Minority Student Academic Performance under the Uniform Admission Law: Evidence from the University of Texas at Austin

Abstract

Administrative data from students enrolled at UT-Austin between 1990 and 2003 are used to evaluate claims that students granted automatic admission based on top 10% class rank underperform academically relative to lower ranked students who graduate from highly competitive high schools. Compared with white students ranked at or below the third decile, top 10% black and Hispanic enrollees arrive with lower average standardized test scores, yet consistently performed as well or better in grades, first year persistence, and four-year graduation likelihood. Similarly, top 10% graduates from Longhorn high schools also arrive at UT with much lower average test scores, yet through 2001, their academic performance was comparable or above that of lower-ranked students who graduated from highly competitive feeder high schools. Finally, multivariate results reveal that high school attended rather than test scores is largely responsible for group differences in college academic performance.

Keywords: percent plan, college performance, race/ethnicity, high school quality, test score, grades

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I. Introduction

Admission to the nation's selective postsecondary institutions is not only highly competitive, but also controversial. The mid-1990s witnessed several legal challenges and public referenda contesting criteria used for college admissions decisions, especially in states with large and rapidly growing minority populations. Universities prohibited from considering race in their admission process have sought to devise legally permissible and socially acceptable criteria to diversify their campuses while also ensuring that academic merit is not compromised. High school grades and standardized test scores are the principal indicators of academic merit used in admissions decisions, yet because selective institutions have been weighting test scores more heavily than grades, black and Hispanic students are less likely to qualify for admission (Bowen & Bok, 1998; Alon & Tienda, 2007).

Texas is an important case study of the consequences of changing admission criteria on minority students' academic performance. In response to a 1996 judicial ban on the use of race or ethnic origin in college admission decisions[1] the Texas legislature passed the uniform admission law (H.B.588), which guarantees admission to any public post-secondary institution to all high school seniors who graduate in the top 10% of their class. Popularly known as the top 10% law, this legislation was designed to restore ethno-racial diversity to Texas's public flagships while simultaneously increasing postsecondary access to students from high schools with low college-going traditions (Montejano, 2001; Giovanola, 2005).

[1] *Hopwood v. Texas*, 78 F.3d 932 (5th Cir. 1996), cert. denied.

Mindful that a handful of largely suburban Texas high schools sent disproportionate numbers of applicants to the University of Texas at Austin and Texas A&M University, while hundreds of others never sent a single student, the principal architects of the top 10% law, Irma Rangel and Gonzalo Barrientos, sought to broaden access to public institutions of higher education to *all* Texans (Giovanola, 2005). The philosophy behind H.B.588 was that the very best students of *each* Texas high school should have an opportunity to attend the flagship universities, irrespective of their socioeconomic status, residential location, or ethnicity (Montejano, 2001). Building on research that high school grades were better predictors of college success than standardized test scores, and in light of clear evidence that high school sending patterns were highly unequal, crafters of the uniform admission law settled on a putatively "race neutral" system that not only rewards merit, but also draws high-achieving students from all Texas high schools—rich or poor, large or small.

Three key features of the uniform admission law are particularly noteworthy for understanding its implications for academic performance. First, standardized test scores are disregarded for students qualified for automatic admission, although these must be submitted for an application to be considered complete. This provision is important because minority students lower average test scores have been used as an exclusion criterion in the legal debates about merit and admission (see Bowen & Bok, 1998; Alon & Tienda, 2007). Second, to ensure that rank-eligible students are drawn from a broad spectrum of Texas high schools, qualification for the admission guarantee is determined on a school-specific basis. This provision responds to the concentrated sending patterns by focusing competition for slots at selective institutions *within* high schools. As such, students compete with their classmates rather than with students from other high schools that differ in their college-going traditions, ethno-racial and socioeconomic composition, and geographic location. Finally, to ensure broad access to the State's public flagships, students eligible for automatic admission were allowed to select their post-secondary institution. An unintended consequence of this provision is the saturation of the UT-Austin campus with students eligible for automatic admission (Schmidt, 2008a; Haurwitz, 2009).

Initially praised as a race-neutral plan that rewarded academic merit (Barr, 2002; Faulkner, 2000), like affirmative action, the uniform admission law also has come under fire (Glater, 2004; Flores, 2003; Kronberg, 2007; Schmidt, 2008b; Sandberg, 2008). Opposition to both the top 10% law and to race-sensitive admission regimes decisions is rooted in perceptions of fairness and merit. Three major criticisms of the uniform admission law are particularly salient. One is that large numbers of talented youth leave the state because they are crowded out of the public flagships (Nissimov, 2000), but Authors (2006a) find no empirical support for this claim. Second, there is mounting dissatisfaction with the top 10% law because the UT Austin campus has become saturated with students eligible for automatic admission, which greatly hampers the ability of administrators to craft a diverse and balanced freshman class (Sandberg, 2008; Schnmidt, 2008a; Haurwitz, 2009; Grissom, 2009). A third major criticism is that the top 10% law unfairly privileges high achieving students who attend *underperforming schools* at the expense of putatively better qualified graduates from competitive high schools who may not achieve top 10% rank (Barr, 2002; Flores, 2003; Nissimov, 2000; Glater, 2004).

The latter allegation, which we evaluate empirically, presumes that students qualified for automatic admission will underperform relative to those who achieve higher scores on standardized tests or who attend high achieving schools. Importantly, this criticism also focuses on a crucial philosophical issue, namely the merit criteria used to ration slots in higher education. Opponents of affirmative action focus on *students* rather than *schools* in their charge that race-sensitive admissions gives preference to less academically qualified applicants. Applicant groups accustomed to high admit rates presume they would have been admitted except for the preferences accorded to minority groups under affirmative action (Bowen & Bok, 1998) and top 10% graduates from low-performing schools under the uniform admission regime (Nissimov, 2000; Flores, 2003). Detractors of both race preferences and admission guarantees allege that the beneficiaries are not well prepared for college-level study (Thernstrom & Thernstrom, 1996).

There is some foundation for concerns about college readiness of some students qualified for the admission guarantee. Race and ethnic achievement gaps based both on grades and standardized test scores widen over academic careers and carry over to college (Schneider, et al., 2006; Kao & Thompson, 2003). Prior research shows that high school grades, AP course completion, and standardized test scores are key predictors of postsecondary academic performance, as reflected in collegiate grades, persistence and graduation rates (Rothstein, 2004). Many researchers have confirmed a positive association between college selectivity and academic success of minority students (e.g., Kane, 1998; Rothstein, 2004; Alon & Tienda, 2005), but *within* selectivity tiers minority students average lower GPAs than their white and Asian counterparts (Bowen & Bok, 1998; Massey, 2006). To what extent race and ethnic differences in collegiate outcomes reflect variation in high school quality has been less systematically examined, however, partly due to the limited success of researchers to identify "school effects" beyond second grade and partly due to data limitations (Pike & Saupe, 2002; Schneider, et al., 2006).

Nevertheless, there is tentative evidence that students who graduate at the top of their high school classes generally perform well in college, even if they attend low resource high schools, partly because of their strong motivation to excel. In fact, when the fate of the *Grutter*[2] decision was uncertain, supporters of the uniform admission law touted the academic success of students admitted under the guarantee (Jayson, 2003). For example, in 2000 then University of Texas President Larry Faulkner (2000) announced that "… top 10 percent students at every level of the SAT earn grade point averages that exceed those of non-top 10 percent students having SAT scores that are 200 to 300 points higher." This claim, however, is based on all students who graduated in the top decile of their senior class, without regard to variation in the quality of their high school or their group membership. Neither does he consider performance of students admitted prior to the top 10% law, when some minority students benefitted from affirmative action policies.

Our analyses expand on Faulkner's claim that top 10% admits outperform students ranked lower in their high school class, first by evaluating academic outcomes over a period spanning the change in admission regimes, and second by disaggregating college student performance by race/ethnicity and the quality of secondary school attended. Using data for Texas public high school students who enrolled UT-Austin between 1990 and 2003, we address three specific questions that bear on the ongoing

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[2] *Grutter v. Bollinger, 539 U.S. 306, 328 (2003).*

policy debate: First, how has the class rank composition of enrollees changed under the different admission regimes, and which groups are being replaced and displaced? Second how does the test score distribution differ between replacement and displaced groups across admission regimes? And, third, how does the academic performance of the replacement groups compare with that of the remaining members of the groups being displaced? We assess academic performance using multiple outcomes, including first-year and 4th year grade point average (GPA), freshman attrition, and 4-year graduation rates. For the latter two questions, we focus on those subgroups that are the focus of policy debate, namely top decile minority students versus lower ranked white students, and top 10% graduates of resource poor high schools versus lower ranked graduates from competitive, affluent high schools.

Section II describes the data and research strategy, including operational definitions of key empirical constructs. Section III presents empirical results, first portraying class rank distributions both by race/ethnicity and by high school type and then comparing test scores and academic outcomes of replacement and displaced groups of policy interest under the two admission regimes.[3] Finally we estimate multivariate models that predict academic performance of replacement and displaced groups as a function of standardized test scores and high school economic status. The concluding section discusses the implications of key findings in light of growing political opposition to the law in Texas and possible implementation of percent plans in other states, like Michigan, where race preferences were recently banned via referendum (Jaschik, 2006; Martin, 2008).

[3] Technically there are three regimes during the period we analyze: affirmative action (pre 1997), no race or rank preferences (1997), and top 10% law sans race preferences (1998 to 2004). We conduct year-specific analyses, which span these three policy periods.

