

**Hopwood and the Top 10 Percent Law: How They Have Affected the
College Enrollment Decisions of Texas High School Graduates***

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EXECUTIVE SUMMARY

For many years, institutions of higher education have been attempting to diversify their student bodies by increasing the representation of minorities, especially African-Americans and Hispanics, in their student bodies. In view of the historical legacy of slavery, Jim Crow, and inferior elementary and secondary schools in minority neighborhoods, most universities could not meet their goal without giving some form of preference to minority students in the admissions process.

White applicants to the University of Texas Law School who felt they had been denied admission in favor of less qualified minority applicants filed a legal challenge. In 1996, the decision by the U.S. Fifth Circuit Court in *Hopwood v. Texas* prohibited the use of race in as a factor in college admissions and financial aid decisions. For two years, no form of affirmative action was employed in Texas public universities.

Subsequently, Texas implemented the Top Ten Percent plan, whereby students in the top 10 percent of each high school's graduating class were guaranteed admission to one of the State's selective public universities. In view of the importance of improving the access of minorities to quality education, and in view of the number of states grappling with the same issues and policy choices as Texas, it is vital to understand the consequences of the Hopwood Decision and the Top Ten Percent Plan.

Using a comprehensive database that contains information on SAT and ACT scores, high school graduation status and family background information for all Texas public college attendees from 1991 through 2002, we examine selective and other public college and community college attendance for minority and white students before Hopwood, during the two Hopwood years, and during the subsequent four Top 10 Percent years.

First, we analyze the aggregate enrollment trends. Our principal conclusions from this analysis are as follows:

- Hopwood had a devastating effect on minority enrollment in Texas selective public universities, reducing the African-American and Hispanic share of entering classes by 37 percent and 21 percent between 1996 and 1998.
- The Top Ten Percent plan, contrary to early news coverage and analyses, did not result in a recovery to pre-Hopwood levels of attendance. In contrast to earlier work, our analyses include freshman admissions throughout the whole academic year, rather than relying on the fall

semester's data only. Using this complete accounting of the freshman class, African-American enrollments by 2002 had not returned to pre-Hopwood Levels.

- Much of the recovery in the number of minority students attending selective public universities is related to increased recruiting efforts such as the Longhorn Opportunity Scholarship program at the UT Austin.
- More importantly, a focus on the *number* of enrolled minority students ignores the fact that the potential applicant pool was changing over time. Minority students made up an increasing proportion of the graduating high school class and more minority students were attending higher quality suburban schools.

Second, we go beyond the raw enrollment data to model the student's educational choice process. We use a multinomial logit model to predict the probability a student will attend a selective university, another public university, a historically black university, or one of two types of community college programs. In this analysis, we control for many student characteristics, including aptitude as measured by SAT and ACT test, family income, gender, age, and type of high school diploma. We also control for a variety of characteristics of the school attended by the student in the semester prior to high-school graduation. Controlling for these characteristics is crucial to isolating the effects of Hopwood and the Top Ten Percent plan, because these characteristics were also changing at the same time that the court ruling and the new policy were being implemented.

From this analysis, we draw the following conclusions:

- Prior to Hopwood, African Americans and, to a lesser extent, Hispanics had an advantage in the probability of attending a selective public university, consistent with the policy of these institutions to pursue a diverse student body.
- Subsequent to Hopwood, the advantage was turned to a disadvantage, with black and Hispanic students having a lower probability of attending a selective university than comparable whites, i.e. those with the same test scores, family income, school of origin characteristics, and so on.
- The Top Ten Percent plan was not effective in undoing the damage done by the Hopwood decision. The disadvantage for black and Hispanic students relative to comparable whites was little changed in the four years after the plan was put in place.

An important caveat to our conclusions is that our analyses suffer from a lack of information regarding student attendance at private and out-of-state institutions. We seek to remedy this gap in future work. Nevertheless, we provisionally conclude the apparent success of the Top Ten Percent program is an illusion, driven by the increasing minority population and recruiting efforts in Texas. It is not an effective alternative to Affirmative Action.

Hopwood and the Top 10 Percent Law: How They Have Affected the College Enrollment Decisions of Texas High School Graduates

I. INTRODUCTION.

This paper examines the impact of the Hopwood decision and Texas' Top 10 Percent Law on enrollments by Texas high school graduates in Texas' selective public universities. As we discuss in greater detail below, *Hopwood v. Texas* is a Fifth Circuit Court decision that prohibited using race as a factor in college admission decisions. The Texas Top 10 Percent Law, a legislative response to the Hopwood decision, guarantees students graduating in the top 10 percent of their high school class admission to any Texas public college or university.

While we focus on the impacts of the Hopwood decision and the Top 10 Percent Law on black and Hispanic enrollment in Texas public selective universities in this paper, these decisions are only a small part of the larger problem of inferior minority access to higher education. While access by disadvantaged minorities to selective colleges and universities, and particularly to state supported ones, is important, it is but one of several crucial issues related to the educational opportunities of disadvantaged minorities. Other, equally important, questions include: impacts of racial residential segregation on minority achievement (Kain and O'Brien, 2000a; Hanushek, Kain and Rivkin, 2002); high school curriculum choices (Kain and O'Brien 2000b); racial/ethnic differences in high-school graduation rates and college enrollment rates, retention, completion of bachelor or

associate degrees and certificates (Kain and O'Brien 2000c); and acceptance to and completion of professional and other graduate programs.

For several years, prompted in part by Federal efforts to undo the effects of earlier discriminatory practices, public and private universities in Texas, and particularly more selective ones, gave some preference to disadvantaged minorities in making decisions about admissions and financial aid (Bowen and Bok 1998). These practices were challenged in 1992 when four white applicants to the University of Texas Law School filed suit, claiming they had been denied admission in favor of less qualified minorities. In an August 19, 1994 decision (*Hopwood v. Texas*), Judge Sparks of the Federal district court in Austin, TX, ruled that the Law School's affirmative action admissions program was unconstitutional because it was not "narrowly tailored," pointing to the law school's dual admissions procedure for minority applicants as the major culprit. He added, however, that "certain types of race-conscious admissions were constitutionally justified," and awarded each plaintiff one dollar and the right to reapply to the law school without paying any additional application fees. The Plaintiffs appealed the district court's judgment.

Roughly two years later (March 18, 1996) the Fifth Circuit in *Hopwood v. Texas* ruled that race may not be taken into account for the purposes of creating a diverse student body, and in July the U.S. Supreme Court declined to review the Fifth Circuit's ruling. On August 21, 1996, Texas Attorney General, Dan Morales, notified all Texas public colleges and universities that it was illegal for them to use race as a factor in making decisions about college admissions and financial aid (Chapa and Lazaro 1998; Finnell 1998). Even though *Hopwood v. Texas* only applied to colleges and universities

in three states (Texas, Louisiana and Mississippi), the decision sent a shock wave through higher education, and particularly caused concern at selective colleges and universities that had considered race in their admissions decisions and believed their selection procedures were legal. *Hopwood v. Texas* prompted similar challenges against universities in several other states in a campaign that continues to this day.

The Hopwood decision was followed by sharp drops in the number of minority students enrolling as freshmen in Texas' three selective public universities, the University of Texas at Austin (UT-Austin), Texas A&M University, and the University of Texas at Dallas (UT Dallas). The mean number of black Texas high schools graduates enrolling as freshmen at these three universities fell by 28 percent in the two years following the Hopwood decision, relative to the three preceding years. Percentage declines in Hispanic freshmen enrollments (-14 percent), while smaller than for blacks, were still a source of concern, particularly given the rapid growth in the Hispanic population. By comparison, white freshmen enrollments increased by seven percent, even though the rate of growth in the number of whites graduating from Texas high schools was less than the rate for either blacks or Hispanics.

Less complete data are available for Texas' private colleges and universities, but Irving (1999, pp 7-8) reports that Rice University, the state's most prestigious private university, was not immune to the Hopwood virus. He found that in the year following the Hopwood decision, the number of Hispanic freshmen fell from 111 to 56 students. He also quotes Rice's Dean of Social Sciences, as saying, "The best black and brown students went to the Ivy League and Stanford. They rarely come back to the state after

they graduate. That's what really hurts. They were denied financial aid here so they went to Stanford, where the tuition's twice as much."

Reports of the large declines in minority applications and freshmen enrollments at the state's selective public universities led to widespread demands for action to insure that Texas minorities would have significant representation at Texas public universities, particularly its most selective ones. The Texas Commission on a Representative Student Body (1998) created by the Texas Higher Education Coalition, chaired by former Texas Lieutenant Governor William P. Hobby, was especially influential.¹ The state legislature, responding to these concerns, set out to devise legislation that would insure significant minority representation at all public colleges and universities. The legislators' goal was to restore minority representation to at least pre-Hopwood levels without running afoul of the courts. The Texas Top 10 Percent Law, which Governor Bush signed into law on May 20, 1997 (26 months after the Hopwood decision), was the legislature's answer. This law provides automatic admission of all students who graduate in the top 10 percent of their high school graduating class to any Texas public college or university. Given the extensive racial segregation of Texas' public schools, a feature it shares with the rest of the country, supporters hoped that the Top 10 Percent Law would permit enough minority

¹ Hobby, at this time was Chancellor of the University of Houston System and President and Executive Editor of *The Houston Post*. In addition to Hobby, the blue ribbon commission included representatives from the Independent Colleges and Universities in Texas, Texas Association of Community Colleges, Texas A&M University System, Texas Technical College System, Texas State University System, University of Houston System, University of North Texas System and the University of Texas System as well as the current and former Mayors of Dallas, the Presiding Judge of the 215th Civil District Court of Harris County, several influential members of the business and corporate communities and representatives from a number of public school districts.

students from predominately black and Hispanic high schools to enroll in selective public universities to offset the losses resulting from the Hopwood decision.²

In contrast to the widespread dismay that followed the Hopwood decision, response to the Top 10 Percent Law has been generally favorable. For example, a November 24, 1999 *New York Times* story carried the headline, “Texas’ Top 10% Law Appears to Preserve College Racial Mix.” The story then reported that “Two years into the startlingly simple top 10 percent program, the racial mix of this campus (UT-Austin) has been restored to what it was under affirmative action” (Wilgoren 1999).

