FOREIGN STUDENTS, IMMIGRANTS, DOMESTIC MINORITIES AND ADMISSION TO TEXAS’ SELECTIVE FLAGSHIP UNIVERSITIES BEFORE AND AFTER THE BAN ON AFFIRMATIVE ACTION

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Abstract:

A growing body of research examines the effects of state affirmative action bans on domestic minority students’ application and admission rates. This study expands previous research, considering how Texas’ implementation of a race-neutral percent plan influenced admission opportunities for two understudied groups: foreign students and in-state black and Hispanic immigrants. Using a census of all applicants to Texas’ flagship universities—University of Texas-Austin (UT) and Texas A&M (A&M)—between 1992 and 2002, descriptive analysis and logistic regressions help examine how the passage of the Top Ten Percent Plan influenced selectivity in terms of observed admission rates and counterfactual admission probabilities for students of varying SAT scores and science, technology, engineering and mathematics (STEM) vs. non-STEM proposed majors for foreign students compared to a variety of in- and out-of-state black and Hispanic immigrants and domestic minorities. Findings point to salient institutional differences in selectivity for foreign applicants. The surge in UT’s foreign applicant numbers post-Top Ten led to significant decreases in admission rates and increases in average SAT score and STEM foreign admits. Post-Top Ten, A&M, on the other hand, maintained numbers of foreign admits on par with UT by accepting a significantly larger percentage of less-selective foreign applicants.
INTRODUCTION

A college education is increasingly necessary for middle-class jobs (Kahlenberg, 2008). At the same time, the cost of a four-year education (particularly at private universities) increases faster than the rate of inflation, making a four-year college education less-and-less affordable for most Americans (Kahlenberg, 2008). Public universities offer among the most affordable bachelor’s degrees for a large segment of four-year degree-seeking students, thus creating high-demand for admission among domestic applicants from a wide-range of racial/ethnic and immigrant backgrounds (Hemelt & Marcotte, 2008; Kahlenberg, 2008). In many cases the largest, oldest and most-prestigious of each state’s public, four-year universities, state flagships often receive the largest numbers of applicants among public universities (Hemelt & Marcotte, 2008). Flagship universities generally offer the most prestigious and high-quality public four-year education in the state, and at times, in the region (Gerald & Haycock, 2006; Hemelt & Marcotte, 2008).

Although demand for higher education from their own citizens is on the rise, American universities attract and admit undergraduate students raised and educated outside the United States, known as foreign students (Institute of International Education, 2008b; Western Interstate Commission for Higher Education, 2008). The same state flagship institutions in particularly high demand by top-performing in-state students (Gerald & Haycock, 2006; Institute of International Education, 2008b) are also increasingly sought-after by out-of-state domestic applicants and foreign students (Institute of International Education, 2008b). Although public flagships receive sufficient applicants to fill each class with their own state’s students, they (like their private, four-year counterparts) admit and actively recruit not only out-of-state domestic applicants, but also foreign students (Rizzo & Ehrenberg, 2003b).
Although many public flagship universities seek to increase their diversity in the form of undergraduate foreign students, a number of state legislatures—including California, Texas, and Florida’s—have banned the practice of explicit race preferences in undergraduate admissions at public universities. In the stead of controversies around racial preferences for domestic minority students, some states have passed alternate state-mandated admissions regimes—like the Top Ten Percent Plan, which was passed in Texas in 1998 (Alon & Tienda, 2005; Alon & Tienda, 2007; Harris & Tienda, 2009; Institute of International Education, 2008b; Long, 2004; Rangel & Barrientos, 1997). The Top Ten Percent Plan is an admissions plan that considers class rank and grades over SAT or ACT scores when making admission decisions for in-state applicants (Alon & Tienda, 2007). Under the Top Ten Plan, all students who graduate from a Texas high school in the top ten percent of their high school’s graduating class and apply for admission to a Texas university are guaranteed admission to the flagship university of their choice (Rangel & Barrientos, 1997). The result is that the overwhelming majority of each class—upwards of 75 percent at UT—is filled by students admitted under the prevue of Texas’ percent plan (Fischer, 2005; Perry, 2009; Rangel & Barrientos, 1997).

A growing body of research examines the effects of Texas’ percent plan on domestic minority enrollments at Texas’ flagship universities, UT-Austin (henceforth UT) and Texas A&M (henceforth, A&M) (Alon & Tienda, 2007; Long & Tienda, 2008). However, with a state-mandated shift in the admission criteria for in-state applicants, the implications of the Top Ten Percent Plan for diverse, out-of-state students remains understudied. As the largest out-of-state applicant group at UT and the second-largest at A&M, post-Top Ten era foreign applicants, like their domestic, non-Texas counterparts, continued to be assessed based heavily on SAT scores.
over grades, particularly since many out-of-state and foreign applicants either did not receive or report class rank in their application (Alon & Tienda, 2007).

At the same time, foreign students also experience certain parallels with in-Texas immigrant minority applicants. In addition to many shared origin countries in Latin America and the Caribbean (in addition to Asia, though domestic and immigrant Asian applicants are not considered here for reasons that will be later discussed), both foreign and domestic immigrant minority students may come from unique selection regimes into the United States and/or the American higher education applicant pool. As such, foreign and domestic immigrant minority students likely comprise more highly-selected group with above-average prior academic achievement profiles compared to domestic minority Texas applicants. This paper compares the differing levels of selectivity¹ in the admission profiles of foreign, in-state immigrant-background minority, and out-of-state (immigrant and domestic) minority applicants compared to the black and Hispanic in-state applicants who comprise the traditional beneficiaries of racial and ethnic preference programs.

FOREIGN STUDENTS, COLLEGE DIVERSITY, AND GLOBAL COMPETITIVENESS

The mission statements of many selective universities include a phrase indicating the university’s commitment to creating a diverse class of students from a variety of states within the United States and myriad countries around the world (Moiseyenko, 2005; Stevens, 2007; Stevens, Armstrong, & Arum, 2008). More than half of institutions surveyed in 2000 through a collaboration between ACT, Inc. (known for its ACT standardized college entrance exams), The College Board, Educational Testing Services, and Association for Institutional Research (AIR) reported specifically recruiting foreign undergraduate applicants (Breland, Maxey, Gernand,

¹Henceforth ‘selectivity’ and ‘selectivity in academic profiles’ refers to differences between groups in percent admitted, average SAT scores, proposed major, and predicted probabilities of admission net of a variety of demographic and prior education controls
Cumming, & Trapani, 2002). Fully 57 percent of reporting institutions acknowledged actively recruiting out-of-state domestic applicants (Breland, Maxey, Gernand, Cumming, & Trapani, 2002).

