SAT/ACT scores).

Table 5 shows that URM applicants to Texas Tech were disadvantaged relative to white and Asian students based on their SAT/ACT scores under both the pre-*Hopwood* and top-10% admission regimes, but not based on their class rank distribution. Panels B and C of Table 5 reveal that black and Hispanic students who were admitted to and enrolled at Texas Tech had lower SAT/ACT scores in both admission periods than their white and Asian counterparts, although the disadvantage narrowed over time. That is, the surge in applications from black and Hispanic students with above average test scores narrowed the test score disadvantage of those admitted and enrolled. Among admitted and enrolled students, URMs and non-URMs had similar distributions of class rank percentiles in both periods.

5d. Consequences for Less Selective Universities

In the remainder of the paper, we focus on four less selective universities: UT-Arlington, UT-Pan American ("PanAm"), UT-San Antonio (UTSA), and Texas A&M at Kingsville ("Kingsville"). Because these institutions accepted most applicants and did not practice affirmative action in the pre-*Hopwood* period, the *Hopwood* decision and the top-10% policy would have only indirect effects on these institutions. However these indirect effects appear to have been substantial.

Pre-*Hopwood* application data is unavailable for UTSA and Kingsville, therefore we begin with a discussion of changes in the test score distributions of applicants to UT-Arlington and UT-Pan American, which are reported in Figure 4. The results for UT-Arlington are comparable to Texas Tech, which is not surprising because the two institutions had similar mean SAT/ACT scores among their applicants (1,037 and 1,053 in 1996, respectively). Between 1994 and 1998, the number of applications to UT-Arlington fell from 2,852 to 2,249. In the subsequent years, however, the applications doubled to over 5,000 by 2002. Like Texas Tech, the rise in applications at UT-Arlington involved recruitment of students with higher standardized test scores. This rightward shift of the distribution of SAT/ACT scores, however, occurred only among white and Asian American applicants, which is a plausible response to the squeeze on the flagships imposed by the top-10% policy.[22]

By contrast, the share of black and Hispanic applicants with test scores below roughly 850 rose after the implementation of the top-10% policy, while the share of applications from URM students whose test scores were in the 850-1,100 range fell, and the share above 1,100 remained constant. This result does not reflect a decline in the number of applications from URM students with middling test scores; in fact, applications from URM students with test scores between 850 and 1,1100 increased from an average of 447 per year (1995-1996) to 566 per year (1998-2002). Thus, the decline in the share of applications from these middle-scoring URMs resulted from increases in the number of lower (and higher) scoring URM applicants. In other words, UT-Arlington witnessed a growth in applications from middle- and high-scoring URMs, but simultaneously experienced fast growth in their applications from low-scoring URMs, likely for reasons unrelated to changes in admission regimes.

Results not reported, but available from the authors, reveal that shifts in the SAT/ACT distributions widened the test score gap between URM and white and Asian applicants, which carried

[22] UT-Arlington lacks pre-Hopwood class rank information, so this hypothesis cannot be verified.

forth to both admitted and enrolled students. Thus, in light of the rising test scores of white and Asian students attending UT-Arlington, the typical black and Hispanic student at the Arlington campus is relatively less well prepared for college-level work. Moreover, as the share of applicants admitted dropped from 89 percent in 2002 to 77 percent in 2006, access to UT-Arlington became more competitive. Recent trends in the test score distribution of applicants coupled with a drop in the percent admitted point to further changes in the characteristics of students admitted to UT-Arlington, particularly as the college squeeze set in motion by changing demographics continues to unfold.

PanAm differs in many ways from the four institutions discussed previously. Located along the Mexican border, it qualifies as an "Hispanic-serving institution": 85 percent of applicants (with non-missing race/ethnicity) were Hispanic, 8 percent were white, and 4 percent identified as "other" race. UT-Pan American rejected only about 10% of applicants during the observation period. Figure 4 reveals that PanAm witnessed an appreciable increase in the SAT/ACT scores of its applicants during the observation period, which was particularly pronounced for Hispanic applicants (with the mean SAT/ACT score for minority applicants rising from 803 in 1996 to 831 in the top-10% years). This change conforms with our prediction, discussed in Section 2, that URM students with high SAT/ACT scores would be highly inclined to apply to less-selective institutions after the top 10% policy went into effect because their admission chances at the public flagships would be diminished by both the elimination of affirmative action and the crowd-out of admission slots caused by the admission guarantee.

In the absence of pre-*Hopwood* applicant data for UT-San Antonio (UTSA) and Texas A&M-Kingsville (Kingsville), our analysis for these institutions is restricted to enrollees. The characteristics of students admitted to less selective institutions are very similar to their applicant pools because of the high admission rate. Although characteristics of their enrollees may differ from those of their admittees,[23] the observed trends in the test score and class rank distributions of enrollees at these institutions are quite informative, particularly relative to the shifts observed at more selective institutions.

The top "A" panel of Figure 5 shows that the combined SAT/ACT distribution of enrollees at these four institutions shifted strongly to the right, reversing a trend in the opposite direction under the pre-*Hopwood* admission regime.[24] Importantly, as shown in middle and bottom "A" panels, the improvement in SAT/ACT scores was not confined to Asian and white enrollees, but also involved black and Hispanic students. The "B" panels of Figure 5 show the class rank distribution for the enrollees at PanAm, UTSA, and Kingsville combined (with UT-Arlington omitted due to a lack of class rank data). Here we observe upgrading in the class rank distribution, with an increasing share of enrollees coming from above the 77th percentile of their class rank. This shift occurs for both URMs and white and Asian-American enrollees.