A February 9, 2000 *Education Week* story by Julie Blair reached similar conclusions. She stated that “New statistics suggest the Texas Plan ... is boosting the enrollment of minority students as its proponents intended,” adding that in fall 1999 black student enrollment at the University of Texas at Austin increased by 50 percent and Hispanic enrollment increased by 9.4 percent relative to 1997 (Blair, 2000). In an op-ed piece that appeared in many Texas newspapers, UT-Austin’s President, Larry Faulkner (2000) wrote, “Our 1999 enrollment levels for African American and Hispanic freshmen have returned to those of 1996, the year before the Hopwood decision prohibited the consideration of race in admissions policies.” Responding to the criticism “that the “Top 10 Percent Law” is causing a large number of qualified applicants to be denied admission

² Thompson and Tobias (circa 1999) credit David Montejano and “a task force populated by members of the academic community, students, and attorneys from the Mexican-American Legal Defense and Education Fund (San Antonio) for devising the Top 10 Percent Plan, which they refer to as “Montejano’s plan.” They also cite Holley and Spencer (1999) who observed that from the late 1980s to the early 1990s, UT-Austin provided automatic admission to top ten percenters. UT-Austin abandoned the plan after the Hopwood decision.

to the University of Texas at Austin,” Faulker emphasized that “*more than half* the spaces in the freshmen class remain available to non-top-10 percent graduates.” He added “because the freshman class has increased in size to more than 7,600, there are about as many spaces for non-top 10 percent graduates as in past years.” Finally, he reported “minority students earned higher grade point averages last year than in 1996 and have higher retention rates.” Montejano (2001) is even less restrained, “These questions have been settled. The Top 10 Percent law has restored diversity to the UT-Austin campus to pre-Hopwood levels.”³

Experience with Texas’s Top 10 Percent Law also figured strongly in recent testimony and pleadings before the Supreme Court in the Michigan Affirmative action case. The alleged success of the Texas Top 10 Percent Law was featured in the Administrations brief opposing Michigan’s affirmative action plans and refutation of the

³ Faulkner’s effort to reassure the parents of high-performing students attending highly competitive suburban high schools was apparently not entirely successful. An April 2001 *Texas Monthly* story titled, “Imperfect 10: Your Kid May be Smart, But IF She Isn’t In The Top Tenth of Her Class, She May Not Get Into UT or A&M. Don’t Despair. Try Harvard,” tells of a Ft. Worth attorney who took his son out of “a private school renowned for its rigorous curriculum and small class sizes,” but which “doesn’t rank the 87 students in its graduating class.” He then enrolled him in a public high school for his senior year where his “grade point average will easily earn him a spot in the top 10 percent-and the precious entitlement that comes with a high class ranking.” At a later point in the story, the author states “The horror stories pile up. A Highland Park High School counselor tells of a student who just missed the top 10 percent and was summarily denied admission to UT business school. Luckily, his second choice accepted him: Harvard. Another college counselor advised a student applying to UT to submit applications to Stanford and the University of Pennsylvania as backups.” Elsewhere the author writes, “Blame it on a 1997 state law that awards high school seniors in the top 10 percent of their class automatic admission to public colleges and universities, including the University of Texas and Texas A&M.” Dismissing Faulkner’s arguments the author concludes that “For every top 10 percent student with mediocre SAT scores who now gets in, another student with high test scores but mediocre grades (who would previously have been admitted) gets left out” (Hart, 2001: 52).

claims about the success of the Texas law was a major focus of several amicus curiae briefs (Briefs a-c). Other states have implemented or are considering fixed percentage plans based on the Texas model.

II. DATA USED IN THE ANALYSIS.

The analyses presented in this paper are based on eight years of data from the UTD Texas Schools Microdata Panel (TSMP), a database developed by the UTD Texas Schools Project. TSMP currently includes up to 12 years of individual data for approximately 11 million persons who attended Texas elementary and secondary schools during 1990-2002 and/or Texas colleges and universities during the same period. While we refer to TSMP as a database, we use the term in the generic sense rather than as denoting a relational database. Instead, TSMP consists of a large number of flat files with a few common identifiers or keys. In using TSMP data for analyses, such as those described in this paper, we create working files that combine data from many TSMP files.

The Texas Education Agency (TEA) is the principal supplier of elementary and secondary school data used in the analysis. TEA's data consist of annual enrollment, attendance and program files and statewide-standardized tests. The most numerous of these tests, the Texas Assessment of Academic Skills (TAAS), has been given to most students in grades 3-8 since 1994. Encrypted identifiers enable us to link the several types of data/files included in TSMP both to each other and over time.

College enrollment data is obtained from the Texas Higher Education Coordinating Board (Coordinating Board). Most of these data are for students attending Texas public colleges and universities, although in certain years we are able to identify

about half of all Texas residents attending Texas private colleges and universities from financial aid data. In addition, we have been able to use Coordinating Board enrollment data to identify the origin-institution of significant numbers of Texas high school graduates who transferred to a Texas public college or university after enrolling as freshmen in a Texas private or an out-of-state college or university. Finally, the Coordinating Board, with the College Board and ACT's approval, provided ACT and SAT data for Texas residents who took these tests during 1991-2000. These data include test scores and, for recent years, extensive information on family background, student interests, high-school records and activities and codes identifying the colleges and universities where test takers have sent scores. Finally, the Coordinating Board has provided us with five years of financial aid data for Texas residents. These financial aid data are for all financial aid recipients who were enrolled in all Texas public or private colleges and universities during this period.

The econometric analyses described in Section V examine eight cohorts, defined as individuals who graduated from a Texas high school between 1994 and 2001 college years. These cohorts include three pre-Hopwood years (1994-96), two Hopwood years (1997-98) and three Top 10 Percent years (1999-2001). The analysis files were created by merging data from approximately 224 separate files. The original files were created and maintained by five different organizations, agencies or divisions. The TEA data, moreover, were provided by more than 1,000 school districts, while the Coordinating Board obtained its data from 35 public universities and 75 public community colleges. Finally, the ACT and SAT data were obtained from the Coordinating Board were produced by the testing organizations and the GED data were obtained from TEA was

originally collected by still another organization. While the data are remarkably clean, variable definitions changed from year to year and in combining the large number of files we discovered errors and missing values. The most serious are inconsistent, invalid or missing encrypted IDs, the keys we use to link the various files both within each year and over time. As an example, there are missing or invalid encrypted SSNs for 10,732 public high school graduates in 1998 and for 6,043 students who took the SAT in the same year. Using multiple sources and secondary characteristics we corrected and replaced missing and invalid encrypted social security numbers for more than half of these observations.

Given the emphasis of this paper on minority access to Texas' selective public universities, we need to be clear about our definition of selective universities. We use the mean SAT scores of entering freshmen for this purpose. Using this criteria, there are three selective Texas public universities, the University of Texas at Austin (UT-Austin), Texas A&M and the University of Texas at Dallas (UTD). UT-Austin and Texas A&M are the state's best-known public universities and in recent years their entering freshmen have consistently ranked in the top three among Texas public universities in terms of mean SAT scores. UTD is less well known and has only been admitting freshmen and sophomores since 1990. Since UTD admitted its first freshmen class, it has maintained high admissions standards for its entering freshmen and has positioned itself as a demanding and high quality institution. The average SAT scores of its entering freshmen have consistently been equal to or higher than those of entering freshmen at UT-Austin or Texas A&M.

In defining first-time entering freshmen we follow the Texas Higher Education Coordinating Board, which defines them as "individuals who have never attended any

college (or post-secondary institution), students who enrolled in the fall term and who attended a postsecondary institution for the first time in the prior summer term, and students who entered with advanced standing (college credit earned before graduation from high school).” While completing advanced placement courses in high school and a passing grade in an AP exam administered by the College Board is the most common method by which students obtain college credit while enrolled in high school, growing numbers of Texas high school students are obtaining college credit by taking college courses while in high school (O’Brien and Nelson, 2003). These students are also counted as first-time freshmen in this analysis, although some of them have earned enough college credits by the time they enroll as full-time college or university students to have sophomore standing.

We recognize that the analyses included in this paper are limited by data availability. The most serious missing data problem is incomplete information on the private and out-of-state schools selected by Texas residents. More than 80 percent of Texas residents enrolling as freshmen in two and four year colleges and universities attend Texas public universities or community colleges and the Coordinating Board data included in TSMP provide a census of them. Nonetheless, only two-thirds of Texas first-time freshmen enrolling in four-year institutions attend Texas public universities.⁴

⁴ Kain and O’Brien (2000c, p. 57) using 1997 Integrated Postsecondary Education Data System (IPEDS) data found that 18.9 percent of Texas residents enrolling as first-year freshmen attended Texas private colleges and universities, 6.2 percent attended out-of-state public institutions and 8.7 percent attended private out-of-state institutions.

III. TRENDS IN ENROLLMENT.

Table 1 provides the numbers of Texas residents who enrolled as first time freshmen in selective public universities by race/ethnicity group during six pre-Hopwood years (1991 to 1996), two Hopwood years (1997 and 1998) and four Top 10 Percent years (1999-2002). First time freshmen are students who enrolled during the academic year or the previous summer. Note that we use the year of the spring semester to denote the academic year; e.g. 2000 refers to summer 1999, fall of 1999 and spring of 2000.

Several conclusions stand out:

- The Hopwood decision had a devastating effect on minority enrollment.
 - First-time freshman African-American enrollment in the three selective public universities dropped from 528 in 1996 to 439 in 1997 (the year after Hopwood), and to 334 in 1998 (the second post-Hopwood year).
 - Hispanic first-time freshman enrollments in selective universities also declined, dropping from 1,681 in 1996 to 1,333 in 1998.
 - Asian and white enrollment rose substantially over the same period, more than offsetting the declines among Blacks and Hispanics.
- After implementation of the Top Ten Percent plan, minority attendance began to recover.
 - Black enrollment rose to 505 by 2001, with a slight decline to 486 in 2002, still below the typical levels in pre-Hopwood years.
 - Hispanic enrollment rose to 1,709 by 2002, surpassing enrollments in the pre-Hopwood years.
 - White and Asian enrollments continued to grow in the Post-Hopwood period.
- The raw enrollment numbers can be misleading. The gains of the Top Ten Percent period must be seen in the context of the rapid growth of overall enrollments.