II. Data and Methods

Our analyses are based on administrative data for the University of Texas at Austin (UT) that were assembled as part of Texas Higher Education Opportunity Project. We focus on UT because it is the only public institution that became saturated with students eligible for automatic admission, thus intensifying competition among students who do not qualify for the admission guarantee. This circumstance permits us to address which groups increase and which groups decrease their relative shares as the college squeeze intensified.[4]

The administrative data from UT includes an applicant file, which contains 224,893 records from 1990 to 2003, and a transcript file that includes term-specific records of 92,986 enrollees . The applicant file includes for all applicants basic demographic information, high school class rank, test scores, admission and enrollment status, and graduation date. Transcript files contain academic performance term-specific GPA and cumulative GPA for each semester enrolled. The working sample is restricted to 75,360 fall semester UT *enrollees* who graduated from a Texas public high school with at least 10 seniors that also reports student class rank.[5] Using a database maintained by the Texas Education Agency (TEA), we appended to each record the percent of students ever economically disadvantaged at their high school.

Key Variables[6]

[4] Although several studies compare the impact of the Top 10% law at UT and TAMU, the displacement/replacement analysis is not viable at TAMU both because it has historically drawn from a larger number of high schools in the state, and because it did not witness the saturation with automatically admitted students that permits the displacement/replacement analysis we conduct. It is no coincidence that the drive to modify the uniform admission law has been spearheaded by UT administrators (Haurwitz, 2009; Grissom, 2009).

[5] We use residency as a proxy for high school location when missing.

[6] An appendix table presents year-specific distributions of UT enrollees by race/ethnicity and high school economic status, as well as mean test scores for three class rank strata.

High school economic status: Using a variable "percent of students ever economically disadvantaged" drawn from the TEA database, we derive a classification scheme for Texas high schools according to socioeconomic status. Annual quartile cut-points are used to classify high schools into three strata: affluent schools (top quartile); average schools (second and third quartiles); and poor schools (bottom quartile). Affluent schools are further sorted into two subgroups designating a subset of "feeder schools" and others; similarly, poor schools are sorted into those designated "Longhorn schools" versus other poor schools.

Feeder high schools differ from other affluent schools because of their strong college-going traditions, sending particularly large numbers to the State's two public flagships. Operationally, feeder high schools are the top 20 high schools based on the absolute number of students *admitted* to UT and Texas A&M University (TAMU) in 2000. At TAMU the top 20 feeder high schools accounted for 15 percent of students admitted in 2000, and 14 percent of enrolled freshmen. For UT, the corresponding figures for both admitted students and enrolled freshmen is 23 percent. Because of the considerable overlap between the two sets, the combined list of feeder schools represent only 28 high schools out of a possible 1,644 public high schools in 2000 (TEA, 2001). Most of the feeder high schools qualify as affluent based on criteria defined above, and none is poor.

Because UT administrators appreciated that low income students are not likely to enroll even if qualified for automatic admission, in order to raise their enrollment odds they targeted a subset of low income schools with low college-going traditions for aggressive outreach programs and offered "Longhorn" scholarships to a few of their highest ranked graduates (Domina, 2007). The Longhorn Opportunity Scholarship program began in 1999 with approximately 40 high schools and expanded during the early years of the uniform admission regime to 60.[7] In this paper, schools ever designated for the Longhorn program are coded consistently throughout the observation period to permit comparison over time. The majority of these schools are classified as poor based on criteria defined above, but a few very large campuses qualify as "average" in the Texas secondary school classification scheme. Although the program does not guarantee scholarships for all top decile graduates from Longhorn schools, in practice the very top of the rank-eligible students who attend UT are granted scholarships, which range from $1,000 to $5,000 annually for four years.[8]

In addition to distinguishing between affluent and poor schools with varying college-going traditions, the feeder and Longhorn categories also proxy high school quality well. For this inference we used the TEA database to examine three metrics of high school performance from 1993 to 2003: (1) percent of students taking college admissions tests; (2) average SAT scores (among test takers); and (3) average ACT scores (among test takers).[9] Diagnostic results confirm a moderately high inverse association between standardized test scores and percent of students ever economically disadvantaged, -0.5 and -0.7 for SAT and ACT, respectively. Moreover, the year-specific associations between percent of students ever economically disadvantaged and

[7] By the 2005-06 academic year, 70 schools participated in the Longhorn program, but these additional schools were enlisted after the period covered by our data. A comparable program, the Century Scholars, was launched at Texas A&M University; 28 schools participate in both programs.

[8] Dickson (2006) finds that black and Hispanic students attending Longhorn high schools were more likely than their statistical counterparts from other schools to take the SAT exam, which is a proxy for college intentions given that the scores are required for all applicants, although disregarded for top decile students.

[9] The ACT is more common than the SAT in Texas, although students frequently take both. Data for students taking admission tests are unavailable for 1994.

standardized test scores increased over time.[10] At feeder high schools, 86 percent of students took college admissions tests and averaged the highest test scores among the five strata (1061 for the SAT and 22 for the ACT); by comparison, only 54 percent of students from Longhorn high schools took either the SAT or ACT, and the average scores were considerably lower (798 and 17, respectively).

High school class rank: Under the provisions of the uniform admission law, high schools have great latitude in determining how to calculate grade point averages used to generate their rank distribution—whether to weight honors and advanced placement courses differently and whether to include non-academic courses such as physical education and vocational courses. In order to determine whether an individual applicant qualifies for automatic admission under the top 10% law UT requires high schools to report the size of their senior class and exact class standing.[11] For analyses detailed below, we sort students into three categories based on their rank: top decile, second decile, third decile or below.

Test scores: Although standardized test scores are not considered in the admission decisions of students who qualify for automatic admission, all applicants must submit results of college entrance exams, either SAT or ACT, in order for an application to be considered complete. ACT scores are converted to SAT scores based on conversion table published by College Board, and SAT scores are re-centered for years prior to 1996.

Analytical Strategies

[10] Data for Houston ISD are problematic because annual school poverty rates increased sharply after 1997. After verifying suspicious data, we re-examined high school performance by excluding Houston ISD schools and produced virtually identical results. These are available on request.
[11] Our files include both the size of the senior class and exact class standing.

We use descriptive tabulations to discern changes in the composition of freshman classes at UT under the two admission regimes. Assessment of claims that highly ranked graduates from low performing high schools underperform academically relative to lower ranked graduates from competitive high schools requires comparisons by high school percentile class rank, race/ethnic groups and quality of high school attended. Because subgroups of interest differ in size, we first examine changes in the class rank composition of UT enrollees by race/ethnicity and by high school strata. This exercise allows us to identify two sets of comparison groups whose representation in the freshman class shifted between admission regimes, namely "replacement" students targeted by critics of the uniform admission law and students whose admission prospects fell, designated "displaced" students.

In order to characterize changes in replacement and displaced groups under the two admissions regimes, we use standardized test scores to represent enrollee qualifications, which critics of the law use to substantiate their claims about declining student quality, and evaluate four college performance outcomes: freshmen GPA, cumulative GPA at the 4th year, freshmen year drop out rate, and 4th year graduation status. Grades and graduation rates are the most common outcomes used to compare academic post-secondary outcomes (Bowen & Bok, 1998; Alon & Tienda, 2007; 2005; Massey, 2006). Because the first year is poses several adjustment challenges that determine graduation prospects, we also consider freshman grades and persistence to sophomore status (Pike & Saupe, 2002).

Tabular analyses by demographic groups and by high school strata ignore the strong association between minority status and high school quality (Orfield and Lee, 2004; Massey, 2006; Authors, 2006b; 2008b); minority students are disproportionately concentrated in low-performing high schools and average lower standardized test scores than their white counterparts. We use OLS regression to predict freshmen and 4th year college GPA and probit regression to predict the probability of first-year withdrawal and graduation in 4 years, simultaneously evaluating the influence of minority group status and high school economic status on these performance outcomes. Test scores are not considered for rank-eligible enrollees under the uniform admission law, but they were taken into account for all applicants prior to 1998. Therefore, we estimate multivariate models that exclude and include test scores as predictors of academic success to gauge how gaps in test scores contribute to group differences in academic performance and whether this relationship changed between admission regimes.

III. Results

By policy design, the composition of UT enrollees shifted over time toward a higher proportion of students who graduated in the top decile of their class. This trend, portrayed in Figure 1, obtains for all race and ethnic groups (upper panel) and across the high school strata (lower panel). Between 1990 and 1996, when admissions officers selectively considered race and ethnicity in admissions, between 40 and 50 percent of all UT enrollees were top 10% graduates, but their admission was not automatic. This share was relatively stable, although a slight downward trend is discernible in 1997 when the judicial ban on race preferences was effective.[12] After the uniform admission law was fully in force (1998), the share of top 10% enrollees rebounded and continued rising through the observation period. Nearly 50 percent of UT enrollees graduated in the top

[12] In 1997 race preferences were judicially banned and the Top 10% law had not been implemented.

decile of their high school class in 2000, as did 60 percent of freshmen in 2001 and 2002. By 2003, nearly 75 percent of enrollees were admitted under the guarantee.