Composing a racially/ethnically- as well as internationally-diverse class is one less-quantifiable way in which universities improve their global competitiveness. With a variety of reciprocity and other policy compacts between states to offer higher education at in-state public universities to admitted students from surrounding states resident—or at least reduced—tuition, the reasons for admitting out-of-state domestic applicants are less ambiguous than those for admitting foreign students (Rizzo & Ehrenberg, 2003a). Unlike out-of-state domestic students, foreign students are rarely admitted through formalized policies of reciprocity. At the same time, foreign students—like domestic minority and immigrant minority students (both in- and out-of-state)—bring valued cultural, linguistic, educational, and experiential diversity to colleges (Stevens, 2007). Over the last decade, the competitive edge that foreign undergraduates bring to a university—whether through enhancing campus diversity, strengthening particular disciplines, or otherwise—has become increasingly visible. In the early 2000s, the U.S. News and World Report began publishing a new ranking called “Best Colleges: Most International Students” that runs alongside their commonly-cited college ranking system (U.S. News and World Report, 2009a; U.S. News and World Report, 2009b). In 2002, ACT Inc., The College Board and Educational Testing Services stated in their report that “public institutions have increased their efforts to recruit out-of-district/out-of-state and international students” (Breland et al., 2002).

In his 1992 work on college student migration, Mixon was among the first to use individual-level micro-data on applicants collected by various universities to model the impact of institutional prestige on percent out-of-state enrollment. Out of state enrollment at public
universities, Mixon found, was a function of factors such as the higher tuitions charged to out-of-state students (Mixon, 1992). Mixon’s argument was that, the more ‘prestigious’ a public university, the greater the numbers of out-of-state applicants it would receive, and hence the higher out-of-state tuition it could get away with charging (Mixon, 1992). This piece follows in the same logic: As a segment of out-of-state enrollment, foreign students are in part desired because their presence at a particular university signals the ascending prestige and global competitiveness of that institution. While increasing global competitiveness is certainly a part of the puzzle, the relatively newly-emergent hype around foreign undergraduates as the new edge for campus diversity begs numerous understudied questions about why public universities increasingly seek to attract and admit undergraduate foreign students.

At the same time, public universities are also concerned with maintaining and/or increasing selectivity in their admission processes. Selectivity is often measured through factors like the average SAT scores of admitted students and a university’s ability to attract students from outside the state’s general prevue into high-prestige science, technology, engineering, and mathematics (STEM) disciplines. Partly a remnant of cold war competition to produce the best-and-brightest scientists and engineers, scientists and engineers were seen to bring the United States closer to becoming the world’s economic superpower via becoming the zenith of technological innovation and progress (Brown & Bean, 2009; Caboni & Adisu, 2004; Karabel, 2005). Today, admitting STEM students may enhance a public flagship university’s reputation by helping it develop strong departments in the STEM fields. Admitting undergraduate foreign students into the STEM fields is also one way in which public flagships create a pipeline to their graduate training programs. Admitting students from out-of-state—but particularly foreign
students—into the STEM fields points to a university’s strength and increased global competitiveness in addition to its embrace of diversity on an international scale.

Throughout this study, selectivity refers to the academic profile of applicants or admits on the basis of SAT score and proposed major (STEM vs. non-STEM). When I say one group or university is more selective than another I am referring to their stronger academic profile on average. More selective groups have higher average SAT scores and/or concentrations of applicants proposing STEM majors. STEM majors are framed as contributing to the strength of an applicant’s academic profile because of the historical and contemporary prestige associated with advancing science, medicine and technology.

Trends in undergraduate foreign student admissions at Texas’ selective flagship universities may be emblematic of those at other institutions, but the context of Texas’ percent plan offers a unique case study. Examining changes in admissions outcomes before and after the passage of the Top Ten Law provides a window through which to assess how state-mandated alternatives to racial preference systems may indirectly affect admission opportunities for foreign applicants (Alon & Tienda, 2007; Harris & Tienda, 2009; Long & Tienda, 2008; Tienda & Niu, 2006). Although foreign students comprise only a small fraction of students at selective flagship universities, Texas’ two flagship universities place in the top 25 in the country for the size of their respective foreign student enrollments (Institute of International Education, 2008a; Institute of International Education, 2008c). UT and A&M actively recruit foreign students even amidst high-demand from in-state applicants and only replacement or, in some cases, below-replacement enrollments of domestic minority students compared to their pre-Top Ten Percent levels (Long & Tienda, 2008). The recruitment of foreign students amidst the ban on race-based affirmative action and transition to a non-race based system points to universities’ seeming
paradox of embracing diversity in certain forms—like that of foreign students—while qualifying it in others—its own domestic minority students. This paradox leads to questions about any changes in the levels of selectivity required for admission for foreign students compared to other groups viewed as enhancing diversity before and after the passage of the Top Ten Percent Plan.

Some of the same institutional priorities that foreign students embody—cultural and geographic diversity—are also enhanced through the admission of domestic minority (henceforth referring to non-immigrant) students and/or immigrant-background domestic minorities. A wide range of work on affirmative action in American higher education highlights the relatively small number of underrepresented (black and Hispanic) minority students who are qualified for admission to selective, four-year universities (Bowen & Bok, 1998; Bowen, Kurzweil, Tobin, & Pichler, 2005; Massey, Charles, Lundy, & Fischer, 2003). With the same minority students gaining admission to a variety of selective universities, institutions compete among themselves to matriculate these coveted minority students to their university (Arenson & Rimer, 2004). Attracting members of a small pool of qualified, underrepresented minority students to their university enhances a historically white institution’s institutional status—as opposed to its more quantifiable, average test-score or departmental reputation-driven status.²

At the same time, Professors Henry Louis Gates, Jr. and Lani Guinier complicate universities’ often simplified definitions of minority status, pointing out that a rising share of the students classified by universities as minorities come from immigrant- as opposed to domestic, underrepresented minority backgrounds (Arenson & Rimer, 2004). Gates and Guinier urge universities to consider the implications for social mobility among America’s historically underrepresented domestic minority communities if universities continue admitting immigran-

² A large body of research on affirmative action documents underrepresented minority students’ lower SAT scores, on average, compared to white and Asian students (Bowen & Bok, 1998; Jencks & Phillips, 1998; Massey et al., 2004).
minorities under the same auspices of diversity as domestic-minority students (Arenson & Rimer, 2004; Gurin & Bowen, 1999). Although Gates and Guinier refer primarily to selective, private institutions, the phenomenon of less-qualified domestic minority students in the pool of four-year college applicants is certainly relevant to selective, public institutions as well.