Our theoretical reasoning predicted an increase in enrollment at these universities of students who had high class ranks, but who were not in the top-10% of their high school class. Thus, the observed increase in the share of enrollees who were in the top-10% of their high school class, which rose from 11.8% to 13.5% during this period, is surprising. Nonetheless, a comparable increase in the share of applicants in the second-decile of their high school classes (14.3% to 15.5%) is consistent with our expectations. In results not shown, but available from the authors, we find that relative to their classmates in the pre-*Hopwood* period, black and Hispanic enrollees at UTSA were at a disadvantage based on SAT/ACT scores, but advantaged based on class rank percentile. Predictably, black and Hispanic UTSA enrollees' test score disadvantage widened even as their class rank percentile advantage narrowed under the top 10% regime. These results suggest that an influx of higher-scoring white and Asian applicants has contributed to the test-score disparities between URM and non-URM students at

[23] Between 1998 and 2006, 44 (45) percent of students admitted to UTSA (Texas A&M Kingsville) subsequently enrolled (Authors' calculations based on data from the Texas Higher Education Coordinating Board reports on "First-time Undergraduate Applicant, Acceptance, and Enrollment Information" (http://www.txhighereddata.org/Interactive/AppAccEnr.cfm, accessed November 30, 2007)).
[24] Plots of these distributions for the individual institutions are available from the authors.

the San Antonio campus. URM enrollees at Kingsville were at a sizable disadvantage based on test scores and a modest disadvantage based on class rank percentile in both the pre-*Hopwood* and Top-10% periods, with little change in this disadvantage.

Geography partly explains the observed shifts in the composition at UTSA, which is located about an hour from the UT-Austin campus. As the flagship campus has become increasingly saturated with top-10% admits, the admission squeeze has tolled particularly hard on prospective applicants that share feeder schools. In fact, both UTSA and Austin Community College have become back-up institutions for students who desire to attend UT-Austin, but do not qualify for the admission guarantee. Depending on space limits, UTSA students could transfer to the Austin campus and community college transfers were usually guaranteed. These practices may have changed, however, as the campus became increasingly saturated with automatically admitted students, crippling the ability of admissions officers to accept transfer students. The observed shifts in the SAT and class rank distributions at UTSA are consistent with the scenario that students crowded out of their preferred institution by top-10% admits are applying to and attending less selective institutions.

6. Conclusion and Policy Implications

The replacement of affirmative action with an admission guarantee for students who graduate in the top decile of their high school class altered college application behavior and admission outcomes at Texas public institutions throughout the state. As Texas students modified their application portfolios in response to the ban on affirmative action and the admission guarantee for top-ranked graduates, average test scores of applicants to UT-Austin stopped increasing while those of applicants to less selective public institutions rose. This result follows from the provisions of the top 10% law, which not only disregards test scores for graduates eligible for automatic admission, but also permits qualified applicants to choose which public institution to attend.

The provision allowing rank-eligible students to select their postsecondary institution appears to have altered college application portfolios of high achieving students who fall below the 10% threshold in the class rank distribution and perceive their admission prospects to be low at the most selective in-state campuses. That the average SAT scores and median class rank of applicants rose at the less competitive institutions under the top 10% regime supports this claim, which is consistent with a crowding hypothesis. UT-Austin experienced rather acute crowding due both to a substantial rise in the number of applicants (experienced to varying degrees at all institutions we examined) and a shift in institutional preferences of top-decile graduates. For the incoming class of 2008, 81% were automatically accepted (Schevitz, 2008). Texas A&M has not been equally saturated with applicants eligible for automatic admission partly because of its less desirable geographic location and partly because of an institutional legacy that was deemed less appealing to minority students (Schmidt, 2005).[25]

Despite clear evidence that the changed admission regime has impacted all Texas public institutions, media coverage and political discourse has largely focused on the consequences of the admission regime change for *actual* enrollment, primarily at the two public flagships, presuming that observed changes are a *direct* consequence of the law. Whether and how much the top 10% policy was responsible for changes in the ethno-racial composition of the public flagships, as intended by its architects, is less clear because several other forces that influence college-going behavior have changed simultaneously. Not only did high school graduates become more ethnically diverse, but their numbers increased faster than the expansion of the four-year college system. By itself the latter would accentuate crowding, and assuming that proportionate numbers of minorities qualified for the admission guarantee, gradually diversify college campuses. In fact, campus diversity depends not only on who is admitted, but who actually applies and ultimately, who actually enrolls. Application and

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[25] Until 1963, Texas A&M was a military-training college that was off-limits to black and female students, and compared to the Austin campus, is characterized by a more conservative culture than UT (Schmidt, 2005).

enrollment decisions are made by individual students and their parents, whereas admission decisions are governed both by the top 10% law and for students who do not qualify for the guarantee, admissions officers.

Table 6 summarizes the composition of in-state student applicant, admission and enrollee pools at the two public flagships before the *Hopwood* decision and under the top-10 admission regime. The uneven results are striking. At Texas A&M, the share of applications from black and Hispanic students fell slightly, while those from white and Asian students rose. White students comprised an increasing share of admittees and enrollees at Texas A&M. In contrast, the share of applications received from black and Hispanic students were not significantly changed at UT-Austin. White students experienced an increase in their raw numbers, but a decline in their share of applicants, admittees, and enrollees. The decline in white students' share of enrollees at UT-Austin was offset by the large rise in Asian students' share. Thus, the competition for a fixed number of slots as UT-Austin along with the new admissions policy largely advantaged Asian students at the expense of white students.