- African-Americans were 4.9 percent of first-time freshmen in 1996, and dropped to 2.9 percent in 1998. After the recovery in the Top Ten Percent period, 3.6 percent of first-time freshman were black. Hence the recovery was far from complete.
- Hispanics comprised 15.6 of the freshman class in the last pre-Hopwood year, but only 12.8 percent in 2002.
- The enrollment patterns vary somewhat among the three selective universities, suggesting that specific policies at those universities played a role in shaping the response to Hopwood and the Top Ten Percent law.
 - UT Dallas did not see a decline in minority freshman enrollment after Hopwood.
 - The recovery for Blacks and Hispanics was much more rapid at UT-Austin than at Texas A&M.

While the Top Ten Percent plan appears to be associated with a recovery of enrollments, that recovery is far from complete, especially for African-Americans. How can this conclusion be reconciled with the glowing reviews of the plan described earlier? Part of the explanation is that some commentaries and analyses were based on an incomplete accounting of the incoming freshman. Table 2 breaks out the first-year students entering selective Texas public universities by the semester of entry: the prior summer, fall semester, and spring semester of each academic year. Other analyses, notably those by Tienda et. al. (2003), use only freshman entering in the fall term. Table 2 demonstrates that it makes a large difference whether students enrolling in the previous summer are included in the analyses. Summer-admitted African American students declined from an annual average of 94 in the pre-Hopwood years to 55 in the Top 10 percent years. In contrast, Asian and Anglo students increasingly enrolled in the summer semester, with of 29 and 338 in the pre-Hopwood years rising to 158 and 720 in the latest years, respectively. Using all three semesters reveals a much larger relative decline in

African American enrollment as a proportion of each academic year's class. Clearly, large numbers of Asian and Anglo high school graduates took advantage of the summer enrollment option to gain access to selective public universities.

Second, consideration of only the number of students attending selective public universities tells only part of the story. The number of minorities graduating from Texas high schools, and particularly Asians and Hispanics, grew more rapidly between 1992 and 2002 than the number of white high school graduates. Thus, we would expect a greater percentage of those seeking admission to higher education institutions to be members of minority groups. In the absence of any policy change regarding admission, the *a priori* expectation should have been an increase in the number and proportion of minority students in selective public colleges. We have been unable to locate consistent annual data that would allow us to define an annual applicant pool by race/ethnicity. However, the changing student demographics will also be reflected in actual college attendance, so we use the number of Texas residents enrolled as first-time freshmen in any Texas' public two- and four- year colleges to calculate the rates by race/ethnicity, shown in Table 3 and the number of Texas public high school graduates in Figure 1 and Table 4. Since many Texas public universities and community colleges are, in effect, open admission institutions, the demographics of this group should closely reflect the applicant pool.

The statistics in Table 3 paint a much more pessimistic picture than the enrollment numbers in Tables 1 and 2. The fraction of black and Hispanic students attending Texas selective public universities fell sharply after the Hopwood decision. Comparing the second Hopwood year to the last pre-Hopwood year, the rates for blacks

fell from 2.7 per hundred students to 1.5 per hundred students and the rates for Hispanics fell from 3.6 per hundred to 2.7 per hundred students. Thus, the raw counts of the number of entering freshmen understate the deterioration of black and Hispanic enrollments during Hopwood and overstate the recovery during the four Top 10 percent years. Although the number of blacks and Hispanics enrolling as first time freshmen in Texas selective public universities increased after enactment of the Top 10 Percent Law, their enrollments as first-time freshmen in selective public universities as a percentage of their enrollments in all Texas public colleges and universities remained below Pre-Hopwood levels for all four Top 10 Percent years. Meanwhile, white first-time freshmen enrollments in Texas selective public universities, except for the first Hopwood year, grew steadily until the most recent year.

IV. SPECIAL RECRUITMENT EFFORTS

The Top 10 Percent Law was not the only response to the *Hopwood* decision. Large second-year increases in black enrollments following the enactment of the Top 10 Percent Law appear to be due to aggressive recruiting of Top 10 Percent students in predominately minority high schools. UT-Austin's efforts were particularly noteworthy. Bruce Walker, UT-Austin's Director of Admissions, credits the university's targeting of its newly designed Longhorn Opportunity Scholarship (LOS) program to top 10 percent students at a number of inner city and rural high schools (May 2001). According to the description of LOS,

70 high schools scattered throughout Texas have been chosen to participate in the LOS program. These schools were included based on criteria that takes into account their students' historical under-representation, measured in terms of a significantly lower than average percentage of college entrance exams sent to The University by students from this particular school... (Longhorn Opportunity Scholars 2004).

In all, 64 Top 10 Percent graduates of these high schools received Longhorn Opportunity Scholarships for fall 1999. These offers encouraged another 75 blacks from the same high schools to enroll; they received different, presumably somewhat less generous, types of scholarships.⁵ Irving (1999, p. 8) reported, "Over the past year, the campus (UT-Austin) organized 350 'college fair' programs and added more than 250 schools to its recruiting visits."

Figure 1 gives the proportion of African American and Hispanic Texas public high school graduates attending a selective public university who are from one of the LOS high schools or from all other Texas public high schools. Among graduates from all other high schools, 3.2 percent of African American and 3.6 percent of Hispanic students attended a selective university in 1994, dropping to 1.6 and 2.5 percent in 1999. These proportions remained fairly stable through 2001, with 1.8 percent of African American students and 2.4 percent of Hispanic students from other high schools attending a selective public university. The trend is very different for LOS high schools. In 1994 African American and Hispanic students were 1.2 and 2.0 percent less likely to attend UT Austin than students from other high schools. The proportion of graduates enrolled at selective universities declined through the 1998 or 1999 school years. However, by 2001

⁵ The statistics on the Longhorn Opportunity Scholars are from Leicht and Sullivan (2000), which also provide a more detailed discussion of both it and other recruiting efforts.

minority students from Longhorn schools had a higher probability of attending a selective public university than students from other schools. Of the total recovery in the number of minority students enrolled as freshman in selective universities, fully 53 percent of the African-Americans and 36 percent of the Hispanics were from LOS schools.

In addition to recruiting visits to high schools which formerly sent few students to UT-Austin and offers of Longhorn Opportunity Scholarships to Top 10 Percent students at these schools, Sullivan (2000) reports that UT-Austin, along with Texas A&M, opened Freshmen Admissions Centers in Dallas and Houston and sent mailings describing the Top 10 Percent law to every junior in the Top 10 Percent of his or her class. The letter, which was signed by the Governor, did not identify any university, although it was paid for and mailed by UT-Austin. In major cities these mailings were followed up with invitations to Top 10 Percenters and their parents to informational meetings. Sullivan (2000, p. 4) reports that, “At the first such meeting, held in inner-city Dallas, a long line of parents and students extended for nearly a block outside the meeting place for a full half-hour before the meeting was scheduled to begin.”

To get a broad brush picture of changes in selective public college attendance for different geographic areas of the state, Table 4 summarizes the average annual number and proportion of high school graduates by race/ethnicity for the three pre-Hopwood, two Hopwood, and three Top 10 percent years in the study for African American, Hispanic and Anglo students. We divide Texas public high schools into four groups based on 1990 census and our own definitions. Central Cities are seven large districts encompassing the central portions of the state’s major metropolitan areas, Houston, Dallas, Fort Worth, Austin, San Antonio, El Paso, and Corpus Christi. Suburbs are school districts in the

same county or counties adjacent to those containing central city districts. The remaining districts are classified using census categories; small cities or their suburbs and rural or non-metropolitan areas. We recognize two features of this classification that make it and many other schemes less than ideal. First, there is substantial heterogeneity within the central city districts with some campuses in areas that resemble affluent suburbs and others in low income, racially segregated city centers. Second, our definition of suburb encompasses some districts, such as Wilmer-Hutchins ISD in the Dallas area, that have higher ratios of minority and economically disadvantaged students than the central city districts.

The first panel of Table 4 confirms that the number of high school graduates in Texas was growing, increasing by more than 32 percent from 1994 to 2001 with both African American and Hispanic rates topping 36 percent. Suburbs grew most rapidly for each group. The share of these students attending the selective public universities was also largest for suburban districts for African American and Hispanic students in each period. Surprisingly, for Anglo students, the highest proportion of students attending selective colleges are from the central city districts. This confirms our prior comment about heterogeneity within these districts and may be due in part to the use of magnet schools that attract highly qualified student from outside the central city attendance areas. The change in selective attendance rates for African American and Hispanic students was not driven solely by decreases in the central cities. Each of the geographic areas experienced declining enrollment rates during the pre-Hopwood to Hopwood periods. Only Small Metropolitan areas for black students and central city areas for Hispanic students did not have continuing declining rates during the Hopwood to Top 10 percent

years. While the number of minority attendees at selective universities was increasing, the pool of high school graduates was more than keeping pace.

In an effort to blunt criticisms that the Top 10 Percent Law was making it impossible for many highly qualified students to attend UT-Austin, the university implemented two new programs, Summer Enrollment and Provisional Admissions. In the Summer Enrollment program UT-Austin offered 1,000 non-top ten percent students admission to UT-Austin on the condition that they enroll as full-time students in the summer after they graduated from high school. This helps explain the large proportion of freshman attending UT-Austin in the summer and the importance of including these students in the analysis (see the discussion of Table 2 above.) In the Provisional Admissions Program, UT-Austin offered all eligible non-10 percent applicants admission to UT-Austin as sophomores if they completed 30 hours and earned at least a 3.0 GPA at a partner UT System campus within the year following their high school graduation. In the program's first year, UT-Austin offered approximately 2,000 applicants places in its Provisional Admissions Program of which 600 indicated they planned to enroll.