(Figure 1 about Here)

With a relatively fixed number of slots, growth in the share of top decile enrollees requires a decrease in the proportion of lower rank enrollees. The upper-left graph in Figure 1 reveals that the largest decreases occurred among enrollees who ranked at or below the third decile of their high school class. This share dropped from about 30 percent of enrollees between 1990 and 2000 to about 15 percent in 2001 and 2002, and further down to a meager 8 percent in 2003. The temporary increase in the size of the freshman class between 2000 and 2002 also enabled second decile admittees to maintain their enrollment share to about one-quarter of the freshman class even as the number of automatically admitted students rose. By 2003, when the class size expansion was rescinded, top decile students dominated the freshman class, virtually displacing students who graduated at or below the third decile of their class and eroding shares of the second decile students.

Similar responses obtain for race and ethnic groups, except that the proportion of top decile enrollees differs (upper panel in Figure 1). The class rank composition of blacks changed dramatically after the admission guarantee was implemented. During the early 1990s, the proportion of top decile enrollees among blacks was lower than that of the other groups compared. With the admission guarantee in force, the share of black enrollees granted automatic admission began an upward drift that roughly converged with that of Hispanic, Asian and white enrollees. Specifically, in the early 1990s, 40 to 50 percent of black enrollees ranked in the top decile of their high school class, but this share fell to 25-30 percent after 1994. In 1999, two-thirds of black enrollees were top 10% graduates; by 2003 this share rose to 80 percent.

The lower panel in Figure 1 also shows a shift in the class rank composition of enrollees by type of high school attended. Less than one-third of freshmen enrollees from feeder high schools were top decile graduates under the affirmative action regime, but this share rose gradually after 1998 and spiked to 55 percent in 2003. Until 2000, about half of UT enrollees who graduated from feeder high schools were ranked at or below the third decile, but that share fell to one-third in 2001 and 2002 and just over one-quarter by 2003. Feeder high school enrollees ranked in the second decile held steady at around 25 percent through 2000, and even increased slightly to 30 percent in the early 2000s, likely due to further crowding out of third decile graduates.

Among Longhorn school students who enrolled at UT in 1990, two-thirds had graduated in the top 10% of their class. Although the percent of top decile graduates from Longhorn schools enrolled at UT ebbed in 1998, their share rebounded to 87 percent once the Longhorn fellowship program was implemented. By 2003, almost all students from Longhorn high schools who enrolled at UT were eligible for the admission guarantee. Likewise, among graduates from poor schools, and to a lesser extent typical high schools, those who enrolled at UT who ranked at or below the second decile have been crowded out by classmates eligible for automatic admission.

Identifying Replacement and Displaced Groups

Because UT has a limited carrying capacity and because demographic groups differ in their relative size, to identify replacement groups we consider changes in the class rank distribution and subgroups status jointly. Annual distributions of UT enrollees by class rank and race/ethnicity (Table 1) and by class rank and high school economic status (Table 2) reveal clear trends and some noteworthy differences. First, blacks represented a tiny share of UT freshmen—between 3 and 5 percent— throughout the observation period; by comparison the Hispanic share ranged from 13 to 18 percent. Both groups remained under-represented at UT before and after the change in admission regime.[13] Second, the share of first time UT freshman from the 28 top feeder high schools rose from approximately one-quarter of instate enrollees in 1990 to around 30 percent in 2000; thereafter, their share of new freshmen contracted and reached a low ebb of 22 percent when the entering class was reduced to its pre-expansion levels. By contrast, students from the Longhorn high schools who qualified for the admission guarantee occupied 5 percent or less of freshmen class seats. Third, regardless of relative group size, top decile graduates increased their shares after 1998 as the representation of enrollees ranked at or below the third decile contracted.

(Tables 1 and 2 about Here)

To evaluate propositions about the college readiness of students granted automatic admission, we compare academic outcomes for paired groups of enrollees whose representation in the freshman class was altered under the uniform admission regime, namely:

[13] Although many have attributed the rebound in black and Hispanic representation at UT to the uniform admission law, in fact, application, admission and enrollment *rates* were lower after under the top 10% law compared with affirmative action owing to the dramatic change in the demography of the state (see Authors, 2009b).

- top 10% black and Hispanic enrollees whose representation increased versus white students ranked at or below the third decile, whose shares contracted; and
- top 10% enrollees from Longhorn high schools whose representation grew verses feeder and affluent high school enrollees ranked at or below the third decile, whose shares shrunk.

We define these paired comparisons as replacement and displaced groups, respectively. It bears emphasizing that there is no direct correspondence between the displaced and replacement groups as defined above both because class rank is determined on a school-specific basis and because replacement groups are smaller, on average, than the groups being displaced. As revealed in Table 1 and 2, subgroups whose representation increases the most in the Top 10% law period are top decile white students, and top decile students from affluent and average high schools.

In this paper, we focus on these two sets of paired comparisons because of their substantive and policy importance. First they permit us to address whether replacement groups underperform relative to allegedly better qualified groups whose campus representation is shrinking. Second, the change in admission regime coincides with a college squeeze driven by above average growth in the number of Texas high school graduates coupled with increases in applications, particularly among students from affluent high schools (Authors, 2008a; 2009a). With a relatively fixed number of seats, growing demand inevitably lowers admission rates, which means substantially fewer slots for groups accustomed to high admit rates. For example, white students ranked at or below the third decile took 24 percent of all freshmen class seats in 1997, but their share was more than halved by 2002 (see Table 1), resulting in about 780 fewer slots in a freshman class of approximately 6,000. Similarly, enrollees from feeder and other affluent high schools ranked at or below the third decile of their senior class combined occupied 28 percent of all freshmen class seats in 1997 (see Table 2), but 840 fewer slots in 2002, when their combined representation in the freshmen class fell to 14 percent.

Third, a comparison of Longhorn and other poor schools attests to the effectiveness of the targeted scholarship program in boosting matriculation of top 10% graduates. Table 2 shows that the share of top decile graduates from poor high schools remains low throughout the observation period, but rank-eligible students from Longhorn high schools rose after the scholarship program was in effect. Because there is no evidence that top decile graduates from poor high schools replace lower ranked students from feeder and affluent schools, we restrict our comparisons to Longhorn and affluent schools for the descriptive analyses.

Evaluation of academic performance for the replacement and displaced groups defined above permit us to address critics of the law while also informing the ongoing policy debate about the merits of percent plans, but they are imperfect. The actual replacement and displaced groups are, respectively, students granted automatic admission who otherwise would not have been admitted and lower ranked enrollees denied admission under the top 10% regime who would have been admitted before the law was enacted. That we define displacement based on "survivors" of the shrinking group yields conservative results because students ranked at or below the third decile who were admitted under the top 10% regime are likely to be highly selective academically compared with their rank counterparts denied admission (and thus not in the enrollee sample). As such, their college performance provides an upper bound of achievement differences when compared with replacement groups.

It is also noteworthy that UT admitted over 93 percent of all top 10% applicants prior to the enactment of the uniform admission law; moreover, a comparison of the average rank of top decile enrollees before and after the policy shift reveals no statistical difference.[14] HB588 essentially formalized a *de facto* practice into a *de jure* policy, but because eligibility for the admission guarantee is school-specific, the uniform admission law redistributed the applicant pool among a larger spectrum of high schools throughout the state---616 in 1996 compared with 853 in 2008 (Montejano, 2001; Sandberg, 2008).

Race and Ethnic Variation in Academic Performance

Critics who allege that the uniform admission law has eroded student quality point to the decline in average test scores of top 10% enrollees over time. Whether these students are ill-prepared for college work, however, is an empirical question. We address by illustrating first the divergence in test scores between displaced and replacement groups, and subsequently evaluating academic performance of the comparison groups.

Figure 2, which plots mean test scores by year for top decile black and Hispanic students (replacement group) and white students ranked at or below third decile (displaced group) confirm that the replacement group averaged lower test scores than the displaced group since before the top 10% law was in effect. Consistent with claims by opponents of the law, the test score gap widened appreciably since 1998.[15] Importantly

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[14] Neither do we find statistical differences in average class rank of automatically admitted students according to high school type or demographic group. Results available on request.

[15] All annual contrasts are statistically significant (at least at the 95% confidence level) with the exception of the black-white difference in 1997, probably due to the low number of black students in that year.

the 60-point gap between the comparison groups was approximately halved under the affirmative action admission regime as admission officers selected students with higher scores. Since 1998, however, the test score gap widened. During the first three years of the top 10% regime enrollment of black and Hispanic top decile students with lower average test scores were responsible for increasing the test score gap, but thereafter (2001 – 2003) the rising test scores of white enrollees ranked at or below the third decile drove the divergent trend. Specifically, the 1997 mean score achieved by top decile Hispanics fell 30 points by 2000 and an additional 10 points over the next 3 years. For whites ranked at or below the third decile, the 1997 mean score of 1158 remained stable until 2000, but rose 90 points over the next three years to 1250.

(Figure 2 about Here)

Despite their lower average test scores, top 10% black and Hispanic students consistently performed as well or better than white students ranked at or below the third decile throughout the entire observation period (Figure 3). Specifically, top decile Hispanics maintain 0.3 freshmen year CGPA margins over the displaced comparison group until 2001, when the test score selectivity of white students ranked at or below the third decile of their class surged. Despite the 161-point test score advantage of lower-ranked white students, their freshman year GPA was comparable to that of higher ranked minority enrollees.