If enrollment diversity at the public flagships is the intended goal of the uniform admission law, it falls short of this objective; the data reported Table 6 show declining shares of underrepresented minority students at both institutions (significantly so at Texas A&M). Although the share of white students declined at UT-Austin, the 2.8 percentage point drop was largely due to an increase in enrollment of Asian origin students, not blacks or Hispanics. At Texas A&M, enrollment shares of black and Hispanic students fell relative to their pre-*Hopwood* levels. Thus, the Texas A&M campus is less diverse under the uniform admission regime compared to the pre-*Hopwood* period. Former president Gates claimed that the main problem "was not so much that too few minority students were applying or gaining admission, but that too few were choosing to enroll" (Schmidt, 2005). Ultimately, legislators will seek results on the desired outcome — enrollment.

From a policy perspective, the reasons for the uneven impact of a uniform admission regime at UT and Texas A&M warrants further scrutiny. Our results demonstrate that a one-size-fits-all solution is unrealistic, particularly in such a dynamic demographic context. Rather than dismantle the law altogether, as some critics have requested, it is necessary to understand the mechanisms that undergird the unequal application and enrollment outcomes. Three considerations seem especially relevant in light of the changing demography of Texas's college-eligible population, namely (1) the carrying capacity of the state's higher education system; (2) the reasons rank-eligible students do not matriculate in their desired institution; and (3) the significance of eliminating the SAT from consideration in college admissions for students who qualify for automatic admission.

Regarding the carrying capacity, the key question is whether the state's higher education system is able to accommodate the growing number of high school graduates. More specifically, if every top decile graduate applied to a four-year institution, would there be a sufficient number of slots? According to TEA, there were approximately 225 thousand public high school graduates in 2003, which implies that around 22 thousand students qualified for automatic admission to a public university in Texas. If everyone sought admission to either UT or Texas A&M, their combined carrying capacity would have been exceeded. Given recent increases in the number of high school graduates, the relevant policy question is whether 10% is a reasonable threshold for guaranteed admission. How the architects of the law arrived at the 10% cut point for the admission guarantee remains a mystery, but it is reasonable to ask whether the guaranteed admission threshold might be pegged to the carrying capacity of the system. Perhaps 5 or 7 percent is a more reasonable cut-off in light of the growing demand for access to public 4-year institutions in Texas. The growing saturation of UT with automatically admitted students is not sustainable; the policy challenge is to devise a way to ration slots throughout the four-year postsecondary education system that achieves the twin goals of broadening educational opportunity across a broader spectrum of the population while protecting some degree of institutional flexibility to shape the freshman classes along many dimensions.

That students have changed their application portfolios in response to the uniform admission regime suggests some broadening of educational opportunity across the state. This claim finds support in the growing number of high schools represented among the freshman classes at UT and Texas A&M. This outcome, however, was not a direct consequence of the law, but rather the strong outreach programs developed by UT and Texas A&M to recruit top performing students from high schools that traditionally sent few students to their campuses (Domina, 2007). Outreach is perhaps a necessary condition to encourage applications of underrepresented minority groups, but it is insufficient to raise their enrollment without commensurate financial aid. Given that minority students are more likely to attend poor schools, it is unsurprising that they report cost and availability of financial aid as the most salient factors influencing their decision to enroll at a non-selective post-secondary college (Tienda and Niu, 2006). In response, Texas A&M has increased its attention to financial aid counseling in tandem with its intensified outreach efforts to make financial aid counter-offers to talented students (Schmidt, 2005). These multi-pronged recruitment efforts reinforce claims that the potential of the top 10% law to diversify college campuses depends on complementary supports to qualified students.

Finally, although it is inappropriate to attribute all changes in application and enrollment behavior to the modified admission policy, the SAT and class rank distributional shifts were likely driven by the admission guarantee, and specifically its influence in redistributing access to the public flagships. Prior to the Top-10% policy, UT-Austin and Texas A&M had admissions policies that led to the acceptance of nearly all applicants who were in the top-10% of their high school classes (Tienda and Niu, 2004). Thus, in one sense the only unique effect of the top-10% law was to make the *de facto* policy transparent. This transparency had broad consequences, evident in the growing shares of top decile high school graduates, particularly highly ranked black and Hispanic graduates, who applied to UT-Austin. These results suggest that making admissions policies more transparent can greatly shift the composition of applicants, particularly when complemented with aggressive outreach strategies.

Embedded in the seemingly benign change from a *de facto* to a *de jure* policy is a more radical provision to disregard altogether the standardized test scores of rank-eligible applicants (Tienda, Alon and Niu, 2008). Perhaps even more than the admission guarantee *per se*, this provision, along with the provision that allows students to select their preferred campus within the UT and A&M systems, may be largely responsible for the observed changes in application and enrollment behavior. Without considering changes at all institutions in the two public post-secondary systems, we can not unequivocally disentangle direct and indirect consequences of the law from demand and supply shifts in the post-secondary market. Nevertheless, the evidence we assemble suggests that students' application responses to the change in the incentives caused by the new admissions rules can profoundly affect the composition of the student bodies, even at institutions not directly affected by the policy changes.

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Table 1: Theoretical Predictions for Changes in the Total Number of Applications Sent to Various Types of Universities, by Racial Group and Top-10% Status

Type of Applicant	**More Selective Texas Public Universities** (e.g. UT-Austin, Texas A&M)	**Less Selective Texas Public Universities**	**Private and Out-of-Texas Universities**
URM, Top-10%	Ambiguous	Decrease	Decrease
URM, Not-Top-10%	Ambiguous	Increase	Increase
Non-URM, Top-10%	Ambiguous	Decrease	Decrease
Non-URM, Not-Top-10%	Ambiguous	Ambiguous	Ambiguous
Top-10% (All Students Combined)	Ambiguous	Decrease	Decrease
Not-Top-10% (All Students Combined)	Ambiguous	Ambiguous	Ambiguous

Note: "URMs" = "Underrepresented Minorities (blacks, Hispanics/Mexicans, and Native Americans). "Non-URMs" = Whites and Asian Americans.