UT-Austin has apparently had second thoughts about the several efforts outlined above because they increased freshmen enrollments. It has discontinued or scaled back a number of programs, while maintaining its recruiting efforts at high schools that formerly sent few graduates to UT-Austin. All of the declines in first-time freshmen enrollments at selective public universities between 2001 and 2002, shown in Table 1, were attributable to UT-Austin decisions to reduce freshmen enrollments. In contrast, first-time freshmen enrollments at both Texas A&M and UT-Dallas increased between 2001 and 2002.

V. CONDITIONAL COLLEGE ATTENDANCE PROBABILITIES

Even with the LOS program, the foregoing analysis indicates that the Top Ten Percent Plan did not restore African-American and Hispanic attendance to its former levels. The glowing early reviews of the program did not take into account summer admissions, increased recruiting efforts by selective universities, the growing share of minorities in the applicant pool, nor the growing size of the entering class.

Nevertheless, a critic of affirmative action could argue that minority students had an unfair advantage in admissions prior to the Hopwood decision. Since minorities as a group score lower on standardized tests, the argument proceeds, the lower probability of selective college attendance post-Hopwood may simply reflect the lower level of academic preparation in these groups. Moreover, many other factors may have contributed, positively or negatively, to the changes in enrollments during the 1990s (Kane 1998a, 1998b).

To assess these arguments, it is necessary to estimate probabilities of attending selective colleges (and other college options) conditional on student ability as measured by standardized tests, as well as other characteristics that may impact the application, admittance, or enrollment of students. The question is not whether whites or blacks in general have a higher probability of attending a particular type of college but whether whites or blacks with similar preparation and background characteristics do. Thus, in the analysis that follows, we control for such factors as ability and other demographic characteristics. In this way we can determine how Hopwood and the Top Ten Percent plan affected attendance by minorities relative to whites holding these factors constant.

Variables Used in the Analysis

Multinomial logit (MNL) models are used to analyze the college choices of Texas high school graduates who attend a Texas public higher education institution. The dependent variable in these models is a categorical variable indicating attendance at one of three categories of public universities and two types of community college programs. Specifically, the five categories are: (1) selective public universities, (2) other public universities, (3) historically black public universities, (4) community college academic curricula and (5) community college technical programs. Multinomial Logit (MNL) models have been widely used to study choices or other discrete outcomes when more than two values are possible for the dependent variable. The estimated model may be used to predict the probability of choosing each outcome as a nonlinear function of the explanatory variables (Long 1997).

A number of the explanatory variables are composites created by combining data from multiple sources of which those obtained from TEA and the Coordinating Board are the most important. The ACT and SAT data are especially valuable. Explanatory variables that are based on SAT and ACT data employ the most recent data for each test. When an individual took both tests in a particular year we normally give preference to the SAT value because in most cases it provides more detailed information. All of the independent variables included in the econometric models presented below are based on two or more sources. When, as is frequently the case, the values of a variable are missing for an individual, we go to great lengths to obtain unbiased estimates for the missing observations. Missing values may be due to the failure of an individual to answer a

particular question, for example household income, but more often they reflect the fact that an individual did not take a particular test or attend a particular type of school.

Table 5 provides some information on how we went about creating the composite family income variable. We gave priority to the Coordinating Board's financial aid data because we considered it more accurate than the self-reported income data from the ACT and SAT student information questionnaires. When both ACT and SAT data were available, we used SAT for the composite income variable because the SAT data provided more income categories. For students who took only the ACT and for which there were no financial aid data available, we used the ACT income data. Finally, we use SAT, ACT or individual student characteristics to impute family income. The procedures used in creating composite SAT scores, high school grade point averages, class rank, and the top ten percent dummy are similar to those described above for family income except that actual data were only available for those taking the ACT or SAT. The composite measure of total AP courses completed was created by combining counts obtained from the TEA course completion files and counts reported by private high school students who took the SAT or ACT. A caveat is in order in reference to the AP course variable; it measures course completions rather than obtaining a grade on the AP exam that qualifies them for college course credit.

Table 6 lists the mean values of the variables included in the three MNL equations by type of college attended (the dependent variable). The 11 variables in the top panel are the percent of students in each race/ethnic group attending each of the five types of public colleges or universities in each period. In all three periods, students enrolled in community college academic programs are the largest category. Many of these students

plan to transfer to a four-year institution and complete a bachelor's degree. It is also true than many are part-time and the fraction completing bachelors' degrees is small.

Students enrolled in selective public universities number between 11 and 12 percent of all students enrolled in Texas public colleges and universities. Fewer than two percent of all students enrolled as freshmen in one of the state's two historically black universities.

The second panel of Table 6 gives the means of the 12 explanatory variables included in the ML equations that represent individual characteristics. These include dummy variables for gender, Limited English Proficient (LEP) and for four types of high school diplomas, age, the number of AP courses taken, hours of dual enrollment (college hours), the student's high school GPA, SAT/ACT scores expressed in percentiles (converted score for those taking only the ACT), and family income.

Few of the seven continuous variables require much explanation. AP Total is the sum of AP courses completed by students attending Texas high schools. Completion of these courses does not guarantee that they will receive college credit. To receive college credit they must receive a sufficiently high grade on a standardized test given by the College Board. University policies on awarding credit for AP courses also differ. For public high schools, the number of AP courses were obtained from TEA course completion files, which list the courses taken and completed by all students attending Texas public high schools. Klopfenstein (2000, 2001) has used these data in her analyses of the rapid growth in AP offerings and differences in availability among high schools and in a second paper that focuses on participation rates and the impacts minority AP course teachers have on minority enrollments in AP courses.

The number of high school students taking college level courses at local community colleges and Texas public universities has grown rapidly in the 12-year period covered by TSMP (O'Brien and Nelson, 2003). While not shown in Table 6, the number of Texas high school students taking college-level courses for credit increased from 8,962 in 1996 to 17,612 in 2000. The mean number of such courses taken by students included in the regression analyses grew from 1.1 college courses per student in the pre-Hopwood period to 1.7 in the Top 10 Percent period. Enrolling in college courses while in high school is in many respects a substitute for AP courses and an increasingly popular one.

The seven campus variables, shown in the third panel, are included to assess the extent to which the college choices of individual students are influenced by characteristics of the high schools they graduate from, in this case the average class size, percent of students taking the ACT/SAT, racial/ethnic composition, and the academic skill level of the student's peers, represented by the mean ACT/SAT percentile. The final eight variables are dummies for each academic year and show the percent of student records from each year.

Because our emphasis is on minority access to higher education, we present sample means by race/ethnicity in Table 7. The percentages in the top panel demonstrate there are large differences by race/ethnic group in the types of colleges they attend. Starting with Texas' selective public universities, 28 percent of Asian students enrolling as freshmen in a Texas public college or university during the period studied attended one of the three selective public universities. At the other extreme, only 4.4 percent of blacks and 5.3 percent of Hispanics were enrolled in one of these three schools. While the rate

at which white high school graduates enrolled in selective schools was much higher than the black and Hispanic rates, it was only slightly more than half the Asian rate.

In contrast to the large racial/ethnic differences in the enrollment rates at selective universities, the differences for most of the other types of Texas public universities are small. Not surprisingly, this is not true of Texas' two historically black public universities, Prairie View and Texas Southern. More than 15 percent of Texas black residents that graduated from a Texas high school enrolled as a first year freshmen in one of the state's two historically black public universities. These institutions are more than 90 percent black.

As Kain and O'Brien (2000c) demonstrate, clustering by race/ethnic group is not limited to blacks. Even larger fractions of Texas' Hispanics attend six Texas public universities, which Kain and O'Brien refer to as Very High Percent Hispanic (VHPH) institutions. They found that 15.9 percent of Hispanic eighth graders who attended a Texas public school in 1994 and who enrolled in a Texas public college or university in 1999, were attending one of the six VHPH campuses (a school more than two-thirds Hispanic in 1990). Cultural affinity no doubt accounts for part of the high Hispanic attendance rates at VHPH institutions, but geography may be as, if not more, important. The largest of the six VHPH schools (UT Pan American and UT El Paso) are located in southwest Texas, a region that is overwhelmingly Hispanic.

The rest of Table 7 provides mean values of the 19 independent variables included in the MNL models. It is hardly surprising that more than 30 percent of Asians and nearly 24 percent of Hispanics enrolling as freshmen in Texas public colleges and universities were classified as Limited English Proficient (LEP) at some time during their

school careers. The rates for whites and blacks are one percent or less. Asian students were more likely to receive advanced diplomas (60.5 percent). Whites (55.4 percent) are second and blacks (42.2 percent) have the lowest rate. Asian students on average also took the most AP courses and the highest number of college credit hours while in high school. The mean Asian student attended a high school with a graduating class that was 12 percent Asian, 17 percent black, 20 percent Hispanic and 57 percent white.

Pooled MNL Model Estimates

Table 8 shows the multinomial logit estimates for the college choices of all students attending Texas public higher education institutions. The key independent variables are the interactions of four dummy variables for race/ethnic group and three dummy variables for the policy regime: pre-Hopwood, Hopwood, and the Top Ten Percent periods. Anglo/pre-Hopwood is the omitted category, and the remaining coefficients are interpreted relative to the enrollment probabilities for this group.

The coefficients in multinomial regressions are not easy to interpret. First, the estimated effects are relative to whatever choice is specified as the base case; here we use community college technical programs as the base case.⁶ For example, the Asian/Hopwood coefficient is not statistically significant; therefore there was no significant difference between the probabilities that an Asian student in the Hopwood period and a white student in the pre-Hopwood period with same characteristics would attend a Texas selective public university, relative to a community college technical

⁶ The coefficients for other comparisons, for example comparing the choice of selective universities to other public 4-year institutions, can be obtained by subtracting the coefficients in the respective columns (Long 1997).

program. Second, the coefficients, multiplied by the corresponding values of the variables, produce a score for each student. The scores for all choices enter in a non-linear fashion into the calculation of the probability that each student will attend each type of college. Third, because of the interaction of the different choices, the signs of the coefficients are not always consistent with the change in the probability of selecting a given choice. Nevertheless, a number of conclusions can be drawn from the results presented in Table 8:

- In the pre-Hopwood period, a black student had a 0.52 higher score on the selective college choice than an otherwise similar white student, i.e. the students have the same values for test scores and all other variables included in the regression.
- In the Hopwood period, this advantage virtually disappears, as a black student's score for the community college choice is 0.39 *lower* than for an otherwise-equal white student in the pre-Hopwood period. However, the score for white students in the Hopwood period declined by 0.45 relative to pre-Hopwood, resulting in a much smaller 0.06 advantage for blacks in this period.
- In the Top Ten Percent period, blacks were at a slight disadvantage compared to whites, with selective college scores 0.77 and 0.70 lower than whites pre-Hopwood, respectively. Unlike blacks, Hispanics did not have an advantage in the pre-Hopwood period after controlling for the other variables. Like blacks, their scores declined relative to whites in the Hopwood and Top Ten Percent periods. Indeed, Hispanic in the Top Ten Percent period had the greatest relative disadvantage.
- The selective college coefficients decline over time for all race/ethnic groups, reflecting the growing popularity of community college technical programs.