(Figure 3 about Here)

Other college performance metrics provide additional evidence that top 10% minority enrollees outperform their lower ranked white counterparts with higher test scores. Specifically, Hispanic enrollees maintained a GPA margin of about 0.2 in their 4^{th}

year college GPA over white enrollees ranked at or below the third decile through 2000 (the last year our data allow comparisons of this measure), and they have a slightly lower freshman year withdrawal rate. Particularly noteworthy is that by the late 1990s, the probability that top 10% Hispanic enrollees graduated in four years surpassed that of white students ranked at or below the third decile. The small numbers of top decile black students result in greater annual fluctuation, but their academic performance generally parallels that of comparably ranked Hispanic enrollees. These results are consistent with a large body of evidence showing that standardized tests are less reliable predictors of academic success than high school grades (Bowen & Bok, 1998; Alon & Tienda, 2007).

High School Variation in Academic Performance

Top 10% enrollees from Longhorn high schools primarily include economically disadvantaged students. By definition, these schools have relatively low college-going traditions, but also large shares of black and Hispanic students. Feeder high school enrollees ranked at or below the third decile of their class are predominantly white, and many are wealthy.[16] Thus, the comparison groups based on high school economic status represent the most extreme subset of ethno-racial replacement and displaced groups.

In the early 1990s, when very few Longhorn school graduates enrolled at UT, the test score gap vis-à-vis feeder school enrollees who graduated at or below the third decile of their class was about 70 points. As Figure 4 shows, the gap widened after the admission guarantee for top 10% graduates went into effect. Before 2001, the rising test-score disparity was mainly due to the lower scores achieved by automatically admitted

[16] Nearly two-thirds of top decile students from Longhorn schools were black or Hispanic during the 1990's, but that share rose to over 80% by 2003 as these campuses became more segregated. By contrast, over two-thirds of feeder high school students ranked at or below the third decile were white.

Longhorn school graduates. Thereafter, the higher selectivity of feeder school graduates ranked at or below the third decile widened the gap.

(Figure 4 about Here)

To be specific, between 1994 and 2003, the average SAT score of top 10% Longhorn students fell 115 points; almost half of this drop occurred in 1999, the second year the top 10% law was in force, and the first year that the Longhorn scholarships were available to rank-qualified graduates (Domina, 2007). The temporary increase in the freshman class size between 2000 and 2002 boosted the average the test scores of feeder school graduates ranked at or below the third decile because most were selected from applicants with the highest test scores. Consequently, the average test score of enrollees from feeder high schools who ranked at or below the third decile rose 94 points in the following three years, and the average score gap between the replacement and displaced groups compared in Figure 4 surged from 152 points in 2000 to 257 points in 2003.

Figure 5 tracks the four academic performance indicators for the replacement and displaced groups defined by high school economic status. Despite their appreciably lower test scores, top decile Longhorn school students performed about as well as the most selective of the group they partly displaced. In 2000 they earned a freshman GPA 0.13 points higher than feeder school students with a 152 point test score advantage, undermining claims that UT is becoming saturated with students unprepared for college work. Longhorn enrollees were also less likely than lower ranked feeder high school graduates to withdraw after the freshman year, and they achieved a comparable 4th year GPA in 2000. However, top ranked Longhorn school enrollees were about 8 percent less likely to graduate in four years compared with the more selective feeder school students who did not qualify for automatic admission. Owing increased the selectivity of students ineligible for automatic admission, especially when the freshman class size was reduced in 2003, the relative edge in freshman year GPA enjoyed by Longhorn students eroded. In 2003 their average freshman GPA was 0.25 points below that of feeder school graduates with class rank at or below the third decile.

(Figure 5 about Here)

Performance differences between top ranked Longhorn graduates and lower ranked graduates from "nonfeeder" affluent high schools was about half as large as that between them and similarly ranked feeder school graduates. After 2001, the test score gap increased rank-eligible enrollees from Longhorn schools and affluent school graduates ranked at or below the third decile. Yet, even as the test score gap approached 210 points, the academic performance of top decile Longhorn students was comparable to or slightly above lower ranked graduates from affluent high schools on all achievement outcomes.

Our descriptive findings underscore the limited power of standardized test scores to predict success in college, except at very high and very low ranges (see Bowen & Bok, 1998). Nevertheless, these descriptive analyses do not reveal how much of the college achievement gap stems from group differences in test scores. This question is important because black and Hispanics average lower test scores than their white counterparts; because black and Hispanic students are more likely than whites to attend poor, underperforming schools; and because the test score gap widened between freshmen who qualified for the admission guarantee and those that did not. The multivariate analyses that follow consider how top 10% black and Hispanic students would perform academically (1) if they had the same standardized test scores as white students ranked at or below the third decile of their class and (2) if they attended high schools of comparable socioeconomic status.

Multivariate Analyses

To address how academic performance of top 10% minority enrollees would improve if they shared the advantages of white students who attend more competitive high schools, we estimate several regression and probit models that predict each of the four academic performance outcomes. The base model includes only dummy variables for the subgroups defined by class rank and race/ethnicity.[17] The second model adds students' standardized test score to the baseline, and model (3) adds a set of high school economic status dummy variables. Finally, model (4) considers the joint influence of test scores and high school economic status on the group differences in academic performance.

Table 3 reports regression coefficients predicting freshman and fourth year college cumulative GPA, and Table 4 reports marginal effects from probit regressions predicting freshmen year withdrawal and the likelihood of graduating in 4 years. Year-specific estimates take into account the changing composition of the freshman class over time, which is important in order to consider how the selectivity of replacement and displaced groups is related to college performance. For parsimony only the coefficients

[17] The subgroups are: top decile blacks, top decile Hispanics, top decile Asians, top decile whites, 2nd decile blacks, 2nd decile Hispanics, 2nd decile Asians, 2nd decile whites, 3rd decile or below blacks, 3rd decile or below Hispanics, 3rd decile or below Asians, and 3rd decile or below whites. The reference group is white students ranked at or below the 3rd decile.

and marginal effects for top decile blacks and Hispanics are reported; whites ranked at or below the third decile serve as the reference category.[18]

(Table 3 about Here)

The baseline model, which mimics the descriptive findings, provides a benchmark for evaluating the unique and joint influence of the key covariates—test scores vs. school economic strata.[19] The second set of estimates (column 2 in Table 3) indicate that top decile black and Hispanic enrollees outperform white students ranked at or below the third decile of their high school class with comparable standardized test scores, although their improvement in freshman grades are quite modest--less than 0.10 cumulative GPA points in most years before 2001. As the test score gap widened between replacement minority enrollees and white students ranked at or below the third decile, the GPA advantage associated with top decile class rank eroded. The point estimates imply that after 2001, top decile black enrollees would improve their freshman GPA by 0.26 to 0.31 grade points if they arrived with the standardized test scores of the shrinking comparison group. For Hispanics the comparable performance increase for equivalent test scores is 0.19 to 0.26 cumulative grade points, depending on the year.

Although test scores exerted a small net influence on first-year college cumulative GPA (a 100-point test score difference translates into approximately 0.14 to 0.17 GPA points) prior 2001, their influence on grades rises as the gap between the comparison groups grows, as occurs after 2001. [20] Consistent with prior studies based on national data

[18] Full results are available from the authors.
[19] Although we only report results for top decile black and Hispanic students (as compared with third decile or lower white students), the pattern also holds for other subgroups. Results are available upon request.
[20] Although small in magnitude, the test score coefficients are statistically significant for all years, about 0.0014 and 0.0015 in year 2000 and prior. These point estimates rise to 0.0016 and 0.0017 from 2001 to 2003.

(Bowen & Bok, 1998), our estimates show that the influence of standardized test scores on college performance declines over time. Therefore, equalizing test scores between the comparison groups leads to smaller gains in 4th year college GPA for top decile black and Hispanic enrollees. Moreover, the test scores minimally influence freshmen year persistence and the likelihood of graduating in four years (see Table 4).

(Table 4 about Here)

Minority enrollees who qualify for the admission guarantee disproportionately hail from high schools with limited resources and low college going traditions (Authors, 2006a); however, if they graduated from high schools comparable to those attended by white enrollees who graduated at or below the third decile of their high school class, their college GPA would improve considerably more than if their test scores were equalized (see column 3 of Table 3). Concretely, if top 10% black and Hispanic enrollees attended schools as affluent as those of white enrollees who graduated at or below the third decile of their high school class, their freshman cumulative GPA would be 0.3 to 0.4 points higher, the equivalent of 100-195 test score points before 2000, and over 200 points after 2000, when the entering freshman class was scaled back. On average, minority replacement groups' fourth year college cumulative GPA would be 0.2 points higher, their likelihood of dropping out after the freshman year would be 2 to 4 percentage points lower, and their 4-year graduation rate would be 7 to 19 percent higher if they attended affluent high schools.

Our claim that differences in high school economic status are stronger predictors of variation in college academic performance than standardized test scores finds further support in the final set of estimates (column 4 of Tables 3 and 4). For all outcome measures in most years, the point estimates for group differences remain unchanged from those reported in column 3 through 2000. Thereafter, the test scores exert a slightly stronger influence on group difference in freshman GPA, but net improvements are substantively small, especially for Hispanics ranked in the top decile of their class.

Two additional findings are noteworthy. First, the influence of high school economic status on freshman GPA is sizeable, but its association with 4^{th} year cumulative GPA also is large. This shows that high school attended influences performance throughout the college career, unlike test scores, whose influence on performance diminishes after freshman year (Bowen & Bok, 1998). Furthermore, type of high school attended is strongly related with the likelihood of graduating in four years. Our data end in 2003, therefore we are unable to evaluate whether the 4-year graduation rates of the 2001-2003 freshmen classes were maintained.