Table 2: Changes in the Characteristics of Applicants at Selected Texas Public Universities, and Changes in the Average SAT and ACT Scores of Texas High School Students

		Average Across the Following Application Years			
		<=1994	**1995/1996**	**1997**	**>=1998**
Number of	**UT-Austin**	14,418	15,728	14,571	17,797
Applications	**Texas A&M**	13,384	14,761	14,914	15,688
	Texas Tech	6,056	6,599	7,545	10,068
	UT-Pan American		6,399	4,907	5,407
	UT-Arlington	2,852	2,690	2,494	3,824
	UT-San Antonio				6,931
	TX A&M-Kingsville				*1,999*
Share Accepted	**UT-Austin**	71	69	78	68
	Texas A&M	75	75	78	73
	Texas Tech	75	81	73	75
	UT-Pan American		89	90	91
	UT-Arlington	91	88	96	91
	UT-San Antonio				84
	TX A&M-Kingsville				*100*
Share of Applicants	**UT-Austin**	20	19	18	19
who are URMs*	**Texas A&M**	18	19	17	16
	Texas Tech	20	19	18	19
	UT-Pan American		88	84	82
	UT-Arlington	26	27	28	32
	UT-San Antonio‡	**39**	**47**	**49**	58
	TX A&M-Kingsville‡	**72**	**71**	**77**	*73*
Share of URMs*	**UT-Austin**	74	68	71	66
Accepted	**Texas A&M**	85	83	72	69
	Texas Tech	68	75	59	61
	UT-Pan American		89	90	91
	UT-Arlington	87	81	94	85
	UT-San Antonio				83
	TX A&M-Kingsville				*100*
Share of Applicants	**UT-Austin**	42	41	39	43
in the Top-10% of	**Texas A&M**	41	39	40	38
HS Class (among	**Texas Tech**	21	22	24	20
those with non-	**UT-Pan American**		10	10	12
missing class rank	**UT-Arlington**				
percentile)	**UT-San Antonio‡**	**15**	**15**	**15**	16
	TX A&M-Kingsville‡	**11**	**11**	**10**	**15**
Average SAT Score (Math + Verbal)		1,001	1,012	1,016	1,020
Average ACT Composite Score		20.2	20.2	20.2	20.3

Notes:

* "URMs" = "Underrepresented Minorities (blacks, Hispanics/Mexicans, and Native Americans).

‡ For UT-San Antonio and TX A&M-Kingsville, values in bold text reflect enrollees, rather than applicants.

Sources:

Non-italicized data on applications: THEOP administrative data files; Italicized data on applications: Texas Higher Education Coordinating Board (http://www.txhighereddata.org/ Interactive/AppAccEnr.cfm, accessed September 2007); SAT data: College Board (http://www.collegeboard.com/about/news_info/cbsenior/ yr2007/reports.html, accessed September 2007); ACT data: ACT, Inc. (http://www.act.org/ news/data.html, accessed September 2007).

Table 3: Relative Disadvantages of Underrepresented Minorities Among Applicants, Admittees, and Enrollees at UT-Austin

			Pre-*Hopwood* (1995/1996)			Top-10 (>=1998)		
			URMs	**non-URMs**	**Ratio**	**URMs**	**non-URMs**	**Ratio**
Panel A: Applicants	**Share in SAT/ACT Distribution**	**Bottom-20%**	45.9	15.9	2.9	44.0	15.4	2.9
		Top-Half	24.9	55.2	0.5	26.0	55.2	0.5
		Top-20%	6.5	21.2	0.3	6.8	22.1	0.3
	Share in Class Rank Percentile Distibution	**Bottom-20%**	23.8	19.0	1.3	20.3	19.8	1.0
		Top-Half	47.5	50.6	0.9	51.1	49.7	1.0
		Top-20%	18.4	20.1	0.9	20.5	19.6	1.0
Panel B: Admittees	**Share in SAT/ACT Distribution**	**Bottom-20%**	29.4	4.9	6.0	35.7	9.2	3.9
		Top-Half	34.6	70.7	0.5	33.1	65.3	0.5
		Top-20%	9.1	28.6	0.3	9.3	28.3	0.3
	Share in Class Rank Percentile Distibution	**Bottom-20%**	11.7	7.1	1.6	8.3	8.8	0.9
		Top-Half	60.5	64.3	0.9	70.1	63.9	1.1
		Top-20%	24.6	26.8	0.9	29.2	25.7	1.1
Panel C: Enrollees	**Share in SAT/ACT Distribution**	**Bottom-20%**	38.5	11.0	3.5	39.7	11.2	3.5
		Top-Half	27.1	58.9	0.5	27.8	59.9	0.5
		Top-20%	6.6	20.1	0.3	6.6	23.0	0.3
	Share in Class Rank Percentile Distibution	**Bottom-20%**	22.0	15.5	1.4	10.0	11.4	0.9
		Top-Half	48.0	53.9	0.9	66.7	59.3	1.1
		Top-20%	16.4	19.9	0.8	25.7	22.2	1.2

Note: A student's position in the relevant distribution is determined on a year-by-year basis using data from all applicants. Students with missing values for the relevant variable are omitted from the share calculations.