One predominating hypothesis for explaining the rising share of immigrant-minorities at selective universities is that college-applying immigrant minorities come from a more highly-selected population in the United States than do domestic minority students without recent immigrant backgrounds. Work by Portes and Rumbaut posits that post-1965 immigrants are a positively selected group relative to non-migrants from their country of origin (Portes & Zhou, 1993; Portes & Rumbaut, 2006; Portes & Fernandez-Kelly, 2008). Similarly, Feliciano (2005a) and Massey et al. (1998) argue that, due to the differing entry conditions of immigrant as opposed to domestic minority students, the high levels of selection on observed (educational and socioeconomic among others) as well as unobserved characteristics (psychic, motivational, and social capital-based, for example) among immigrant-minorities is not mirrored among domestic minorities (C. Feliciano, 2005a; Massey, 1998). But the domestic minorities who submit college applicants are also a highly-selected subgroup of the domestic minority population in the United States. Among applicants who surpass potential barriers to high school graduation and college application, it is unclear whether immigrants and children of immigrants have academic profiles suggesting higher levels of academic selection than domestic minority applicants and, if so, if they gain admission to selective colleges and universities at higher rates.

RESEARCH QUESTIONS

Exploring a new dimension of the implications of Texas Top Ten Percent Plan, this paper examines how foreign students and Texas’ immigrant-background black and Hispanic minorities
fare before and after the passage of the Top Ten Percent Plan at Texas’ two flagship universities. Specifically, based on overall acceptance rates and standardized admission test scores, how did the passage of the Top Ten Percent Plan influence the levels of selectivity (in terms of admission rates and predicted probabilities of admission net of controls) and the academic profiles (in terms of SAT scores) of admitted foreign students compared to all foreign applicants, admitted in-state black and Hispanic immigrants, and black and Hispanic domestic (immigrant and domestic) minority applicants to UT and A&M? Second, to what extent did UT and A&M experience a differential squeeze on spots for foreign compared to out-of-state domestic minority applicants after the passage of the Top Ten Percent Plan? Third, did the squeeze on spots for out-of-state (foreign and non-Texas domestic minority) applicants post-Top Ten Percent increase the probabilities of admission for foreign and out-of-state applicants proposing STEM majors at both UT and A&M? Fourth, how did the effects of the Top Ten Plan on foreign students compared to other groups’ probabilities of admission by SAT and STEM major vary between UT and A&M?

RESEARCH DESIGN

Data

This study utilizes restricted-use administrative data from the Texas Higher Education Opportunity Project (THEOP). THEOP administrative data are particularly well-suited for this study because they are one of the few of their kind to include information from admissions applications for a census of applicants to Texas’ two public flagship universities over an approximately 10 year period between 1990 and 2000 (years vary by institution). The total number of applicants to UT between 1991 and 2003 was 205,733. At A&M, the total number of applicants between 1992 and 2002 totaled 160,021. Analyses that restricted UT’s years of data
coverage to the ten year period available at A&M returned similar results. As such, results from all twelve years of UT’s reliable data are reported.

At the undergraduate level, UT and A&M are large well-known institutions that attract a large number of in-state applicants and a smaller, but significant, number of applicants from outside Texas (mainly hailing from surrounding Southern states). Although both universities admitted slightly over 70 percent of applicants during the 1990s, UT’s admitted students showed stronger academic profiles. The mean standardized test score of students admitted to UT was 1226, compared to 1172 at A&M. Additionally, over the period for which we have data, an average of 18 percent of UT’s applicants came from out-of-state compared to 14 percent of A&M’s applicants.

Variables

The study examines admission probabilities based on a binary dependent variable indicating whether a student gained admission. Table 1 displays descriptive statistics as population means and standard deviations across as well as within universities for the dependent and all independent variables.

[“Table 1. Descriptive Statistics” about here]

The primary predictor variable is ‘group’, which identifies foreign students relative to a variety of groups based on Texas residency, race/ethnicity, and immigrant-status shown in Table 1. In addition to foreign students, the comparison groups throughout both parts of the analyses include: non-Texas blacks and Hispanics (both immigrant and domestic), Texas domestic blacks and Hispanics, and Texas immigrant blacks and Hispanics. The characteristics used to distinguish these groups are explained in the section of Table 1 on variable construction. The two primary measures of admission-selectivity include: average SAT score (or SAT-converted ACT
score, both of which serve as a measure of prior academic qualification) and STEM as opposed to non-STEM major indicated in students’ admission application. STEM majors additionally include health, whereas all humanities, social science, vocational and undecided majors are included in the non-STEM category. Table 1 also lists demographic and prior-achievement controls, including: gender, high school type (private, public, or other), whether a student attended high school in-state, whether a student attended a feeder high school (one of the top 20 schools in absolute numbers of students sent to either UT or A&M in 2000 (Tienda & Niu, 2006), and whether a student took at least one Advanced Placement exam in high school.

Analytic Strategy

In light of existing research (Alon & Tienda, 2007; Long & Tienda, 2008) that examines how domestic minorities fare after the passage of the Top Ten Plan within the context of the wider white and Asian applicant pool, this study excludes whites and Asians in order to instead focuses on how foreign students compare to groups that are historically underrepresented at four-year selective universities and are therefore targeted at least in part to increase college diversity. The groups identified in this study include foreign applicants and in- and out-of-state domestic black and Hispanic minority immigrant and domestic applicants. Foreign students are non-U.S. citizens of any race who receive their primary education outside the United States and identified on their college application as foreign/international (referred to in this study as foreign students). Domestic refers to American-educated underrepresented minority students— namely, blacks and Hispanics. Minority is used as an umbrella term for American-educated blacks and Hispanics, some of whom are non-immigrants (domestic minorities) while other are immigrant minorities. Immigrant minorities are non-U.S. citizens who were born outside the United States but were schooled in the U.S. from an early age and therefore apply to college as domestic applicants.
Permanent residents are identified as immigrants because permanent residency entails having been born outside the U.S. even though the process of naturalization has been initiated. Some students identified as domestic may in fact be naturalized immigrants but are nonetheless classified as domestic due to lack of information to identify naturalized citizens apart from native-born citizens.