Second, we investigated whether the GPA advantages accrued by top ranked minority and Longhorn school enrollees reflect their choice of easier academic fields of study. Despite their lower average standardized test scores, top 10% minority students and those from poor schools are more likely to major in natural science, engineering and computer science compared with their comparison groups. Nearly one-third of top decile students choose these majors as compared with one in five among lower ranked white students. Longhorn school graduates who ranked in the top 10% of their class are even more likely than lower ranked graduates from affluent schools to choose science majors at the beginning of their college career. As UT became increasingly saturated with enrollees qualified for automatic admission, lower ranked students became more selective and the shares of top 10% enrollees majoring in science fields dropped.[21] Inclusion of dummies for major choices to the baseline model alters the point estimates reported in Tables 3 and 4 only slightly in most years, but our basic inferences remain unaltered.

IV. Conclusions and Policy Implications

A decade after becoming law, the top 10% law has been subjected to growing criticism because the state's premier public institution, the University of Texas at Austin, has become saturated with students guaranteed admission based on their class rank, which leaves UT admission officers little discretion in shaping the composition of their entering class (Sandberg, 2008). This unintended consequence, which is partly due to the provision that allows rank-eligible students to choose their campus, partly to the rapidly growing college-age population (WICHE, 2008), and partly to the State's underinvestment in higher education,[22] has fueled opposition to the law. In 2007 the Texas legislature considered several bills that would modify or rescind the uniform admission law during its 80th session, and despite support for various compromise bills, none were adopted (Kronberg, 2007; Sandberg, 2008). At the core of the criticisms are widespread beliefs that graduates from competitive high schools who do not qualify for automatic admission are being replaced by less well prepared students who attended low performing high schools.

[21] These results are based on the majors from the final term record of the students.

[22] In a recent communication to alumni (June, 2008), President Powers noted that Texas spends less of its GDP on education compared with other states. For example, in 2006, Texas spent 3.35% of GDP on higher education and public schools, compared with California's 4.24%, Michigan's 4.49%, and North Carolina's 4.05%. These differences, while seemingly small in relative terms, represent significant dollars. Reaching parity with Michigan, for example, would increase education expenditures by $8.5 billion.

We evaluate this criticism first by identifying replacement and displaced groups and subsequently assessing the academic performance of both over time. Descriptive and multivariate analyses established three major findings. First, during the first four years the law was in force, growing saturation of UT with students qualified for automatic admission came at the expense of students who graduated at or below the third decile of their high school class. Freshmen ranked in the second decile of their high school classes maintained their cohort share until 2002, the last year that benefitted from the temporary expansion in the size of the freshman class; thereafter, their cohort share also fell. The increased representation of top decile students coupled with diminishing shares of students ranked at or below the third decile obtains for every ethno-racial group compared and across the five high school economic strata.

Second, we confirm that top ranked black and Hispanic students and those from poor Longhorn high schools do arrive at UT with lower average test scores than the groups they replace, namely white students and graduates from affluent and feeder high schools ranked at or below the third decile of their class. Although the test score gap between replacement and displaced groups widened over time, through 2002 top 10% admits consistently performed as well or better than their lower ranked counterparts. After the temporary expansion of the freshman class was rescinded, students ineligible for automatic admission became increasingly selective on test scores, and predictably, academic performance of top 10% students and their lower ranked counterparts converged. Stated differently, as the admission squeeze took its toll on students ranked at or below the third decile, test scores assumed a major influence on those admitted.

Third, we find that the economic status of high schools is largely responsible for group differences in college academic performance. This finding has profound policy implications because it directs attention to the problem the top 10% law was designed to address, namely broadening college access across economic, demographic, geographic and social groups (Giovanola, 2005). Although the number of high schools sending students to UT has increased, from 616 in 1996 to 815 in 2004 (University of Texas, 2005), academic performance of graduates from resource poor schools would be higher still if they benefitted from the academic preparation enjoyed by their counterparts from affluent feeder schools. Revamping the secondary school system so that college-bound students have a more level playing field is a long term policy proposition, but some short-term high impact, low cost alternatives suggest themselves. The strong ties with competitive post-secondary institutions nurtured by feeder high schools provide a standard of college-going behavior to be emulated by other secondary school campuses. Cultivating college-going cultures at under-resourced secondary schools by strengthening ties with post-secondary institutions is a relatively cost-effective interim strategy that has considerable promise (Domina, 2007).

An important policy lesson concerns the disproportionate emphasis on standardized tests in college admissions despite growing evidence that high school grades are stronger predictors of college success. Our comparisons of top 10% students, whose share of the freshman class has continued to rise, with shrinking shares of students ranked at or below the third decile raises an important research question that bears on college readiness and college access, namely: How wide can the test score gap go without negatively affecting overall academic performance? Because our analyses end in 2003, we do not know whether and how much the 4th year college performance of top 10% enrollees levels off, as suggested by their converging freshmen year performance. Our analyses showing that increased saturation of UT freshman classes with students admitted using a single merit criterion, however reliable in predicting postsecondary academic success, suggests that college performance of students admitted automatically may decline in the future. This does not bode well for the future of the uniform admission law, however laudable its intended equity goals.

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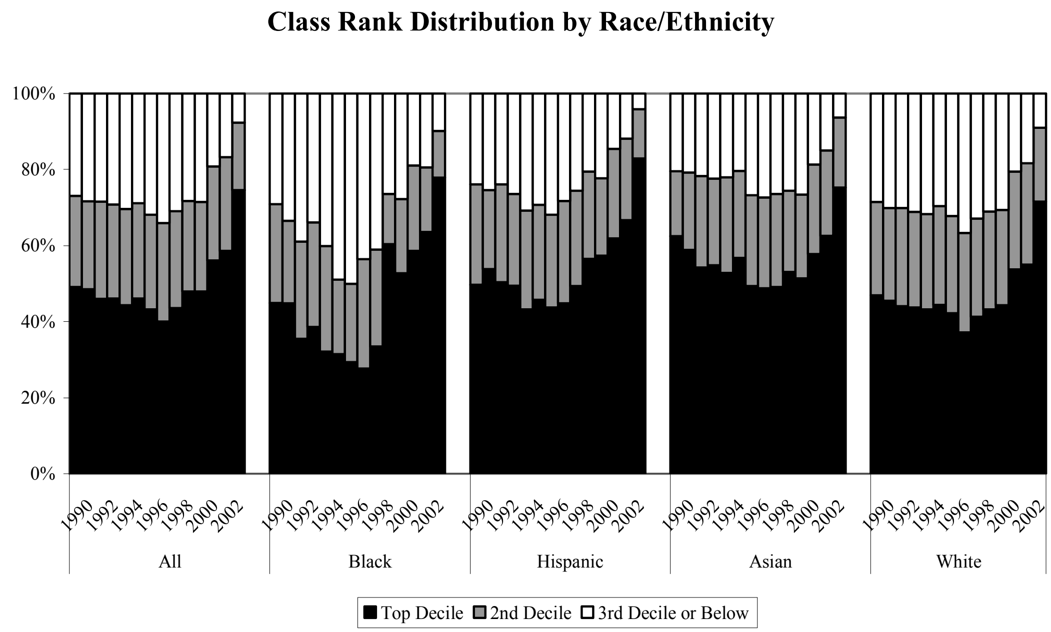
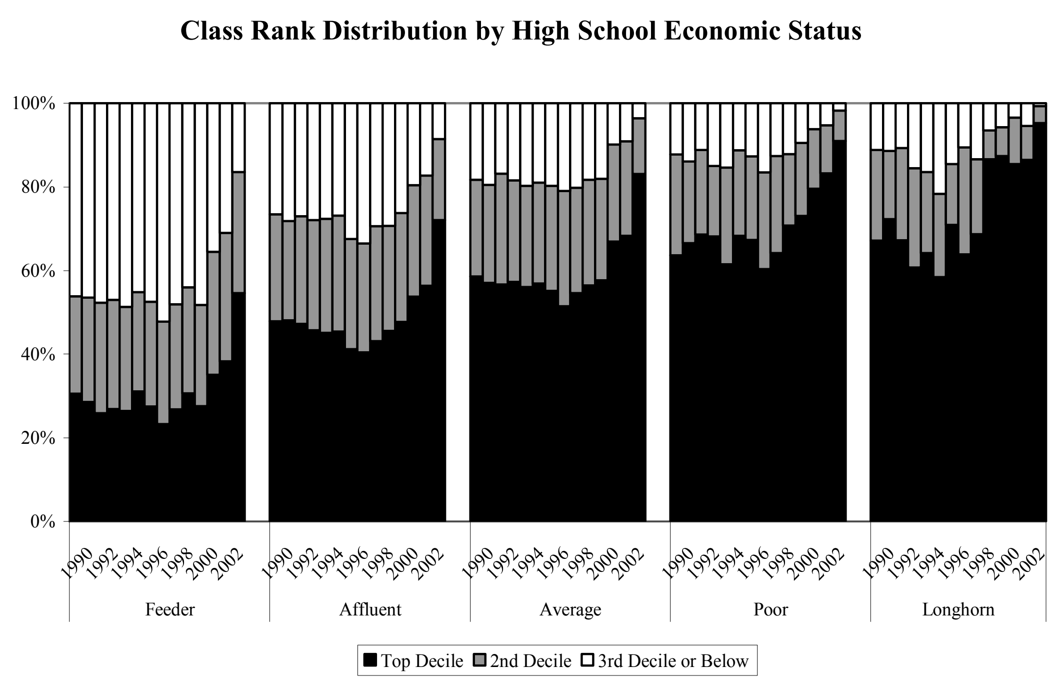
Figure 1. Class Rank Distribution of UT Enrollees, 1990-2003





Source: Texas Higher Education Project (THEOP) administrative data.