Table 4: Relative Disadvantages of Underrepresented Minorities Among Applicants, Admittees, and Enrollees at Texas A&M

			Pre-*Hopwood* (1995/1996)			Top-10 (>=1998)		
			URMs	non-URMs	Ratio	URMs	non-URMs	Ratio
Panel A: Applicants	**Share in SAT/ACT Distribution**	**Bottom-20%**	42.7	17.8	2.4	40.1	18.0	2.2
		Top-Half	30.0	54.1	0.6	30.2	52.5	0.6
		Top-20%	8.9	21.6	0.4	9.1	21.3	0.4
	Share in Class Rank Percentile Distibution	**Bottom-20%**	23.3	19.2	1.2	22.3	19.5	1.1
		Top-Half	48.9	50.1	1.0	49.4	50.0	1.0
		Top-20%	19.9	19.9	1.0	20.5	19.7	1.0
Panel B: Admittees	**Share in SAT/ACT Distribution**	**Bottom-20%**	35.3	9.8	3.6	34.0	12.4	2.7
		Top-Half	35.1	65.4	0.5	35.8	60.2	0.6
		Top-20%	10.6	28.1	0.4	12.6	27.6	0.5
	Share in Class Rank Percentile Distibution	**Bottom-20%**	14.2	8.4	1.7	8.8	8.7	1.0
		Top-Half	57.4	63.9	0.9	66.8	64.6	1.0
		Top-20%	23.8	26.4	0.9	29.0	26.5	1.1
Panel C: Enrollees	**Share in SAT/ACT Distribution**	**Bottom-20%**	34.7	10.8	3.2	35.5	14.3	2.5
		Top-Half	34.4	62.3	0.6	31.9	54.9	0.6
		Top-20%	11.0	24.2	0.5	9.4	22.1	0.4
	Share in Class Rank Percentile Distibution	**Bottom-20%**	15.4	8.9	1.7	10.3	9.4	1.1
		Top-Half	54.8	62.4	0.9	62.6	62.9	1.0
		Top-20%	21.9	24.6	0.9	25.3	24.8	1.0

Note: A student's position in the relevant distribution is determined on a year-by-year basis using data from all applicants. Students with missing values for the relevant variable are omitted from the share calculations.

Table 5: Relative Disadvantages of Underrepresented Minorities Among Applicants, Admittees, and Enrollees at Texas Tech

			Pre-*Hopwood* (1995/1996)			Top-10 (>=1998)		
			URMs	**non-URMs**	**Ratio**	**URMs**	**non-URMs**	**Ratio**
Panel A: Applicants	**Share in SAT/ACT Distribution**	**Bottom-20%**	48.1	16.7	2.9	40.8	17.2	2.4
		Top-Half	25.1	51.4	0.5	29.1	52.8	0.6
		Top-20%	7.8	21.2	0.4	8.2	21.4	0.4
	Share in Class Rank Percentile Distibution	**Bottom-20%**	22.9	19.5	1.2	21.4	19.7	1.1
		Top-Half	49.5	49.5	1.0	50.3	49.9	1.0
		Top-20%	19.2	19.7	1.0	21.8	19.5	1.1
Panel B: Admittees	**Share in SAT/ACT Distribution**	**Bottom-20%**	47.3	16.3	2.9	28.0	12.2	2.3
		Top-Half	25.4	51.7	0.5	37.2	58.3	0.6
		Top-20%	8.0	21.3	0.4	10.7	23.9	0.4
	Share in Class Rank Percentile Distibution	**Bottom-20%**	13.7	13.2	1.0	13.0	13.9	0.9
		Top-Half	55.8	54.7	1.0	59.7	55.3	1.1
		Top-20%	21.6	22.1	1.0	28.4	21.9	1.3
Panel C: Enrollees	**Share in SAT/ACT Distribution**	**Bottom-20%**	45.8	16.3	2.8	32.7	15.8	2.1
		Top-Half	25.7	51.1	0.5	33.0	52.9	0.6
		Top-20%	8.2	21.0	0.4	9.4	20.8	0.5
	Share in Class Rank Percentile Distibution	**Bottom-20%**	18.1	14.7	1.2	18.4	16.5	1.1
		Top-Half	47.4	52.4	0.9	49.6	53.1	0.9
		Top-20%	14.8	20.3	0.7	19.4	22.0	0.9

Note: A student's position in the relevant distribution is determined on a year-by-year basis using data from all applicants. Students with missing values for the relevant variable are omitted from the share calculations.

Table 6: Composition of In-State Student Applicant, Admission, and Enrollee Pools: Texas A&M and UT-Austin, Pre-*Hopwood* and Top-10% Years

(In percent)

Student Characteristics	Applicants: Pre-*Hopwood* 1992-1996	Applicants: *Top 10 %* 1998-2002		Admittees: Pre-*Hopwood* 1992-1996	Admittees: *Top 10 %* 1998-2002		Enrollees: Pre-*Hopwood* 1992-1996	Enrollees: *Top 10%* 1998-2002	
Texas A&M									
Black	4.7	3.9	*	5.2	3.4	*	4.2	2.7	*
Hispanic	12.9	11.6	*	14.7	11.2	*	12.7	9.5	*
Asian	5.5	6.5	*	5.3	5.9		3.5	3.5	
White	75.2	77.5	*	74.4	78.9	*	79.3	83.7	*
N	67,676	75,715		51,381	55,089		29,807	33,568	
UT-Austin									
Black	4.5	4.8		3.9	4.0		4.0	3.6	
Hispanic	15.5	15.4		16.0	14.6	*	14.7	14.2	
Asian	13.6	16.2	*	14.0	17.5	*	14.5	18.1	*
White	65.9	63.2	*	65.6	63.4	*	66.4	63.6	*
N	70,915	79,681		50,725	59,811		30,126	36,900	

Source: Texas Higher Education Opportunity Project (THEOP) administrative data.
Notes: The race/ethnic categories do not sum to 100% because the residual group (Native Americans) are not shown. International students and those with missing race/ethnicity are not included. "*" denotes a significant difference between the pre-*Hopwood* and Top-10% shares at the 10% level.