Prior work (C. Feliciano, 2005a; C. Feliciano, 2005b; C. Feliciano, 2005c) shows immigrants’ varying levels of positive educational selection relative to non-immigrants from their origin countries have an effect on children’s college enrollment in the United States. The question of whether in-state black and Hispanic immigrant applicants to Texas’ flagships are more highly-selected (on observed prior academic achievement or other unobserved characteristics) than domestic black and Hispanic applicants in the United States remains understudied. In-state Texas immigrant-background black and Hispanic students offer a relevant comparison because, like foreign students, immigrant applicants may exhibit higher levels of positive selection on observed factors—like academic qualification—or on unobserved characteristics—like persistence—that may be association with coming from families who may have overcome the financial, psychic, legal, and social barriers to immigration (Massey, 1998). I investigate this hypothesis with regard to differences in the strength of the academic profiles of admitted foreign and immigrant applicants relative to domestic blacks and Hispanics. Finally, out-of-state domestic applicants are an important comparison for foreign students. Comparing foreign and non-Texas minority applicants helps overcome the threat to internal validity that would result if the study lacked a group that continued to be assessed for admission based largely on the same criteria (i.e. SAT score and proposed major) as foreign students without offering the university the same edge on global competitiveness as foreign students.
Throughout the analysis, black and Hispanic students are grouped together for parsimony and because the numbers of black applicants are limited, reflecting the demographic composition of Texas high school graduates (Harris & Tienda, 2009; Henry J. Kaiser Family Foundation, 2007; Institute of International Education, 2008c). Results from analysis disaggregating each group indicated strikingly similar results for blacks and Hispanics. Additionally, immigrant and domestic out-of-state blacks and Hispanics are reported as an aggregate group because results do not change noticeably but cell sizes and predictive power increase. Though ethnically heterogeneous groups, for this study’s purposes, the aggregation of blacks and Hispanics is substantively supported by other studies finding black and Hispanic first and second generation immigrants to be a less-positively selected group than first and second generation Asian immigrants (C. Feliciano, 2005b; C. Feliciano, 2005c).

Methods

Treating immigrant minority and domestic minority students—both from within and outside Texas—as comparison groups for foreign students, this study examines how foreign, immigrant minority, and domestic, non-immigrant minority students’ average applicant profiles based on SAT score and proposed major influence their admission rates and probabilities and whether admission rates and probabilities change after the passage of the Top Ten Plan.

[“Figure 1. Foreign Applicants and Admits at UT and A&M” about here]

To assess the influence of the Top Ten Percent Plan on each group’s admission probabilities, comparisons are made both within and across Texas’ two flagship public universities (University of Texas-Austin and Texas A&M) before and after the passage of the Top Ten Percent Plan. Following a large body of econometric research on differencing strategies within natural experiments (Ashenfelter, 1978; Card, 1990; Conyon, Girma, Thompson, & Wright, 2002),

3 Results from the disaggregated analysis are available from the author upon request.
much of the analysis in this study relies on differencing and differences-in-differences to control for the effects of time-invariant factors and isolate the effects of the Top Ten Plan on changes in various groups’ admission probabilities. Separate analyses are reported for each institution.

Paying particular attention to how admission rates vary by SAT and STEM vs. non-STEM proposed major, the first part of the analysis charts basic admission rates for foreign students compared to various domestic minority groups. Calculated without controlling for observed confounding factors, the basic admission rates used in the first part of the analysis allow me to understand how underlying compositional differences in measures of selectivity like SAT score and proposed major are in reality associated with admission rates for foreign students compared to other groups. The second part of the analysis adds demographic, prior achievement, and high school characteristic controls (shown in Table 1) to logistic regressions to enable more causal inference about groups’ differing predicted probabilities of admission after accounting for each groups’ differing levels of selection into the applicant pool.

RESULTS

Table 2 displays cell sizes and admission rates of foreign students compared to three sub-groups of black and Hispanic immigrant and domestic applicants by institution before and after the passage of the Top Ten Plan.

[“Table 2. Applicants and Admission Rates” about here]

Before the passage of the Top Ten Plan, UT’s basic admission rate for foreign students was 31 percent, or 21 percentage-points higher than that of A&M. The chi-squared significance tests reported in column 15 indicate that this institutional difference in foreign students’ acceptance rates was significantly larger than that of non-Texas black and Hispanic applicants and in-state domestic minorities. At UT, foreign applicants experienced a significantly smaller average
percentage-point reduction in the percentage of applicants admitted after the passage of the Top Ten Plan than did out-of-state black and Hispanic applicants. Table 3 displays mean standardized test scores of applicants by group and institution before and after the Top Ten Plan.

[“Table 3. Mean Standardized Test Scores” about here]

At UT, although foreign applicants experienced a significantly larger percentage-point reduction in percent admitted compared to in-state immigrant applicants, their admitted foreign students became increasingly positively-selected, with an average increase in SAT score of 22 points post-Top Ten compared to a decrease in SAT-based selectivity among both out-of-state and in-state minority applicants. In contrast, foreign students at A&M experienced a 5 percentage point increase in admission rates after the Top Ten Plan with admitted foreign students also more positively-selected after the passage of the Top Ten Plan. Compared to other groups, foreign applicants admitted to A&M experienced a significant 46-point increase in average SAT score. At the same time, however, the difference in the pre- and post- Top Ten average SAT score decreased for A&M’s out-of-state and in-state minority applicants. After the passage of the Top Ten Plan, foreign students at UT were admitted at an even lower rate on average over the 1998-2003 period than were post-Top Ten foreign applicants to A&M—whose average, basic admission rate actually increased by 4 percentage-points. After the passage of the Top Ten Plan, UT’s average admission rate for foreign students diverged significantly from that of A&M’s such that the institutional difference in admission rate-based selectivity was significantly larger than the difference in selectivity for each other group, including out-of-state minorities (see columns 16 and 17 of Table 1). Much of UT’s heightened selectivity was driven by a faster rate of increase and larger absolute numbers of foreign applicants in the post-Top Ten Plan era compared to A&M. Interestingly, while A&M admitted disproportionately high shares
of foreign applicants compared to other groups post- Top Ten, it continued to admit an increasingly positively-selected group of foreign students. Between 1998 and 2002, the difference in average SAT score for A&M’s admitted foreign students shrunk relative to foreign students at UT. Post-Top 10, the average SAT score for A&M’s admitted foreign students came on par with those of domestic and immigrant applicants from outside Texas (shown in column 13 of Table 3).