The magnitude of the effects indicated by the MNL coefficients is difficult if not impossible to appreciate from the coefficients alone. For this reason, we present the same regression results in a different form in Table 9, which shows the predicted marginal changes in the probability of attending each college type. For each variable, the marginal change is the change in the probability for the given choice corresponding to a one unit

change in the variable, calculated with the other variables held at their mean values. For dummy variables, the marginal change is difference in the probability when the dummy variable is equal to 1 compared to the probability when the dummy variable is zero, again with the other variables set to their means. The predicted marginal changes in Table 9 are much more informative for several reasons. First, the marginal changes are in probability units and thus are not dependent on the measurement scale of the dependent variable. Second, comparable estimates are provided for all five college attendance outcomes. Third, the changes for each variable add to zero, since the sum of all five probabilities is one both before and after the one unit change in the independent variable.

The most important results in Table 9 are the estimates in the change in the probability of attending a selective public university during the pre-Hopwood, Hopwood and Top 10 Percent periods for high school graduates of the four different race/ethnic groups, holding measures of ability, performance, family background, and campus characteristics constant.

Impact on Black Students.

During the pre-Hopwood period a black high school graduate had a 2.5 percentage point higher probability of attending one of Texas' three public selective universities than an otherwise comparable white student. Hopwood more than eliminated this advantage; during the Hopwood period blacks were 2.7 percentage points *less* likely to enroll in selective public university than a comparable white in the pre-Hopwood period. Thus the total change for blacks was 5.2 percentage points. Whites were also less likely to enroll in a selective university in the Hopwood period, but the decline was only 1.7 percentage points. Whites, who presumably were not effected in a significant

way by Hopwood, were less likely to enroll in selective colleges and other 4-year institutions because they were more likely to enroll in community colleges, particularly technical programs. If we take the white selective college decline as proxy for a general trend towards enrollment in community college, then the excess decrease for blacks is 5.2 less 1.7, or 3.5 percentage points. This net decline is probably the single best estimate of the impact of the Hopwood decision on blacks, because it removes the general trend toward community college attendance, as well as controlling for such things as test scores, family income, and the other control variables which affect enrollment. Given that the probability of attending a selective college is small to begin with, this is a rather large and troubling decline.⁷

Contrary to the conventional wisdom, the Top Ten Percent policy did not undo the damage of the Hopwood decision. Blacks were 3.9 percentage points less likely to attend selective universities during the Top Ten Percent era relative to comparable whites in the pre-Hopwood era, for a total decline of 6.4 from the advantage they enjoyed before Hopwood. Netting out the white decline of 2.8 percentage points as above, the decline for blacks was 3.6 percentage points, about the same as the net decline in the Hopwood era.

It should be kept in mind in assessing these results that the choice set represented in these models includes only Texas public colleges and universities. In the immediate aftermath of Hopwood there were numerous reports that out-of-state institutions, who

⁷ Since the marginal effects are calculated at the overall means of the data, the correct base for comparison is the overall probability of attending a selective public university, which is 11.5 percent.

were unaffected by Hopwood, had stepped up their recruiting efforts in Texas and were luring Texas' best minority studies away from the state with offers of admission and generous financial aid. This view was expressed in a November 19, 1999 story in *The Chronicle of Higher Education*, which claimed that "In the wake of the 1996 Hopwood v. Texas decision... dozens of mostly Midwestern colleges have stepped up their efforts to recruit black and Hispanic students here (Austin) and elsewhere in the state" (Selingo, 1999). Tulane's Dean of Admissions and Enrollment was quoted as saying "Texas has been picked clean by other states." We will be unable to adequately assess these and similar claims until we obtain additional data on private and out-of-state enrollments of Texas residents.

Impact on Hispanic Students

The results for Hispanics in Table 9 are a muted version of the results for blacks. The pre-Hopwood advantage for Hispanics, relative to comparable pre-Hopwood whites, was only 0.8 percentage points. After Hopwood, Hispanic students were 2.5 percentage points less likely to attend selective institutions than pre-Hopwood whites, for a total difference of 3.3 percentage point for Hispanics pre- vs. post Hopwood. The net change, after removing the white decline in selective college attendance, is 1.6 percentage points. Again, this change must be related to the already small probability of selective college attendance.

The Top Ten Percent policy did not close this gap. Relative to comparable pre-Hopwood whites, Hispanics had 3.9 percentage point lower probability of attending selective universities, for a total decline of 4.7 points from the pre-Hopwood probability. Netting out the white selective college decline, the net change is a decline of 1.9

percentage points; if anything, the gap for Hispanics continued to grow during the Top Ten Percent period.

Impact on Asian Students

Asians are more likely than comparable whites to attend selective public universities, though relative to pre-Hopwood whites, their advantage declined: 3.0 percentage points (pre-Hopwood), 1.0 percentage point (Hopwood) and 0.1 percentage points (Top 10 Percent). The decreases in probability relative to Asian pre-Hopwood, are -2.0 and -2.9 percentage points for the Hopwood and Top Ten Percent eras, respectively. These declines very closely mirror the white declines in selective college attendance, suggesting that Hopwood and the Top Ten Percent plan had little impact on Asians.

These results are consistent with results obtained by Kain and O'Brien (2000c), who suggest that the higher than expected rates at which Asians enrolled in selective Texas public universities might be due in part to the fact that the parents of Asian children are less likely to have attended selective *private* colleges and universities than the parents of white high school graduates. As a result high performing Asians are less likely to be influenced by their parents' loyalty to selective private colleges and are less likely to have benefited from being a legacy.

Other Control Variables

The second panel of Table 9 gives the predicted percentage point changes in the probability of enrolling in a particular type of school/program for five dummy variables as well as for a one standard deviation increase in each of the six continuous variables. The estimates of the effects of higher GPAs and SAT/ACT scores indicate, not surprisingly, that these measures of high school performance have a large impact on the

change in probability of attending a selective public university in all three years. Higher family income, net of its possible effects on high school performance, does not have as much impact on which type of college or university these students attend. Receiving an advanced diploma in high school, a measure of the intensity of secondary instruction, increases the probability of attending a selective university by 3 percentage points.

The panel labeled Campus Variables gives the change in predicted probabilities associated with a one-standard deviation change in variables that describe a student's campus, or more precisely, its graduating class. While all these variables are significant, owing to the large sample size, the actual marginal effect of these variables is quite small, with one exception. The average SAT of a student's classmates has an 3.1 percentage point impact; that is a smaller effect than the student's own score, but a larger impact than the student's family income. Whether this represents a direct benefit of interacting with smarter classmates or is a proxy for the quality of instruction is not clear. Another possibility has to do with a greater cultural awareness of the benefits of attending a selective university in communities with better schools and higher standards.

The last panel gives the predicted change in the probability of attendance for five year dummies; one dummy is omitted for each period. These variables are included to remove generic time trends within each of the three policy regime periods. The coefficients of the five year dummies are all negative for selective public universities. Note that one year in each of the three periods is omitted to avoid multicollinearity between the year dummy variables and the period/race interaction variables. In general, the marginal effects point to a decrease in the attendance at four-year institutions and an

increase in the attendance at community colleges, even when controlling for student ability, family income, and the other variables in the regression.

VI. SUMMARY AND CONCLUSIONS

Estimates of the numbers of first-time freshmen enrolled in Texas' selective public universities by race/ethnicity between 1991 and 2002 demonstrate that Hopwood had a devastating impact on the number of African American and Hispanic students attending these institutions. Black first-time freshmen enrollments at the three most selective Texas public universities in the second Hopwood year were only 64 percent of the number in the last pre-Hopwood year. The drop for Hispanics was somewhat smaller, but still a source of concern.

After enactment of the Top 10 Percent Law and aggressive recruiting of students at predominately black and Hispanic high schools that historically had sent few students to these universities, the *number* of black and Hispanic first-year freshmen enrolling in the state's selective, public universities rebounded. For blacks, despite early reports to the contrary, the number of blacks did not fully recover to pre-Hopwood levels if a full accounting is made of the entering students across the entire academic year. Moreover, the evidence suggests that of this recovery was due to targeted recruiting rather than the Top Ten Percent program *per se*. For Hispanics, the number of enrolled students did in fact recover, and by 2002 the number of Hispanics attending selective universities exceeded pre-Hopwood levels.

The substantial progress in the minority enrollment figures, however, is misleading in three respects:

- To achieve the increases in minority enrollment in the Top Ten Percent period, UT-Austin and Texas A&M abandoned their earlier efforts to limit total undergraduate enrollment. Data from the most recent year indicates a reconsideration of that policy, as total enrollments declined substantially.
- A focus on the number of enrolled students ignores a number of important demographic trends in the state. Any meaningful assessment of Hopwood and the Top 10 Percent Law must take into account the rapid growth in the numbers of black and Hispanic high school graduates seeking admission to the states' colleges and universities. As a fraction of all Texas residents enrolling as first-time freshmen in Texas public colleges and universities (including community colleges) or the number of Texas public high school graduates, the rates at which both blacks and Hispanics attended the three selective public universities four years after the Top 10 Percent Law was passed were lower than any Pre-Hopwood year.
- Changes in the relative achievement and family income levels of white and minority students during the 1990s may also have contributed to different patterns of attendance, the net effect of which is hard to predict without multivariate analysis.