Figure 1: Changes in Characteristics of Applicants to UT-Austin

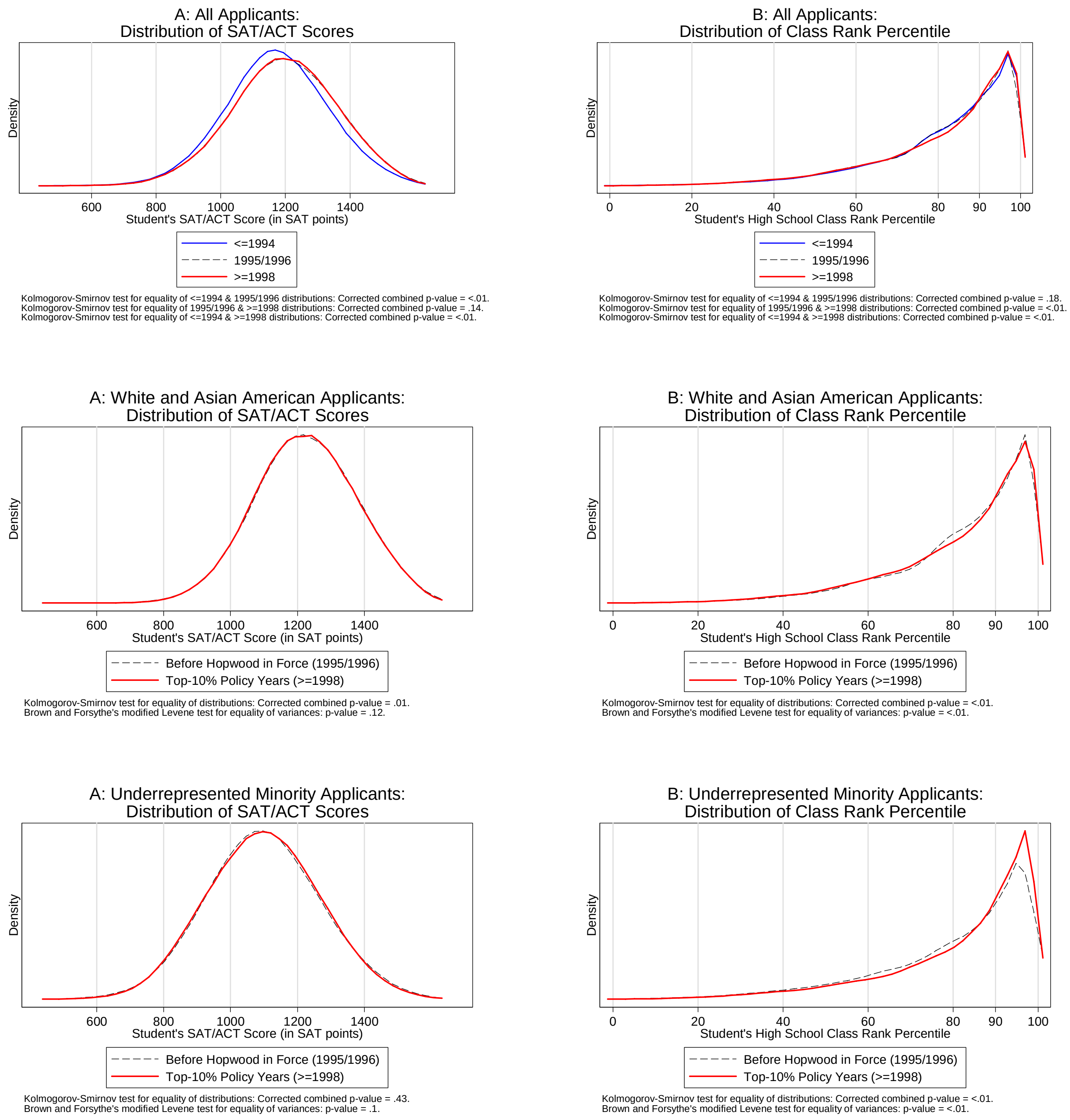

Figure 2: Changes in Characteristics of Applicants to Texas A&M