Table 4 breaks down the cell sizes and admission rates for applicants by group, policy regime and institution shown in Table 1, examining applicants who proposed majors in the STEM and health fields separately from non-STEM proposing applicants.

[“Table 4. STEM vs. Non-STEM Applicant and Admission Rates” about here]

Columns 11 and 22 of Table 4 show both UT and A&M admitted a higher percentage of STEM applicants in the Post-Top Ten compared to pre-Top Ten era, significantly more than each other group, each of which experienced a decrease in their average, basic admission rate for STEM majors post-Top Ten compared to pre-Top 10. The higher acceptance rate for STEM foreign applicants post-Top Ten was more pronounced at UT than at A&M, as shown in column 23, with UT averaging a significantly higher admission rate for STEM foreign applicants compared to other groups of applicants than at A&M. By contrast, the admission rates for non-STEM applicants pre- vs. post- Top Ten did not differ across institution for any group except out-of-state domestic and immigrant minorities, who experienced a more-pronounced decrease in admission rate post Top Ten at A&M than at UT (though this is offset by the fact that A&M had a higher mean basic admission rate for non-STEM applicants in both pre- and post- Top Ten periods to begin with) (see column 24 of Table 4).
Table 5 shows predicted probabilities and their differences across group, STEM vs. non-STEM proposed major, policy regime, and institution \textit{net of a variety of demographic, prior achievement, and high school characteristics} (see Table 1 for a full listing). Predicted probabilities are calculated at the grand mean across institutions and can be interpreted as those for the average applicant across UT and A&M. Predicted probabilities can be interpreted as counterfactuals—indicating what probability of an applicant from a particular group with average characteristics across both universities would have experienced had s/he applied before or after the passage of the Top Ten Plan. Some readers may choose to think of the predicted probabilities as representing simulations.

[“Table 5. Predicted and Percentage-Point Differences in Probabilities of Admission” here]

Pre-Top Ten foreign applicants with across-institution population-mean values for all control variables would have experienced significantly lower predicted probabilities of admission compared to an average individual in each of the other groups at both UT and A&M. After the passage of the Top Ten Plan, the admission probability of a foreign applicant with population-average characteristics would have \textit{increased} at both UT and A&M at the same time it would have decreased for an individual with population-average characteristics from each of the other groups. For example, a foreign, male applicant to UT who attended a Texas public high school, did not take any Advanced Placement exams in high school and proposed a non-STEM major would have had a 29.4 percent chance of being admitted before the Top Ten Plan was passed but a 32.4 percent chance of being admitted after the Top Ten Plan—a 3 percentage-point \textit{increase} in admission probability. A black or Hispanic non-Texas resident with the same profile, on the other hand, who had a 63.8 percent chance of being admitted before the Top Ten Plan and a 59.8 percent chance of being admitted after the Top Ten Plan would therefore have experienced an
overall 4 percentage-point decrease in admission probability. A foreign applicant’s increase in admission probability was significant in comparison to the decrease that would have been experienced not only by the non-Texas resident black or Hispanic student with population-average characteristics, but by each of the Texas resident groups as well. Therefore, although the margin of increase in admission probabilities across institutions was modest, it was significantly larger for a foreign student with population-average characteristics at A&M than at UT. Unlike a foreign applicant with the across-institution population average characteristics described above who would have experienced a larger admission probability at both UT and A&M after the Top Ten Plan, the passage of the Top Ten Plan would have been associated with a decrease in admission probability for individuals with population-average characteristics in each U.S.-applicant pool (both in and out of state, immigrant and domestic) at both institutions, as shown in columns 5 and 11 of Table 5. The difference in admission probabilities for a foreign student with population-average characteristics across institutions would have been larger after the passage of the Top Ten Plan as a foreign applicant with population-average characteristics would have had a higher probability of admission at A&M after the passage of the Top Ten Plan than before it compared to a corresponding foreign applicant to UT after the Top Ten Plan as opposed to before it (see column 17 of Table 5). The larger increase in predicted probability of admission for a foreign student with population-average characteristics at A&M vs. UT after- compared to before- the Top Ten Plan contrasts with the increase in predicted probability of admission for an individual with population-average characteristics in each of the domestic comparison groups. An individual with population-average characteristics in each of the domestic groups would have experienced a smaller reduction in admission probability at UT post Top Ten than to A&M post-Top 10, suggesting UT’s popularity for Top Ten applicants after the passage of the Top Ten
Plan. Nonetheless, as at UT, predicted admission probabilities for individuals with population-average characteristics in each domestic and immigrant Texas and non-Texas applicant group would have decreased in the post-Top Ten era at A&M.

Corroborating results reported for STEM applicants in Table 5, Figure 2 shows group admission probabilities by institution before and after the passage of the Top Ten Plan, distinguishing STEM from non-STEM majors for purposes of examination of STEM major as a measure of selectivity.

[“Figure 2. Group Admission Probabilities by Major” about here]

For STEM applicants in particular, the predicted probability of admission for a foreign student with population-average characteristics would have increased modestly at both UT and A&M after the passage of the Top Ten Plan, but the modest increase would have been slightly more pronounced at UT than at A&M, as seen in column 18 of Table 5. By contrast, the predicted admission probabilities for a STEM applicant of each of the other groups with population-average characteristics would have decreased after the passage of the Top Ten Plan at both UT and A&M, but the decrease would have been more pronounced at A&M than at UT (see columns 6, 12, and 18 of Table 5). The single exception to this pattern, however, is immigrant black and Hispanic STEM applicants at UT, who, like foreign STEM applicants, would have experienced a modest increase in predicted admission probability after the passage of the Top Ten Plan.