Table 1. Distribution of UT Enrollees by Class Rank & Race/Ethnicity (Row Percents)

	Top Decile				2nd decile				3rd Decile and Lower						All Ranks			
	Black	**Hispanic**	**Asian**	**White**	**Black**	**Hispanic**	**Asian**	**White**	**Black**	**Hispanic**	**Asian**	**White**		N	**Black**	**Hispanic**	**Asian**	**White**
1990	2	8	7	32	1	4	2	17	1	4	2	19	100	4,711	5	17	11	67
1991	2	9	7	30	1	3	3	16	1	4	3	20	100	4,714	4	16	12	67
1992	2	8	7	29	1	4	3	17	2	4	3	20	100	4,608	4	16	14	67
1993	2	8	8	28	1	4	3	16	2	4	3	20	100	4,753	5	17	15	63
1994	1	6	9	28	1	4	4	16	2	4	4	21	100	4,879	5	14	16	65
1995	1	7	9	29	1	4	4	17	2	4	3	19	100	5,061	4	15	16	65
1996	1	6	8	28	1	4	4	17	2	5	4	21	100	5,090	4	15	17	65
1997	1	6	9	24	1	4	4	17	1	4	5	24	100	5,487	3	13	18	66
1998	**1**	**7**	9	27	1	4	5	17	1	4	5	**21**	100	5,440	3	14	18	64
1999	**3**	**8**	10	27	1	3	4	16	1	3	5	**19**	100	5,849	5	15	19	61
2000	**2**	**9**	10	28	1	3	4	16	1	3	5	**19**	100	6,660	4	15	19	62
2001	**2**	**9**	12	32	1	4	5	15	1	2	4	**12**	100	5,768	4	15	21	60
2002	**2**	**10**	12	33	1	3	4	16	1	2	3	**11**	100	6,318	4	16	20	61
2003	**4**	**15**	14	42	1	2	3	11	0	1	1	**5**	100	5,404	5	18	19	59

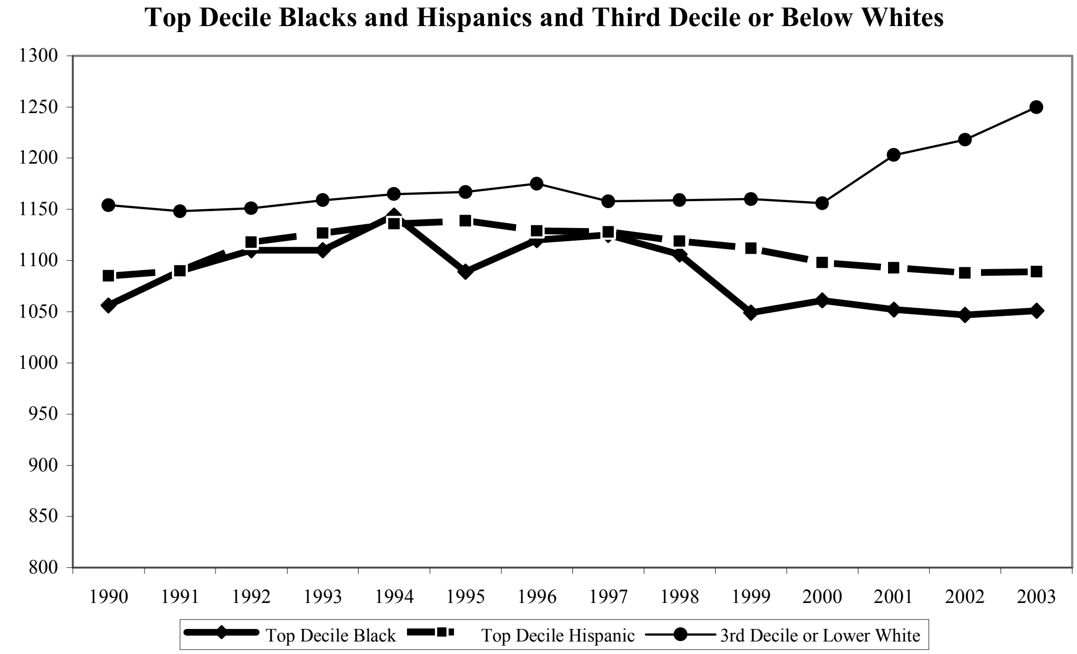
Source: Texas Higher Education Project (THEOP) administrative data.

Table 2. Distribution of UT Enrollees by Class Rank & High School Economic Status (Row Percents)

	Top Decile					2nd Decile					3rd Decile and Lower							All Ranks				
	Feeder	Affluent	Average	Poor	Long-horn	Feeder	Affluent	Average	Poor	Long-horn	Feeder	Affluent	Average	Poor	Long-horn		N	Feeder	Affluent	Average	Poor	Long-horn
1990	7	17	15	6	4	6	9	6	2	1	11	9	5	1	1	100	4,689	24	35	26	9	5
1991	7	17	15	6	3	6	8	6	2	1	12	10	5	1	1	100	4,673	25	36	25	9	5
1992	7	18	13	6	3	7	10	6	2	1	13	10	4	1	0	100	4,567	27	38	23	8	4
1993	7	18	12	6	2	7	11	5	1	1	12	11	4	1	1	100	4,738	26	40	22	9	4
1994	7	17	13	5	2	7	10	6	2	1	14	11	5	1	0	100	4,847	28	38	23	8	3
1995	9	17	13	5	1	7	10	6	2	0	13	10	4	1	1	100	5,010	30	36	23	8	2
1996	9	14	14	5	2	8	9	6	1	0	15	11	5	1	0	100	5,052	31	34	26	7	2
1997	7	14	13	4	2	7	9	7	2	1	16	12	5	1	0	100	5,463	30	35	25	7	2
1998	8	14	15	5	**1**	8	9	7	2	0	**15**	**9**	5	1	0	100	5,399	31	32	27	8	2
1999	9	15	15	5	**3**	7	8	7	1	0	**13**	**10**	5	1	0	100	5,807	29	32	27	8	3
2000	8	15	16	5	**4**	7	8	7	1	0	**15**	**8**	5	1	0	100	6,659	30	31	28	6	4
2001	9	18	20	5	**4**	8	9	7	1	1	**9**	**6**	3	0	0	100	5,730	27	33	30	6	5
2002	9	19	21	5	**4**	8	9	7	1	0	**8**	**6**	3	0	0	100	6,288	24	34	31	6	5
2003	12	26	22	9	**5**	7	7	4	1	0	**4**	**3**	1	0	0	100	5,374	22	36	27	10	6

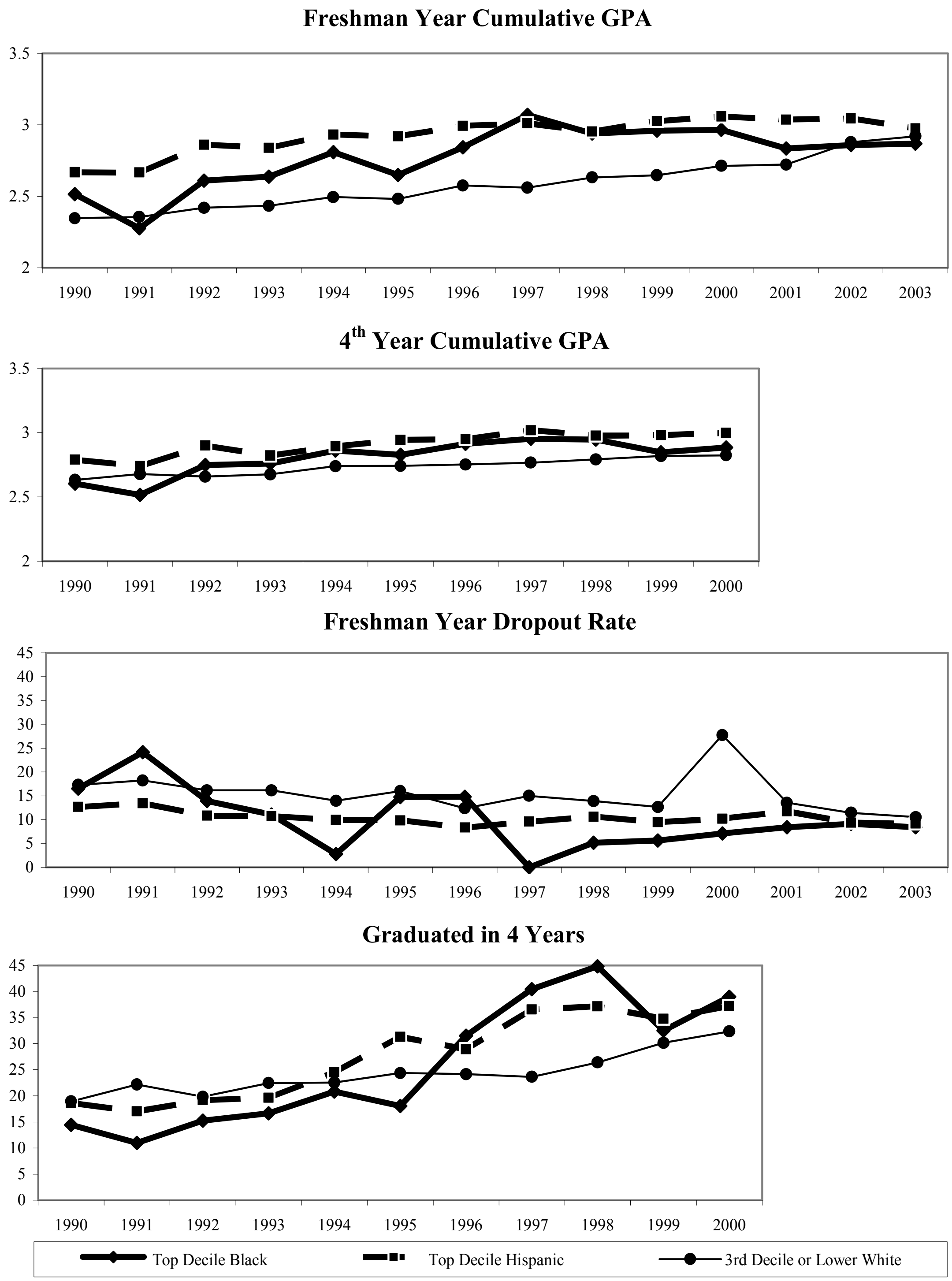
Source: Texas Higher Education Project (THEOP) administrative data.