Our regression models control for many of these social and demographic factors and estimate probabilities for attendance at selective institutions that are comparable over time and across racial and ethnic groups. These models indicate that the Hopwood decision led to substantial declines in the probability of minority students attending selective Texas public universities. Further, there was no recovery in those probabilities during the Top Ten Percent period. Although the probability of white attendance at selective public universities also declined, due to increases in the proportion attending community colleges, the decreases for minorities were even larger.

Specifically, holding the effects of all other explanatory variables constant, blacks in the pre-Hopwood year were 2.5 percentage points more likely to enroll as a first-year student in a selective, Texas public university than comparable whites. The pre-Hopwood premium for Hispanics was less, 0.8 percentage points. The continuing effect of Hopwood and the failure of the Top 10 Percent Law to maintain relative black and

Hispanic probability of enrollment in selective universities is evident from the negative estimated marginal probabilities during the Hopwood period, -2.7 percentage points for blacks and -2.5 percentage points for Hispanics, and the post-Hopwood period, -3.9 percentage points for both black and Hispanic students. Even after adjusting these figures for the decline in the white probability of attending selective public university, the probability of attending a selective university was still 3.6 percentage points lower for African-Americans and 1.9 percentage points lower for Hispanics, other things equal, in the Top Ten Percent years compared to the pre-Hopwood years.

In summary, we conclude that the Top Ten Percent plan did not undo the effects of the elimination of affirmative action in admissions. The recovery in the number of students enrolled seems to stem from enhanced recruiting at selected inner-city schools and demographic changes in the State's population. The Top Ten Percent plan and variants of it being implemented in other states may or may not be a bad thing, but they are unlikely to serve the same purposes as more traditional methods of enhancing minority representation in higher education institutions.

A disturbing feature of the Top 10 Percent Law is its dependence on school and residential segregation to achieve the goal of increasing the representation of disadvantaged minorities at the state's selective public universities. The Top 10 Percent gains came entirely from the state's selective universities targeting its recruitment efforts and financial aid to predominately black and Hispanic inner-city schools and in the Rio Grande valley. A system that discourages black and Hispanic parents from moving to opportunity in an effort to enroll their children in better schools is disturbing to say the least.

Finally, it is crucial to recognize that our analysis in this paper suffers from a number of limitations. Most importantly, our data do not include information on either private college attendance or public college attendance outside the state of Texas. We are in the process of obtaining this data, which will allow us to fully articulate the choice set of graduating high school seniors. This analysis, along with an analysis of the labor market impacts of selective college attendance pre- and post-Hopwood, are currently being pursued in our ongoing research.

REFERENCES

- Blair, Julie. 2000. "Minorities' College Enrollment Improves Under Texas Program." *Education Week*, Vol. XIX, No. 22 (February 9).
- Bowen, William G. and Derek Bok. 1998. *The Shape of the River*. Princeton, N.J.: Princeton University Press.
- Brief a. Brief for the United States as Amicus Curiae Supporting Petitioner in Grutter v. Bollinger.
- Brief b. Brief of Social Scientists Glenn C. Loury, Nathan Glazer, John F. Kain, Thomas Kane, Douglas Massey, Marta Tienda and Brian Bucks as Amici Curiae in Support of Respondents in Grutter v. Bollinger.
- Brief c. Brief of the Author of the Texas Ten Percent Plan as Amicus Curiae in Support of Respondents in Grutter v. Bollinger.
- Chapa, Jorge and Vincent A. Lazaro. 1998. "Hopwood in Texas: The Untimely End of Affirmative Action." Pp. 51-70 in Gary Orfield and Edward Miller, *Chilling Admissions: The Affirmative Action Crisis and the Search for Alternatives*. Cambridge: Harvard Education Publishing Group.
- Faulkner, Larry. 2000. "The 'Top 10 Percent Law' Is Working for Texas," Oct. 1. Op Ed piece appearing in many Texas newspapers. Obtained from the UT-Austin website.
- Finnell, Susanna. 1998. "The Hopwood Chill: How the Court Derailed Diversity Efforts at Texas A&M." Pp. 71-82 in Gary Orfield and Edward Miller (eds.), *Chilling Admissions: The Affirmative Action Crisis and the Search for Alternatives*. Cambridge: Harvard Education Publishing Group.
- Hanushek, Eric A., John F. Kain, and Steven G. Rivkin. 2002. "New Evidence about Brown v. Board of Education: The complex Effects of School Racial Composition and Achievement." UTD Texas Schools Project Working Paper, University of Texas at Dallas.
- Hart, Patricia Kilday. 2001. "Imperfect 10: Imperfect 10: Your Kid May be Smart, But If She Isn't In The Top Tenth of Her Class, She May Not Get Into UT or A&M. Don't Despair. Try Harvard." *Texas Monthly*. April 1, 2001.
- Holley, D. and D. Spencer. 1999. "The Top 10 Percent Plan," *Harvard Civil Rights-Civil Liberties Law Review*, 34.

- Irving, Carl. 1999. "Texas' Demographic Challenge: New Programs Attempt to Substitute for Race-Based Admissions Policies." *National Crosstalk*, Vol. 7/No. 2 (Spring). San Jose, California: The National Center for Public Policy and Higher Education.
- Kain, John F. and Daniel M. O'Brien, "Black Suburbanization in Texas Metropolitan Areas and Its Impact on Student Achievement." 2000a. UTD Texas School Project Working Paper, University of Texas at Dallas
- Kain, John F. and Daniel M. O'Brien. 2000b. "Differences in School Quality and Black-White Achievement Differences." UTD Texas School Project Working Paper, University of Texas at Dallas.
- Kain, John F. and Daniel M. O'Brien. 2000c. "High School Outcomes and college Decisions of Texas Public School Students." UTD Texas School Project Working Paper, University of Texas at Dallas.
- Kane, Thomas J. 1998a. "Racial and Ethnic Preferences in College Admissions." Pp. 431-456 in Christopher Jencks and Meredith Phillips (eds). *The Black-White Test Score Gap*. Washington, D.C.: Brookings Institution Press.
- Kane, Thomas J. 1998b. "Misconceptions in the Debate Over Affirmative Action in College Admissions." Pp. 17-33 in Gary Orfield and Edward Miller, *Chilling Admissions: The Affirmative Action Crisis and the Search for Alternatives*. Cambridge: Harvard Education Publishing Group.
- Klopfenstein, Kristin. 2000. "Advanced Placement: Do Minorities Have Equal Opportunity?" UTD Texas Schools Project Working Paper, University of Texas at Dallas.
- Klopfenstein, Kristin. 2001. "Minority Advanced Placement Participation: Is Equal Opportunity Enough?" UTD Texas Schools Project Working Paper, University of Texas at Dallas.
- Leicht, Kevin and Teresa A. Sullivan. 2000. "Minority Student Pipelines Before and After the Challenges to Affirmative Action." The University of Texas at Austin, unpublished paper.
- Long, J. Scott. 1997. *Regression Models for Categorical and Limited Dependent Variables*. California: Sage Publications, Inc.
- Longhorn Opportunity Scholars. 2004. Downloaded March 4 from web site <http://www.utexas.edu/student/connexus/scholars/>
- May, Michael. 2001. "The Cream of Every Crop." *The Texas Observer*, May 26.

- Montejano, David. 2001. "Access to the University of Texas and the Ten Percent Plan: A Three-Year Assessment." UT-Austin, Office of Admissions.
- O'Brien, Daniel and Terri Nelson. 2003. "A Head Start to College: Dual Enrollment in High School and Community College." UTD Texas Schools Project Working Paper, University of Texas at Dallas.
- Selingo, Jeffrey. 1999. "Why Minority Recruiting is Alive and Well in Texas." *The Chronicle of Higher Education*, November 19.
- Sullivan, Teresa A. 2000. "Beyond Affirmative Action: Algorithmic Versus Holistic Approaches to College Admissions." *Research in Social Stratification and Mobility*, 17: 319-334.
- Texas Commission on a Representative Student Body. 1998. "Report of the Texas Commission on a Representative Student Body," October.
- Tienda, Marta, Kevin T. Leicht, Teresa Sullivan, Michael Maltese, and Kim Lloyd. 2003. "Closing the Gap? Admissions & Enrollments at the Texas Public Flagships Before and After Affirmative Action." Unpublished manuscript, Princeton University.
- Thompson, J. Philip and Sarah Tobias. Circa 1999. "The Texas Ten Percent Plan." Columbia University. Unpublished manuscript.
- Wilgoren, Jodi. 1999. "Texas' Top 10% Law Appears to Preserve College Racial Mix," *The New York Times*, November 24, page 1.