The findings highlight a discrepancy between the results of the admission rates without controls and the counterfactual predicted probabilities. For example, at UT, the basic admission rates without controls indicate that, in reality, it became harder to gain admission as a foreign applicant to UT post-Top 10. On the other hand, counterfactual predicted probabilities indicate it would have become easier—though the magnitude differences in predicted probabilities are
modest, at best, and non-significant compared to within-group pre-Top Ten predicted probabilities. This seeming contradiction highlights the importance of underlying compositional differences between groups before compared to after the passage of the Top Ten Plan. That is, a foreign applicant with the same average observed characteristics of any group of student who would have applied to both UT and A&M would have had a higher admission probability post-Top Ten compared to pre-Top Ten. However, because the pool of foreign applicants became more positively selected post-Top 10, his/her predicted probability of admission would have increased despite the counter-veiling force of the admission squeeze. In reality, the admission squeeze as a result of a large number of spots automatically filled by Top Ten in-state applicants led to a decrease in the admission probabilities for foreign applicants at UT. The fact that this discrepancy does not arise at A&M points to a noteworthy phenomena: The squeeze on admission spots appears to converge post-Top Ten as a larger proportion admitted from each non-foreign applicant group increase at A&M and the difference in proportions of domestic applicants admitted closes between the two institutions (see columns 15-17 of Table 1). Interestingly, despite this squeeze on admission spots, A&M continued to admit a greater share of its foreign applicants. The increase in the average admission rate (without controls) for foreign applicants to A&M suggests the increase may be driven by an increase in the degree of underlying positive-selection into the applicant pool taking place among foreign applicants to A&M. It is unsurprising that this increase in selectivity in the academic profiles of foreign applicants did not take place at UT considering that the academic profiles of UT’s foreign applicant pool were already quite strong.

Figure 3 shows predicted admission probabilities for individuals of each group with population-average characteristics on all observed variables except SAT score.
For gradual increases in SAT score, there would have been marked differences in admission probabilities for individuals with population-average characteristics from each group before as compared to after the Top Ten Plan was passed. After the passage of the Top Ten Plan, there would have been a clear divergence in predicted admission probabilities by SAT score between individuals with population-average characteristics from in-state versus out-of-state groups. Shallower slopes for in-state domestic and immigrant applicants indicate dampened increases in admission probabilities associated with rising SAT scores from the population-mean SAT for individuals with population-average characteristics from all groups. For in-state applicants, this reflects the pronounced emphasis on grades and class rank as opposed to test score in admission practices. For out-of-state applicants who continued to be assessed heavily on SAT scores, predicted probabilities indicate a heightened selectivity regime in which the pay-off of higher SATs became more pronounced after the passage of the Top Ten Plan. Post-Top Ten, both UT and A&M admitted on average more selective out-of-state applicants. Figure 3 shows that admission probabilities for foreign applicants and non-Texas minorities with population-average characteristics but below population-average SAT scores would have decreased post-Top Ten. In contrast, admission probabilities for foreign applicants and non-Texas minorities with population-average characteristics would have increased for individuals with above population-average SAT scores. At A&M compared to UT, this effect is more pronounced for foreign compared to out-of-state domestic applicants, reflecting A&M’s higher admission rates for foreign applicants compared to those at UT post Top Ten. For a number of reasons, A&M was particularly committed to increasing its enrollment of foreign students even after the squeeze on admission spots in the Post-Top Ten era. Given caps on out-of-state enrollments, supposing UT
had already reached its maximum capacity for foreign students, it is not surprising it did not increase its foreign student enrollments.

DISCUSSION: INSTITUTIONAL SELECTIVITY AND FOREIGN STUDENTS AS A SIGNAL OF ASCENDING GLOBAL COMPETITIVENESS

This study uses a unique dataset consisting of a census of all applicants to Texas’ two public flagship universities in the wake of Texas’ post-affirmative action era to highlight a group—foreign students—that is little-examined in the context of institutional efforts around diversity. Foreign students are an increasingly important part of college and university diversification efforts and will figure prominently in future debates about how colleges and universities in the United States define college diversity and its importance in an international higher education marketplace (Bowen et al., 2005; Stevens, 2007). Using a dual-pronged analytic strategy of comparing basic admission rates (without controls) to admission probabilities that incorporate controls, this study seeks to understand the *prima facie* effects of the Top Ten Plan as well as a set of counterfactuals that would be expected if applicants from each group exhibited the same observed demographic and academic characteristics. Predicted probabilities approach more causal arguments about the underlying factors that contribute to differences in admission rates after accounting for observed differences in the underlying composition of each group’s applicant pool before and after the passage of the Top Ten Plan.

Based on examination of Texas’ flagship public universities, UT and A&M, this study’s findings support hypotheses about the increasing desireability of foreign students at slightly less-selective public flagships like A&M. Even amidst the squeeze on spots for in-state applicants after the passage of the Top Ten Plan in 1998, A&M admitted foreign applicants at a higher rate than before the squeeze brought on by the Top Ten Plan. Predicted admission probabilities
corroborate the descriptive findings in that an individual with population-average characteristics—i.e. a foreign, male applicant to UT who attended a Texas public high school, did not take any Advanced Placement exams in high school and proposed a non-STEM major—would have experienced a higher predicted probability of admission at A&M post- compared to pre-Top Ten Plan even though predicted admission probabilities would have, on average, decreased for in- and out-of-state black and Hispanic immigrants as well as domestic Texas applicants with population-average characteristics.

On the other hand, foreign applicants to the slightly more-selective UT experienced a decrease in their admission rate after compared to before the passage of the Top Ten Plan. Interestingly, foreign applicants to UT would have experienced modest increases in their admission probabilities had their profiles reflected the population-average characteristics mentioned above. That is, even though foreign applicants to UT became more-selected along lines of average SAT score post- compared to pre-Top Ten Plan, compositional differences from the population averages in their demographic and other prior academic performance characteristics offset our counterfactual predictions of increases in admission probabilities. The observed decrease in overall admission rates for foreign applicants to UT post Top Ten reflects this reality.

At a time when the United States continues to seek the best-and-brightest STEM students, this study also investigates whether foreign and immigrant students tend to come from more positively-selected and STEM-heavy academic backgrounds, on average, than domestic minority students. Findings from both the observed admission rates and counterfactual predictions align closely. Both foreign and Texas immigrant black and Hispanic STEM applicants to UT experienced (and were predicted to experience) a modest increase in predicted admission
probability after the passage of the Top Ten Plan. STEM applicants to UT from each other group possessing population-average characteristics experienced a significant decrease in admission probabilities post- compared to pre-Top Ten. At A&M, predicted admission probabilities for foreign applicants’ with population-average characteristics remained virtually unchanged before and after the Top Ten Plan. Predicted admission probabilities for all non-foreign students, including Texas minority immigrants, further corroborate observed rates, predicting non-foreign applicants to experience significant decreases in admission rates compared to those for foreign applicants post- versus pre-Top Ten. In terms of SAT score, both UT and A&M showed signs of heightened selectivity on the basis of SAT score among admitted foreign undergraduates compared to other groups of admitted applicants post-Top Ten, but the degree of heightened selectivity is more pronounced at the slightly more-selective UT. These findings suggest some partiality in favor of STEM foreign and Texas minority immigrants to UT and of foreign (but not Texas immigrant) applicants to A&M. If all applicants possessed population-average characteristics, STEM majors among the most-selected applicant groups (foreign applicants at both UT and A&M and Texas immigrant minorities to UT) would have earned some admission preference.