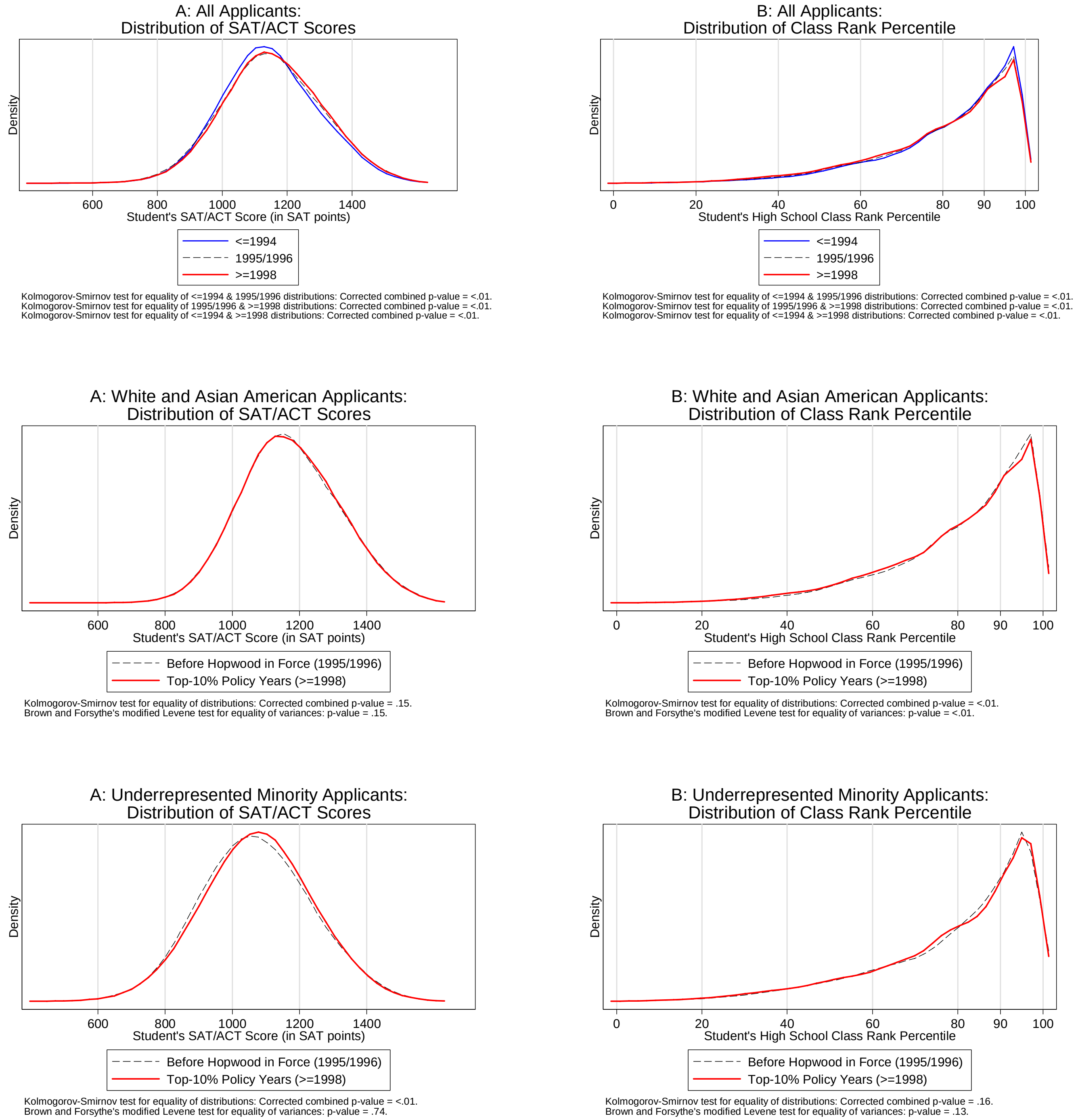

Figure 3: Changes in Characteristics of Applicants to Texas Tech

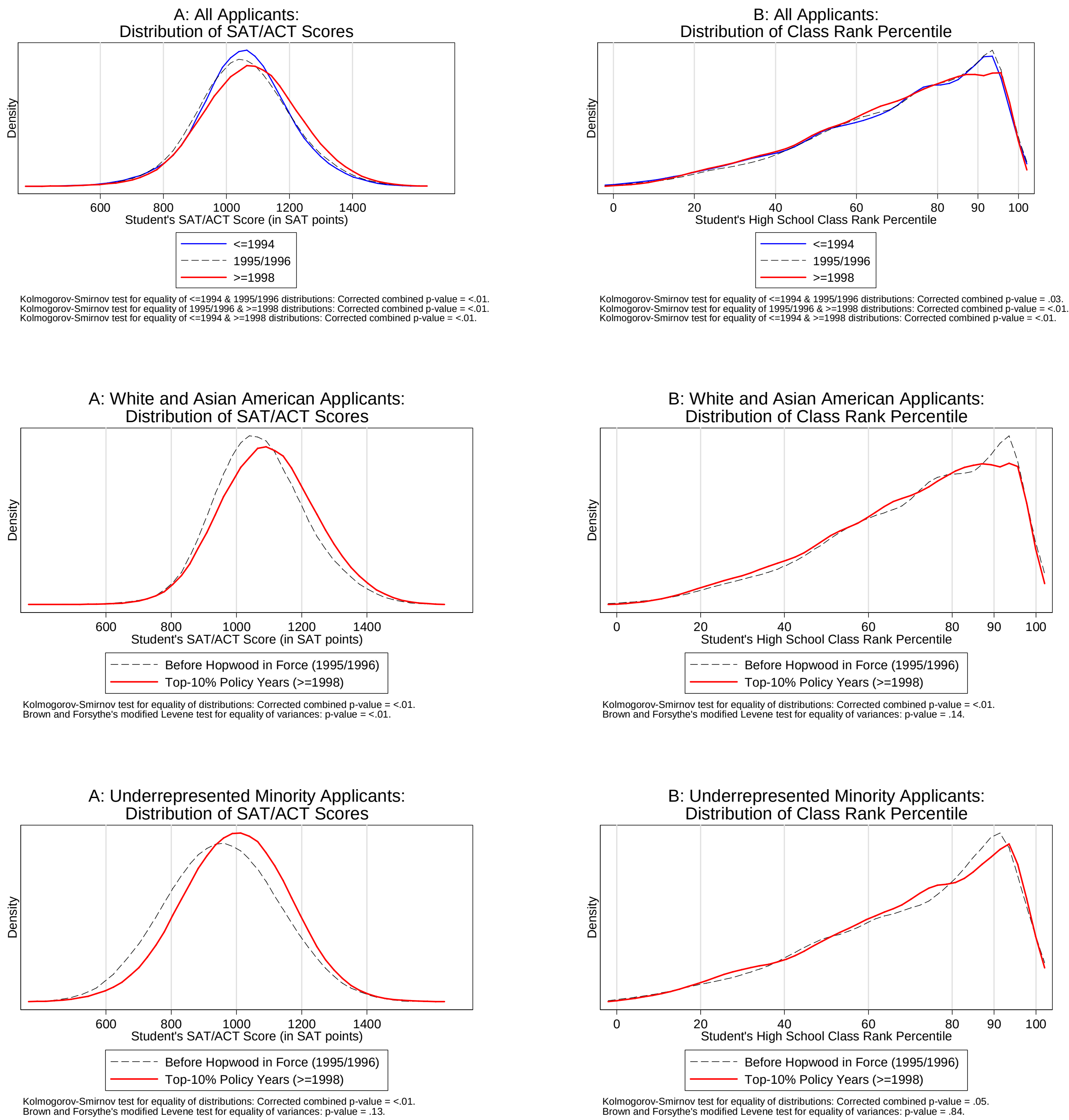

Figure 4: Changes in Characteristics of Applicants to UT-Arlington and UT-Pan American