Table 1. First-Time Texas Resident Freshman Attending Selective Texas Public Universities

School and Year	Race and Ethnicity					Total	
	Native American	Asian	African American	Hispanic	Anglo		
UT Austin							
<i>Pre-Hopwood</i>	1991	22	559	294	962	3,629	5,466
	1992	19	598	253	876	3,513	5,259
	1993	11	597	252	804	3,254	4,918
	1994	20	658	307	900	3,237	5,122
	1995	18	760	293	808	3,347	5,226
1996	21	768	265	873	3,481	5,408	
<i>Hopwood</i>	1997	26	734	234	823	3,266	5,083
	1998	31	962	161	794	3,938	5,886
<i>Top Ten Percent</i>	1999	33	1,040	197	878	4,073	6,221
	2000	23	1,125	286	987	4,190	6,611
	2001	29	1,174	291	988	4,400	6,882
	2002	28	1,177	237	967	3,882	6,291
UT Dallas							
<i>Pre-Hopwood</i>	1991	1	11	4	4	72	92
	1992	3	22	5	14	58	102
	1993	0	19	5	9	66	99
	1994	3	51	12	30	282	378
	1995	1	59	31	31	257	379
	1996	3	58	23	30	223	337
<i>Hopwood</i>	1997	1	64	22	33	298	418
	1998	1	62	23	30	265	381
<i>Top Ten Percent</i>	1999	4	74	17	52	314	461
	2000	1	97	34	35	371	538
	2001	2	130	53	67	450	702
	2002	3	168	53	96	552	872
Texas A&M							
<i>Pre-Hopwood</i>	1991	22	227	228	545	4,372	5,394
	1992	20	236	151	541	4,401	5,349
	1993	23	220	230	587	4,214	5,274
	1994	18	207	209	737	4,341	5,512
	1995	13	179	241	731	3,931	5,095
	1996	18	140	240	778	3,850	5,026
<i>Hopwood</i>	1997	20	141	183	618	4,292	5,254
	1998	26	173	150	509	4,307	5,165
<i>Top Ten Percent</i>	1999	30	214	169	579	5,193	6,185
	2000	31	185	166	554	5,323	6,259
	2001	34	225	161	643	5,044	6,107
	2002	34	199	196	646	5,163	6,238
All Selective							
<i>Pre-Hopwood</i>	1991	45	797	526	1,511	8,073	10,952
	1992	42	856	409	1,431	7,972	10,710
	1993	34	836	487	1,400	7,534	10,291
	1994	41	916	528	1,667	7,860	11,012
	1995	32	998	565	1,570	7,535	10,700
	1996	42	966	528	1,681	7,554	10,771
<i>Hopwood</i>	1997	47	939	439	1,474	7,856	10,755
	1998	58	1,197	334	1,333	8,510	11,432
<i>Top Ten Percent</i>	1999	67	1,328	383	1,509	9,580	12,867
	2000	55	1,407	486	1,576	9,884	13,408
	2001	65	1,529	505	1,698	9,894	13,691
	2002	65	1,544	486	1,709	9,597	13,401

Table 2. First-Time Students at Texas Selective Public Universities, Fall Semester Only vs. Summer, Fall, and Spring Semesters Combined, by Race and Time Period

		Average annual first-year students			
Time Period		Asian	African American	Hispanic	Anglo
<u>All Semesters</u>	<i>Pre-Hopwood</i>	895	507	1,543	7,755
	<i>Hopwood</i>	1,068	387	1,404	8,183
	<i>Top 10 Percent</i>	1,452	465	1,623	9,739
<u>Fall Only</u>	<i>Pre-Hopwood</i>	866	413	1,407	7,417
	<i>Hopwood</i>	1,040	321	1,269	7,838
	<i>Top 10 Percent</i>	1,294	410	1,435	9,019
<u>Difference</u>	<i>Pre-Hopwood</i>	29	94	137	338
	<i>Hopwood</i>	28	66	135	346
	<i>Top 10 Percent</i>	158	55	188	720
		Percent Change			
		Asian	African American	Hispanic	Anglo
<u>All Semesters</u>	<i>Before/After Hopwood</i>	19.4	-23.8	-9.1	5.5
	<i>Hopwood/Top 10 Pct.</i>	36.0	20.3	15.6	19.0
<u>Fall Only</u>	<i>Before/After Hopwood</i>	20.1	-22.3	-9.8	5.7
	<i>Hopwood/Top 10 Pct.</i>	24.4	27.8	13.1	15.1

**Table 3. Percent of First-Time Freshmen at All Texas Public
Community Colleges and Universities Attending Selective Texas
Public Universities**

Year	Race\Ethnicity					Total
	Native American	Asian	Black	Hispanic	Anglo	
<i>Pre-Hopwood</i>						
1991	7.2	18.2	2.7	3.7	7.0	6.0
1992	5.5	18.2	2.0	3.3	7.1	5.9
1993	4.5	17.2	2.4	3.1	6.9	5.7
1994	5.3	17.6	2.7	3.8	7.5	6.3
1995	3.3	16.7	2.8	3.4	7.3	6.1
1996	4.4	15.5	2.7	3.6	7.3	6.1
<i>Hopwood</i>						
1997	4.8	14.7	2.1	2.9	7.5	5.8
1998	6.1	17.0	1.5	2.7	7.9	6.1
<i>Top 10 Percent</i>						
1999	7.1	17.3	1.8	3.0	8.7	6.7
2000	5.7	16.9	2.0	3.0	8.3	6.5
2001	6.9	18.4	2.0	3.2	8.4	6.7
2002	5.9	16.5	1.7	2.8	7.8	6.0
All Years	5.6	17.0	2.2	3.2	7.7	6.2

Table 4. Geographic Distribution of High School Graduates and Selective University Attendees

	<u>African American</u>			<u>Hispanic</u>			<u>Anglo</u>		
	<u>Pre-Hopwood</u>	<u>Hopwood</u>	<u>Top 10%</u>	<u>Pre-Hopwood</u>	<u>Hopwood</u>	<u>Top 10%</u>	<u>Pre-Hopwood</u>	<u>Hopwood</u>	<u>Top 10%</u>
<i>Average Annual Number of Students</i>									
Central City	6,087	6,467	7,315	9,355	9,734	12,133	5,825	5,615	5,761
Suburb	6,615	8,144	10,408	15,126	17,417	21,880	47,911	51,179	57,387
Small Metro.	2,378	2,590	3,092	11,493	12,729	14,586	9,927	10,450	11,299
Rural/Non-Metr	3,543	3,902	4,208	9,180	10,085	11,891	26,238	28,233	30,730
Total	18,623	21,103	25,022	45,154	49,964	60,490	89,901	95,476	105,177
<i>Proportion by Geographic Area</i>									
Central City	32.7	30.6	29.2	20.7	19.5	20.1	6.5	5.9	5.5
Suburb	35.5	38.6	41.6	33.5	34.9	36.2	53.3	53.6	54.6
Small Metro.	12.8	12.3	12.4	25.5	25.5	24.1	11.0	10.9	10.7
Rural/Non-Metr	19.0	18.5	16.8	20.3	20.2	19.7	29.2	29.6	29.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<i>Percent Attending a Selective University</i>									
Central City	2.8	2.0	1.9	3.0	2.6	2.6	13.4	14.5	14.7
Suburb	3.7	2.4	2.1	3.5	2.7	2.6	10.0	10.3	10.5
Small Metro.	2.5	1.0	1.3	2.8	2.4	2.2	7.2	7.6	7.7
Rural/Non-Metr	1.6	0.9	0.9	2.1	1.6	1.5	4.8	4.9	5.2
Total	2.8	1.8	1.8	3.0	2.4	2.3	8.4	8.7	8.9

Note: For definition of periods, see Table 1.

Table 5. Derivation of Income Variable, by Time Period

Method and Source	Time Period			Total
	Pre-Hopwood	Hopwood	Top 10 Percent	
<i>Reported Income, from source:</i>				
Financial aid file	57,660	61,690	44,111	163,461
SAT file	0	0	141,606	141,606
ACT file	59,411	41,041	39,456	139,908
<i>Estimated, based on:</i>				
SAT data file	166,434	100,653	11,941	279,028
ACT data file	0	0	2,821	2,821
TEA data file	8,468	5,329	113,503	127,300
Total	291,973	208,713	353,438	854,124

Table 6. Race and Period (%) and Means of Control Variables, by College Type of Public College Attended

Explanatory Variable	Entire Sample	College Choice				
		Selective University	Other University	Historically Black	Community College Academic	Community College Technical
<i>Race/Ethnicity</i>						
Asian	4.3%	10.4%	4.6%	0.4%	2.9%	3.2%
Black	10.6%	4.0%	9.3%	96.2%	8.7%	12.5%
Hispanic	25.7%	11.7%	26.5%	1.7%	25.9%	34.0%
Anglo	59.4%	73.8%	59.6%	1.6%	62.5%	50.3%
<i>Period</i>						
Pre-Hopwood	34.2%	33.5%	35.1%	38.0%	33.9%	33.5%
Hopwood	24.4%	24.0%	24.2%	23.1%	25.0%	24.3%
Top Ten Percent	41.4%	42.5%	40.8%	38.9%	41.1%	42.3%
<i>Individual Characteristics</i>						
Male	0.46	0.49	0.44	0.46	0.45	0.47
Ever LEP	0.08	0.04	0.08	0.01	0.07	0.12
Advanced Diploma	0.53	0.74	0.64	0.39	0.47	0.38
Regular Diploma	0.44	0.22	0.34	0.59	0.50	0.58
IEP Diploma	0.01	0.00	0.00	0.01	0.01	0.02
Private Diploma	0.02	0.03	0.02	0.01	0.02	0.01
Age	18.6	18.5	18.6	18.6	18.6	18.7
AP Courses	1.43	3.55	1.71	0.89	0.98	0.69
College Hours	1.40	2.71	1.73	1.09	1.04	0.85
H.S. GPA	3.25	3.71	3.34	2.93	3.15	3.04
SAT/ACT score	0.49	0.70	0.50	0.41	0.46	0.43
Income	\$43,007	\$51,768	\$43,538	\$30,990	\$42,936	\$38,502
<i>Campus Variables</i>						
Class Size	3.29	3.95	3.30	2.99	3.26	2.97
Pct. Test Takers	0.62	0.66	0.62	0.59	0.61	0.60
Pct. Asian	0.04	0.05	0.04	0.05	0.03	0.03
Pct. Black	0.13	0.12	0.11	0.52	0.12	0.13
Pct. Hispanic	0.29	0.21	0.32	0.17	0.27	0.33
Pct. Anglo	0.57	0.65	0.56	0.31	0.60	0.53
Average SAT Score	0.48	0.52	0.48	0.45	0.48	0.47
Observations	854,124	98,446	251,339	14,594	312,645	177,100
Percent	100.0%	11.5%	29.4%	1.7%	36.6%	20.7%