UT’s particularly pronounced selectivity among foreign applicants is largely the result of a surge in its numbers of foreign applicants beginning in the mid-1990s. Beginning at approximately the same time, UT’s ability to admit foreign students was limited by a squeeze on admission spots accompanying the passage of the Top Ten Plan. At A&M, the numbers of foreign applicants did not surge, but the percentage of admitted applicants—and their respective admission probabilities controlling for a variety of factors—did. The result: A&M came to admit
numbers of foreign undergraduates on par with UT, but was somewhat less-selective in the SAT scores of those foreign students it admitted.

These findings are best understood in the context of the practices guiding admission decisions at public universities. Public universities are funded largely with state tax dollars and are grounded on institutional missions to serve their state’s residents. As such, some public, four-year universities with high levels of legislative oversight place caps on the numbers of out-of-state (including foreign) students they can enroll (Rizzo & Ehrenberg, 2003b); (Gerald & Haycock, 2006). Despite highly-selective flagship universities, like UT, already trending toward their maximum politically- and legislatively-acceptable levels of foreign student enrollments, the last decade in particular has witnessed gradual increases in the numbers of out-of-state, undergraduates—including foreign students—applying, gaining admission, and enrolling at less-selective, four-year public universities (Rizzo & Ehrenberg, 2003b). As a result, out-of-state and foreign undergraduate enrollments at many slightly less-selective public universities are coming onto par with enrollments of these same groups at already-selective flagships (Gerald & Haycock, 2006; Institute of International Education, 2008b; Mixon, 1992).

The desire of public universities to admit foreign students despite the squeeze on admissions spots from in-state applicants reflects foreign students’ desirability and highly-selected nature (Institute of International Education, 2008b). Foreign applicants often hail from prestigious and competitive-admission (often private) secondary schools with a pipeline to American universities (Stevens, 2007). Many foreign applicants to American universities also come from families with sufficient social and financial capital to support overseas higher education. As such, universities may admit foreign applicants to help fill a variety of interrelated institutional priorities, such as: 1) Attracting a diverse group of students from around the world
who enhance students’ educational experience by increasing their exposure to cultural, geographic, and ethnic diversity (Stevens, 2007); 2) Admitting at least a portion of their class that can afford to pay full tuition (i.e. admitting full-freight students as a way to generate revenue for the university and place less burden on the endowment or tax dollars)\(^4\), and; 3) Composing a class that encompasses a wide range of disciplines of major including but certainly not limited to students who will feed into the university’s STEM pipeline. Foreign students in general and STEM foreign students in particular not only strengthen the university’s global competitiveness, but later may contribute to the United States’ graduate education programs and/or the American labor market (Breland et al., 2002; Caboni & Adisu, 2004). The presence of foreign students also signals to other potential foreign applicants and the higher education community that a university is able to attract highly-qualified students (based on measures like SAT scores, for example) from around the world (Bowen et al., 2005). Certainly, these priorities are not mutually-exclusive, and in many cases more than one priority is enhanced through the admission of particular groups of students. Foreign students, for example, may bring cultural and educational diversity as well as help boost a university’s STEM pipeline into graduate education.

That predicted admission probabilities for both foreign and Texas immigrant black and Hispanic STEM applicants held constant rather than decreasing amidst the squeeze on spots from in-state domestic minorities after the passage of the Top Ten Plan lends some support to the theory that that both groups were positively-selected on major in addition to SAT, especially after the passage of the Top Ten Plan. This phenomenon is at least partly explained by the fact that both Texas immigrant minorities and foreign applicants experienced some degree of

\(^4\) On the matter of revenue generation, which falls outside the empirical scope of this study due to data limitations, recent work shows that public universities use out-of-state enrollments, including foreign students, to enhance the caliber of their institutions and to increase overall student-quality (students’ qualifications based on measures like SAT score) as well as quality of particular disciplines. Generating revenue is \textit{not} a primary aim of out-of-state enrollments (Rizzo and Ehrenberg 2003; Breland et al. 2002).
positive-selection on academic characteristics post-Top Ten—though certainly of modest magnitude. This is likely because the applicant pool in each group became more-selected in and of itself, and/or because institutions began admitting more selective applicants from these groups. In particular, for admitted foreign students at both UT and A&M, noticeable increases in average SAT scores after the passage of the Top Ten Plan highlight positive-selection as a major part of the story.

In addition to the squeeze on admission spots for out-of-state applicants in the wake of the Top Ten Plan, the tightening of student visa regulations after the 9/11 attacks in the United States may also have adverse effects on the ability of universities to maintain the same admission standards for foreign students if there was a decline in the numbers of applicants as a result of awareness of tightened visa regulations. Interestingly, these findings show that the numbers of foreign applicants to both UT and A&M increased substantially in the wake of the Top Ten Plan and that both universities admitted an increasing share of foreign applicants without compromising SAT- and STEM-based selectivity among admits. These findings are particularly significant in light of previous work (Brown & Bean, 2009) showing foreign STEM enrollments declined significantly at the graduate education level in the post 9/11 era after increasing steadily until that point. The study points to tightened visa review procedures as a likely cause of the decline, finding that enrollments in the STEM fields did not decline among permanent resident/citizen graduate students (Brown & Bean, 2009). Although my study does not directly investigate enrollment rates, the finding that neither UT nor A&M—two of the United States’ largest and selective public flagship universities—experience a similar downward trend in admission rates is noteworthy, especially since foreign STEM undergraduates are an important pipeline into graduate education in the United States.
Much of this study emphasizes that foreign students possess a variety of sought-after qualities that may further boost their chances of gaining admission were it not for state caps on out-of-state enrollments and the squeeze on spots resulting from the Top Ten Plan. However, foreign students’ admission probabilities are limited by the fact that, as non-citizens and non-Texas residents, they do not benefit from preferential admission policies, such as affirmative action or alternative policies that rose in lieu of affirmative action. Particularly compared to in-state minority students who also bring educational and cultural diversity to their university, foreign applicants also face stiffer competition for admission because they must be admitted from an already highly-selected pool of foreign students (NAFSA: Association of International Educators, 2009). Our findings largely corroborate common perceptions that it is more difficult to gain admission as a foreign student than as a domestic, in-state applicant, and particularly as an in-state minority student (Office of Admissions, University of Texas at Austin, 2008; USA Study Guide, 2007).