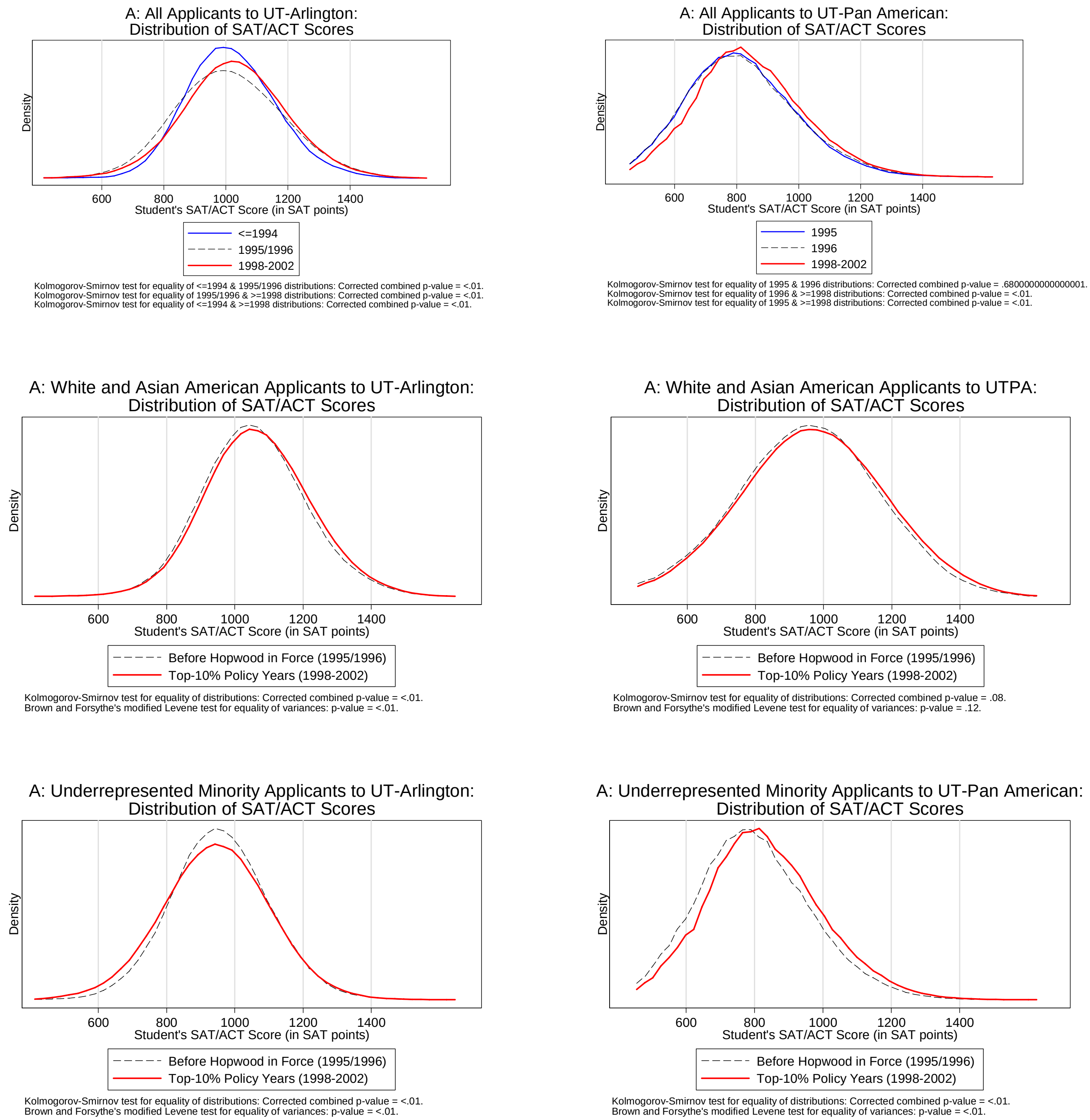

Figure 5: Changes in Characteristics of Enrollees at UT-Arlington, UT-Pan American, UT-San Antonio, and Texas A&M at Kingsville