Figure 2. Average Test Scores for UT Enrollees 1990-2003



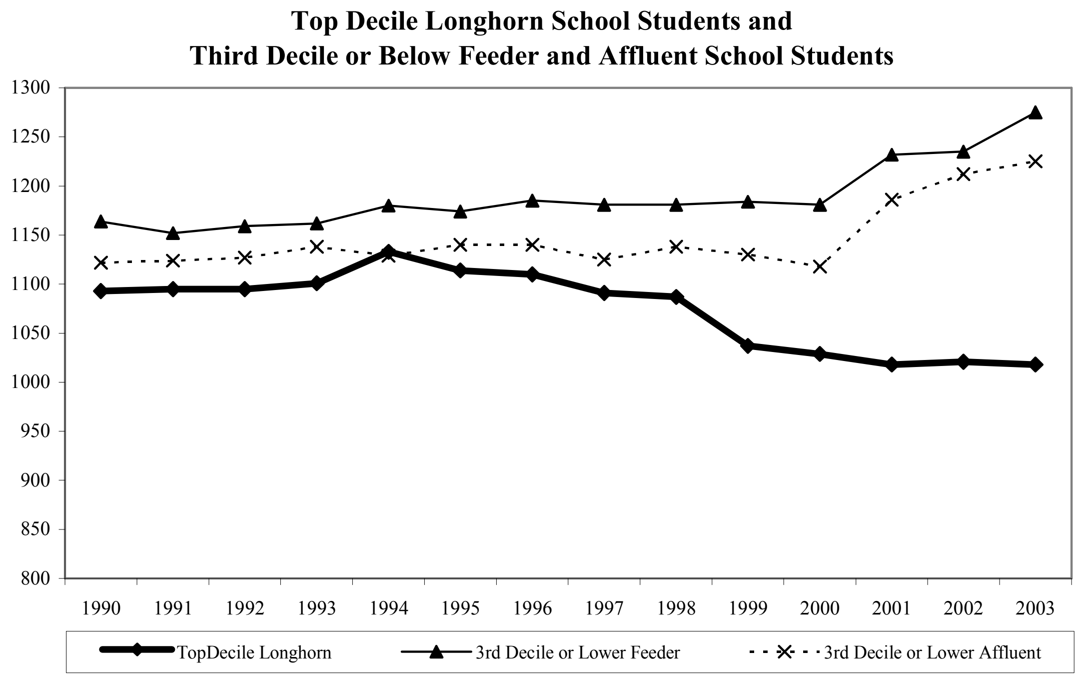
Source: Texas Higher Education Project (THEOP) administrative data.

Figure 3. Academic Performance of UT Enrollees 1990-2003:
Top Decile Blacks and Hispanics and Third Decile or Below Whites



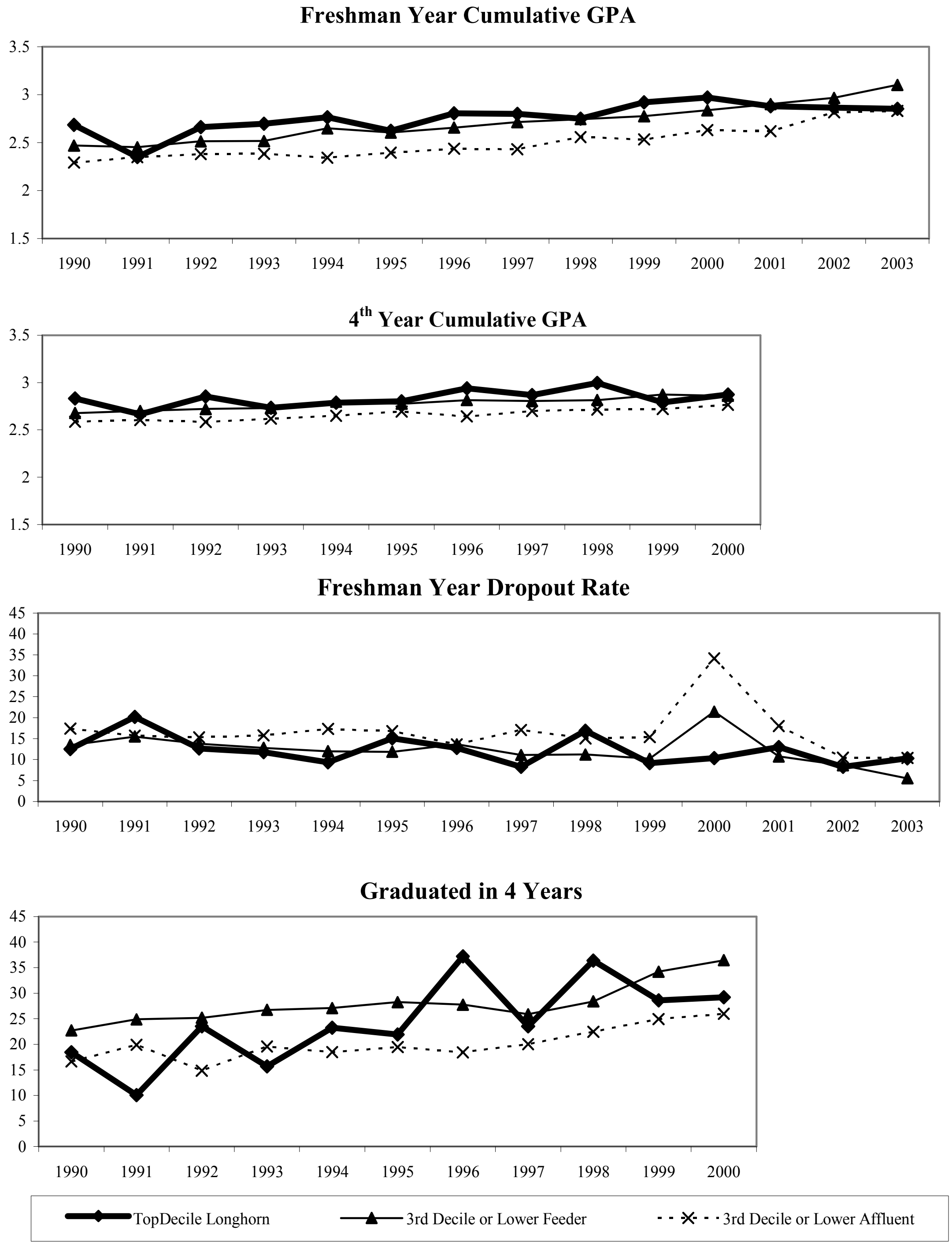
Source: Texas Higher Education Project (THEOP) administrative data.

Figure 4. Average Test Scores for UT Enrollees 1990-2003



Source: Texas Higher Education Project (THEOP) administrative data.

Figure 5. Academic Performance of UT Enrollees 1990-2003:
Top Decile Longhorn School Students and Third Decile or Below Feeder and Affluent School Students



Source: Texas Higher Education Project (THEOP) administrative data.