Table 7. College Attended (%) and Means of Control Variables by Race/Ethnicity

Explanatory Variable	Entire Sample	Race/Ethnicity			
		Asian	African American	Hispanic	Anglo
<i>College Attended</i>					
Selective University	11.5%	28.0%	4.4%	5.3%	14.3%
Other University	29.4%	31.5%	25.8%	30.4%	29.5%
Historically Black	1.7%	0.2%	15.5%	0.1%	0.0%
Community College Academic	36.6%	24.8%	29.9%	36.8%	38.5%
Community College Technical	20.7%	15.5%	24.4%	27.4%	17.6%
<i>Individual Characteristics</i>					
Male	0.46	0.49	0.41	0.45	0.47
Ever LEP	0.08	0.30	0.01	0.24	0.00
Advanced Diploma	0.53	0.61	0.42	0.51	0.55
Regular Diploma	0.44	0.37	0.55	0.46	0.41
IEP Diploma	0.01	0.00	0.02	0.01	0.01
Private Diploma	0.02	0.02	0.01	0.02	0.02
Age	18.6	18.7	18.6	18.7	18.6
AP Courses	1.43	2.88	1.01	1.16	1.52
College Hours	1.40	2.29	0.94	1.29	1.46
H.S. GPA	3.25	3.46	2.99	3.11	3.33
SAT/ACT Score	0.49	0.57	0.42	0.43	0.52
Income	\$43,007	\$37,912	\$32,116	\$30,255	\$50,847
<i>Campus Variables</i>					
Class Size	329	461	308	327	324
Pct. Test Takers	0.62	0.66	0.59	0.59	0.63
Pct. Asian	0.04	0.12	0.04	0.02	0.04
Pct. Black	0.13	0.17	0.39	0.08	0.10
Pct. Hispanic	0.29	0.20	0.19	0.63	0.17
Pct. Anglo	0.57	0.57	0.42	0.30	0.72
Average SAT Score	0.48	0.52	0.46	0.45	0.49
Observations	854,124	36,581	90,886	219,531	507,126
Percent	100.0%	4.3%	10.6%	25.7%	59.4%

Table 8. Multinomial Logit Regression of College Choice for All First-Year Students in Texas Public Higher Education (Base case = Community College - Technical)

Explanatory Variable		Type of College (CC-Technical is the Omitted Category)							
		<u>Selective University</u>		<u>Public Other Four Year</u>		<u>Historically Black</u>		<u>Com. Col - Academic</u>	
		Coef.	(z)	Coef.	(z)	Coef.	(z)	Coef.	(z)
<i>Race/Ethnicity x Period</i>									
Asian	Pre-Hopwood	0.53	(13.4) *	0.22	(7.0) *	1.26	(5.9) *	-0.03	(-0.9)
	Hopwood	0.03	(0.6)	-0.08	(-2.0) *	0.30	(0.9)	-0.24	(-6.1) *
	Top Ten Percent	-0.30	(-7.7) *	-0.34	(-11.2) *	0.26	(1.1)	-0.43	(-14.4) *
Black	Pre-Hopwood	0.52	(15.0) *	0.18	(8.5) *	5.02	(50.2) *	-0.16	(-8.5) *
	Hopwood	-0.39	(-8.3) *	0.07	(2.7) *	4.51	(43.0) *	-0.33	(-14.4) *
	Top Ten Percent	-0.77	(-20.0) *	-0.11	(-5.0) *	4.34	(41.6) *	-0.47	(-23.9) *
Hispanic	Pre-Hopwood	-0.05	(-2.0)	-0.19	(-13.0) *	0.51	(3.6) *	-0.20	(-14.7) *
	Hopwood	-0.78	(-23.9) *	-0.53	(-27.3) *	-0.24	(-1.3)	-0.28	(-16.0) *
	Top Ten Percent	-1.07	(-37.0) *	-0.64	(-35.3) *	-0.09	(-0.6)	-0.28	(-17.1) *
Anglo	Hopwood	-0.45	(-20.3) *	-0.25	(-15.9) *	-0.72	(-4.1) *	-0.14	(-9.8) *
	Top Ten Percent	-0.70	(-32.8) *	-0.39	(-26.1) *	-0.81	(-5.3) *	-0.18	(-13.2) *
<i>Individual Characteristics</i>									
Male		0.22	(22.1) *	0.05	(6.7) *	0.23	(11.7) *	-0.05	(-7.8) *
Ever LEP		-0.43	(-16.8) *	-0.20	(-15.5) *	-0.42	(-4.9) *	-0.23	(-19.3) *
Advanced Diploma		0.90	(75.6) *	0.72	(97.1) *	0.28	(12.8) *	0.21	(29.9) *
IEP Diploma		-0.50	(-5.5) *	-0.88	(-23.2) *	-0.83	(-10.0) *	-0.23	(-10.4) *
Private Diploma		1.30	(35.1) *	0.73	(24.7) *	0.37	(3.3) *	0.48	(16.9) *
Age		-0.19	(-18.3) *	-0.26	(-42.3) *	-0.21	(-12.3) *	-0.11	(-20.0) *
AP Courses		0.26	(97.7) *	0.19	(82.6) *	0.10	(15.1) *	0.08	(35.2) *
College Hours		0.05	(50.9) *	0.04	(54.8) *	0.03	(15.3) *	0.01	(18.2) *
H.S. GPA		1.95	(143.4) *	0.65	(84.2) *	0.07	(3.3) *	0.15	(21.9) *
SAT/ACT score		6.27	(143.3) *	2.40	(61.7) *	0.64	(3.7) *	1.34	(34.4) *
Income		0.12	(43.5) *	0.06	(28.3) *	0.02	(3.3) *	0.03	(16.0) *
<i>Campus Variables</i>									
Class Size		0.06	(22.9) *	0.03	(14.5) *	0.04	(5.6) *	0.06	(29.5) *
Pct. Test Takers		0.01	(13.7) *	0.01	(35.2) *	0.00	(-4.7) *	-0.01	(-16.5) *
Pct. Asian		-0.01	(-11.1) *	-0.01	(-6.9) *	0.01	(7.4) *	-0.02	(-23.2) *
Pct. Black		0.01	(20.7) *	0.00	(4.3) *	0.02	(28.5) *	0.00	(2.6) *
Pct. Hispanic		0.01	(33.9) *	0.01	(46.6) *	0.00	(4.2) *	0.00	(7.4) *
Pct. Anglo		0.00	(-4.3) *	0.00	(5.8) *	-0.01	(-11.5) *	0.00	(10.8) *
Average SAT Score		10.43	(66.6) *	3.53	(29.1) *	5.72	(17.0) *	3.25	(28.5) *
<i>Year Dummies</i>									
1995		-0.31	(-15.2) *	-0.17	(-12.5) *	-0.24	(-6.4) *	-0.13	(-9.8) *
1996		-0.50	(-25.0) *	-0.24	(-17.5) *	-0.42	(-10.9) *	-0.11	(-8.7) *
1998		-0.01	(-0.3)	0.00	(0.1)	0.03	(0.8)	0.11	(9.2) *
2000		-0.23	(-12.4) *	-0.17	(-13.6) *	-0.22	(-5.7) *	-0.09	(-8.2) *
2001		-0.19	(-10.2) *	-0.16	(-12.1) *	0.12	(3.2) *	0.03	(2.3) *
Constant		-14.20	(-65.9) *	-1.48	(-11.2) *	-4.84	(-12.5) *	-0.10	(-0.9)
Observations		854,124							
Chi-squared		390,719							
Pseudo R-squared		0.167							

Omitted categories are Anglo, Pre-Hopwood and Regular H.S. Diploma

*Absolute value of z statistic > 2

Table 9. Predicted Marginal Changes in Choice Probabilities for First-Time Texas Public College Students

Explanatory Variable	College Choice					
	Selective University	Other University	HBCU	Community College Academic	Community College Technical	
<i>Race Ethnicity x Period</i>						
Asian	Pre-Hopwood	0.030	0.018	0.022	-0.050	-0.021
	Hopwood	0.010	0.005	0.006	-0.044	0.023
	Top Ten Percent	0.001	-0.016	0.008	-0.053	0.060
Black	Pre-Hopwood	0.025	-0.018	0.143	-0.110	-0.040
	Hopwood	-0.027	0.019	0.124	-0.106	-0.010
	Top Ten Percent	-0.039	0.017	0.108	-0.106	0.019
Hispanic	Pre-Hopwood	0.008	-0.018	0.011	-0.026	0.025
	Hopwood	-0.025	-0.046	0.000	0.007	0.063
	Top Ten Percent	-0.039	-0.058	0.003	0.024	0.070
Anglo	Hopwood	-0.017	-0.016	-0.007	0.007	0.032
	Top Ten Percent	-0.028	-0.030	-0.007	0.019	0.046
<i>Individual Characteristics</i>						
Male		0.015	0.005	0.003	-0.021	-0.001
Ever LEP		-0.016	0.000	-0.003	-0.018	0.037
Advanced Diploma		0.030	0.089	-0.001	-0.054	-0.065
IEP Diploma		0.000	-0.111	-0.006	0.042	0.075
Private Diploma		0.059	0.037	-0.001	-0.016	-0.079
Age		-0.001	-0.017	-0.001	0.005	0.014
AP Courses		0.021	0.043	0.000	-0.022	-0.041
College Hours		0.008	0.026	0.001	-0.014	-0.020
H.S. GPA		0.066	0.015	-0.002	-0.046	-0.033
SAT/ACT score		0.054	0.011	-0.002	-0.021	-0.042
Income		0.011	0.007	0.000	-0.005	-0.013
<i>Campus Variables</i>						
Class Size		0.004	-0.006	0.000	0.017	-0.016
Pct. Test Takers		0.002	0.033	-0.001	-0.030	-0.003
Pct. Asian		-0.001	0.006	0.002	-0.016	0.010
Pct. Black		0.010	-0.004	0.004	-0.005	-0.005
Pct. Hispanic		0.011	0.053	-0.001	-0.036	-0.027
Pct. Anglo		-0.007	0.003	-0.003	0.015	-0.008
Average SAT Score		0.031	-0.004	0.002	0.002	-0.031
<i>Year Dummies</i>						
1995		-0.011	-0.009	-0.002	-0.002	0.024
1996		-0.022	-0.017	-0.004	0.014	0.028
1998		-0.003	-0.011	0.000	0.024	-0.010
2000		-0.007	-0.014	-0.002	0.003	0.020
2001		-0.008	-0.026	0.002	0.026	0.007
Observations		854,124				

Notes. Omitted categories are Anglo Pre-Hopwood and Regular H.S. Diploma. Changes add to zero across the rows. Marginal changes are calculated for each variable with other variables to mean values. For dummy variables, the change is based on a change

Figure 1. Percent Longhorn and Other High School African American and Hispanic Graduates Attending a Selective Texas Public University