Table 3. Academic Performance of Top Decile Black and Hispanic UT Enrollees Relative to Whites Ranked at or Below Third Decile: Freshman Year and 4th Year GPA

(Coefficients from regressions, s.e. in parentheses)

		Base (1)	Base+ Test Score (2)	Base+ High School Economic Status (3)	Base+ Test Score+ High School Economic Status (4)
		Freshman Year GPA			
Black	1991	-0.08 (.079)	0.02 (.076)	0.22 (.079) **	0.25 (.077) ***
	1994	0.31 (.087) ***	0.38 (.047) ***	0.62 (.085) ***	0.62 (.083) ***
	1996	0.27 (.099) **	0.36 (.095) ***	0.57 (.097) ***	0.57 (.095) ***
	1997	0.51 (.101) ***	0.57 (.097) ***	0.73 (.098) ***	0.73 (.096) ***
	1998	0.31 (.090) ***	0.40 (.086) ***	0.58 (.088) ***	0.58 (.086) ***
	2000	0.25 (.056) ***	0.42 (.054) ***	0.60 (.058) ***	0.61 (.056) ***
	2001	0.11 (.064)	0.37 (.061) ***	0.46 (.065) ***	0.52 (.062) ***
	2002	-0.02 (.058)	0.25 (.056) ***	0.34 (.059) ***	0.42 (.057) ***
	2003	-0.05 (.060)	0.26 (.057) ***	0.33 (.061) ***	0.42 (.058) ***
Hispanic	1991	0.31 (.043) ***	0.41 (.042) ***	0.64 (.048) ***	0.65 (.046) ***
	1994	0.44 (.049) ***	0.51 (.047) ***	0.77 (.051) ***	0.75 (.049) ***
	1996	0.42 (.044) ***	0.49 (.043) ***	0.74 (.047) ***	0.73 (.046) ***
	1997	0.45 (.043) ***	0.50 (.042) ***	0.80 (.046) ***	0.75 (.045) ***
	1998	0.32 (.041) ***	0.40 (.039) ***	0.65 (.044) ***	0.61 (.043) ***
	2000	0.35 (.034) ***	0.46 (.033) ***	0.73 (.038) ***	0.70 (.037) ***
	2001	0.31 (.039) ***	0.50 (.037) ***	0.65 (.042) ***	0.66 (.040) ***
	2002	0.17 (.036) ***	0.37 (.035) ***	0.53 (.039) ***	0.56 (.038) ***
	2003	0.05 (.044)	0.31 (.042) ***	0.47 (.046) ***	0.50 (.044) ***
		4th Year GPA			
Black	1991	-0.16 (.069) *	-0.10 (.067)	0.00 (.070)	0.02 (.068)
	1994	0.06 (.070)	0.10 (.067)	0.28 (.070) ***	0.25 (.068) ***
	1996	0.16 (.083) *	0.21 (.081) **	0.34 (.082) ***	0.34 (.081) ***
	1997	0.19 (.081) *	0.22 (.079) **	0.33 (.080) ***	0.32 (.078) ***
	1998	0.15 (.073) *	0.20 (.071) **	0.30 (.072) ***	0.30 (.071) ***
	2000	0.06 (.049)	0.17 (.047) ***	0.36 (.051) ***	0.35 (.050) ***
Hispanic	1991	0.06 (.037)	0.10 (.036) **	0.24 (.041) ***	0.24 (.040) ***
	1994	0.15 (.039) ***	0.19 (.037) ***	0.37 (.041) ***	0.34 (.040) ***
	1996	0.20 (.038) ***	0.23 (.037) ***	0.43 (.041) ***	0.41 (.040) ***
	1997	0.25 (.037) ***	0.28 (.036) ***	0.48 (.040) ***	0.44 (.039) ***
	1998	0.19 (.034) ***	0.22 (.033) ***	0.39 (.037) ***	0.36 (.037) ***
	2000	0.17 (.030) ***	0.24 (.029) ***	0.48 (.034) ***	0.45 (.033) ***

***: $p<0.001$, **: $p<0.01$, *: $p<0.05$

Source: Texas Higher Education Project (THEOP) administrative data.

Table 4. Academic Performance of Top Decile Black and Hispanic UT Enrollees Relative to Whites Ranked at or Below Third Decile: Freshman Year Dropout, 4th Year Graduation
(Marginal effects from probit models, s.e. in parentheses)

		Base (1)		Base+ Test Score (2)		Base+ High School Economic Status (3)		Base+ Test Score+ High School Economic Status (4)	
		Freshman Year Drop Out							
Black	1991	0.05 (.038)		0.04 (.037)		-0.01 (.030)		-0.01 (.029)	
	1994	-0.09 (.016)	**	-0.09 (.016)	**	-0.10 (.009)	***	-0.10 (.009)	***
	1996	0.02 (.043)		0.02 (.042)		-0.01 (.036)		-0.01 (.035)	
	1997	--[a]		--		--		--	
	1998	-0.06 (.019)	*	-0.06 (.018)	*	-0.07 (.011)	**	-0.07 (.011)	**
	2000	-0.10 (.009)	***	-0.10 (.006)	***	-0.11 (.005)	***	-0.11 (.005)	***
	2001	-0.04 (.018)		-0.05 (.013)	**	-0.06 (.012)	**	-0.06 (.011)	***
	2002	-0.02 (.018)		-0.03 (.015)		-0.04 (.013)	*	-0.05 (.012)	**
	2003	-0.01 (.017)		-0.03 (.012)		-0.04 (.010)	**	-0.04 (.009)	**
Hispanic	1991	-0.04 (.014)	*	-0.04 (.015)	*	-0.07 (.012)	***	-0.07 (.012)	***
	1994	-0.03 (.017)		-0.04 (.017)	*	-0.07 (.012)	***	-0.07 (.012)	***
	1996	-0.04 (.015)	*	-0.04 (.014)	*	-0.06 (.012)	***	-0.06 (.012)	***
	1997	-0.04 (.014)	**	-0.04 (.013)	**	-0.07 (.009)	***	-0.07 (.009)	***
	1998	-0.02 (.013)		-0.03 (.013)	*	-0.06 (.009)	***	-0.06 (.009)	***
	2000	-0.09 (.007)	***	-0.10 (.006)	***	-0.12 (.006)	***	-0.11 (.006)	***
	2001	-0.01 (.013)		-0.03 (.011)	*	-0.04 (.011)	***	-0.04 (.010)	***
	2002	-0.02 (.012)		-0.03 (.010)	**	-0.04 (.009)	***	-0.05 (.009)	***
	2003	-0.01 (.013)		-0.03 (.011)	*	-0.04 (.010)	***	-0.04 (.009)	***
		Grauated in 4 Years							
Black	1991	-0.13 (.040)	**	-0.12 (.041)	*	-0.05 (.054)		-0.05 (.054)	
	1994	-0.02 (.057)		-0.01 (.058)		0.09 (.067)		0.09 (.067)	
	1996	0.08 (.072)		0.10 (.072)		0.17 (.075)	*	0.17 (.075)	*
	1997	0.18 (.075)	*	0.20 (.075)	**	0.29 (.074)	***	0.28 (.074)	***
	1998	0.20 (.067)	**	0.21 (.067)	**	0.29 (.065)	***	0.29 (.065)	***
	2000	0.07 (.043)		0.11 (.044)	**	0.25 (.043)	***	0.25 (.043)	***
Hispanic	1991	-0.06 (.025)	*	-0.05 (.026)		0.06 (.034)	*	0.06 (.034)	*
	1994	0.02 (.032)		0.03 (.032)		0.16 (.039)	***	0.15 (.039)	***
	1996	0.05 (.032)		0.07 (.033)	*	0.17 (.037)	***	0.17 (.037)	***
	1997	0.14 (.032)	***	0.15 (.032)	***	0.31 (.035)	***	0.30 (.035)	***
	1998	0.12 (.030)	***	0.13 (.031)	***	0.26 (.033)	***	0.26 (.034)	***
	2000	0.05 (.026)	*	0.08 (.026)	**	0.24 (.029)	***	0.22 (.029)	***

***: $p<0.001$, **: $p<0.01$, *: $p<0.05$

Note: a: None of top 10% black students dropped out in freshmen year in 1997.

Source: Texas Higher Education Project (THEOP) administrative data.

Appendix: Summary Statistics of UT-Austin Enrollees, 1990-2003 (Column Percent)

	***Afffirmative Action* 1992-1996**				***No Policy* 1997**				***Top 10% Plan* 1998-2003**			
	Top Decile	2nd Decile	3rd Decile or	Total	Top Decile	2nd Decile	3rd Decile or	Total	Top Decile	2nd Decile	3rd Decile or	Total
Race/Ethnicity												
Black	3.4	4.2	5.7	4.3	2.1	3.4	3.9	3.1	4.3	3.1	4.2	4.0
Hispanic	16.1	15.3	14.5	15.5	14.6	13.6	10.8	13.1	17.7	13.6	11.2	15.3
Asian	17.3	13.2	11.0	14.5	22.0	16.6	14.4	18.0	20.3	18.0	17.2	19.1
White	62.7	66.6	68.2	65.3	60.8	65.8	70.1	65.3	56.6	64.3	66.3	60.5
Other/Missin	0.5	0.7	0.6	0.6	0.4	0.6	0.7	0.6	1.1	1.0	1.1	1.1
N	15,679	8,408	9,921	34,008	2,206	1,428	1,885	5,519	19,557	8,378	7,898	35,833
High School Type												
Feeder	16.6	27.4	43.6	27.1	17.5	28.4	45.9	30.1	16.9	31.2	47.5	27.0
Affluent	36.1	38.4	35.0	36.3	35.0	34.9	33.9	34.6	31.7	34.9	31.8	32.4
Average	29.3	23.4	15.3	23.8	32.0	26.5	15.2	24.8	32.8	26.8	16.6	27.8
Poor	11.6	6.7	3.6	8.1	10.8	6.4	3.5	7.1	10.1	4.5	2.5	7.1
Longhorn	5.0	2.8	1.6	3.5	3.9	2.4	0.7	2.4	6.4	1.4	0.9	4.0
Missing	1.5	1.4	0.8	1.3	0.9	1.5	0.8	1.0	2.1	1.2	0.8	1.6
N	15,679	8,408	9,921	34,008	2,206	1,428	1,885	5,519	19,557	8,378	7,898	35,833
Mean												
Test Score	1211	1163	1140	1178	1239	1172	1142	1189	1217	1191	1167	1200

Source: Texas Higher Education Project (THEOP) administrative data.