Despite its contributions in the relatively understudied area of foreign student admissions at the undergraduate level, this study opens possibilities for future research. First and foremost, future projects should seek to generalize findings beyond Texas. Second, future analysis of immigrants should attempt to identify a more appropriate measure of immigrant status. Without data on birthplace of applicants, this study relied on citizenship status, treating immigrants as those who attended high school in the United States and are permanent residents or non-citizens, indicating they were born outside the United States. A number of applicants treated as domestic, however, may in fact be naturalized citizens who immigrated into the United States at a young age. Finally, future research should identify data with larger numbers of minority immigrants—particularly those outside Texas. In this study, many of the logistic coefficients for the immigrant
groups were not significant, but it is possible that their non-significance is due to a lack of statistical power rather than lack of substantive differences. As such, future research in this area would enable more reliable analyses of the comparisons between foreign students and immigrants and generalize to broader trends in foreign admissions if it were to include data from flagships in a variety of states and if it could include a large enough groups of immigrants with more accurate information on birthplace.
References


S.B. no. 175, (2009).


<table>
<thead>
<tr>
<th>Variable</th>
<th>Population</th>
<th>UT</th>
<th>A&amp;M</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission Outcome</td>
<td>0.66 (0.47)</td>
<td>0.61</td>
<td>0.75</td>
<td>0.43) =1 if Admitted</td>
</tr>
<tr>
<td>Demographic and Prior Achievement</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign</td>
<td>0.17 (0.36)</td>
<td>0.21</td>
<td>0.09</td>
<td>0.28) =1 if non-U.S. citizen and self-identified as 'international' on application</td>
</tr>
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<td>Domestic and Immigrant Blacks &amp; Hispanics, non-Texas</td>
<td>0.07 (0.25)</td>
<td>0.05</td>
<td>0.10</td>
<td>0.30) =1 if Permanent Resident or non-U.S. citizen, attended a non-Texas, U.S. high school, and identified as 'black' or 'Hispanic' (as opposed to 'international') on application</td>
</tr>
<tr>
<td>Black and Hispanic Immigrants, Texas</td>
<td>0.03 (0.18)</td>
<td>0.03</td>
<td>0.03</td>
<td>0.16) =1 if Permanent Resident or non-U.S. citizen, attended a Texas high school, and identified as 'black' or 'Hispanic' (as opposed to 'international') on application</td>
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<tr>
<td>Black and Hispanic Domestics, Texas</td>
<td>0.73 (0.44)</td>
<td>0.70</td>
<td>0.78</td>
<td>0.41) =1 if U.S. citizen, attended a Texas high school, and identified as 'black' or 'Hispanic' on application</td>
</tr>
<tr>
<td>Male</td>
<td>0.52 (0.50)</td>
<td>0.52</td>
<td>0.52</td>
<td>0.50)</td>
</tr>
<tr>
<td>Took 1+ Advanced Placement exam</td>
<td>0.18 (0.38)</td>
<td>0.16</td>
<td>0.22</td>
<td>0.42) =1 if student submitted scores for at least one Advanced Placement (AP) exam taken in high school</td>
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<tr>
<td>SAT or SAT-converted ACT score</td>
<td>1090.07</td>
<td>1101.98</td>
<td>1069.42</td>
<td>155.83) SAT variable used in logistic regressions is centered around 1090.07. Quadratic and cubic SAT terms included in logistic regressions are centered around the population mean before exponentiation.</td>
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<tr>
<td>Proposed STEM major</td>
<td>0.49 (0.48)</td>
<td>0.37</td>
<td>0.69</td>
<td>0.46) =1 if student proposed a science, technology, engineering, math, or health major in college application</td>
</tr>
<tr>
<td>School-Level Characteristics</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>0.72 (0.44)</td>
<td>0.68</td>
<td>0.80</td>
<td>0.40) =1 if University identifies high school as a public school</td>
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<tr>
<td>Private</td>
<td>0.09 (0.28)</td>
<td>0.08</td>
<td>0.09</td>
<td>0.29) =1 if University identifies high school as a private school</td>
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<tr>
<td>Missing/Unclassified</td>
<td>0.19 (0.38)</td>
<td>0.24</td>
<td>0.11</td>
<td>0.31) =1 if University cannot identify or classify high school type as public or private</td>
</tr>
<tr>
<td>Feeder High School</td>
<td>0.09 (0.29)</td>
<td>0.09</td>
<td>0.10</td>
<td>0.29) =1 if high school is one of the top 20 to have the largest absolute numbers of students admitted to either UT or A&amp;M in 2000 (See Tienda et al., 2003).</td>
</tr>
<tr>
<td>In-state (Texas) applicant</td>
<td>0.79 (0.40)</td>
<td>0.75</td>
<td>0.85</td>
<td>0.35) =1 if attended a high school in Texas and is therefore eligible for admission under the Top 10 Percent Plan (12% and 17% of foreign applicants to UT and A&amp;M</td>
</tr>
<tr>
<td>Top 10 Percent Plan Years (1998- )</td>
<td>0.50 (0.50)</td>
<td>0.53</td>
<td>0.46</td>
<td>0.50) =1 if ’year’ is 1998 or later</td>
</tr>
</tbody>
</table>

NOTE: Logistic regression models include these variables in addition to group x SAT (centered at across-university population mean), group x SAT², group x SAT³, and group x STEM interactions.

¹Population means and standard deviations are weighted by proportion of applicants at each university. Population means are then used in predicting predicted admission probabilities.
<table>
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<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>Overall</td>
<td>Pre-Top 10</td>
<td>Post-Top 10</td>
</tr>
<tr>
<td></td>
<td>N (total) (1)</td>
<td>N (admit) (2)</td>
<td>% of All Apps (3)</td>
</tr>
<tr>
<td>Non-Texas</td>
<td>10,869 (5)</td>
<td>1,330 (31)</td>
<td>1,710 (26)</td>
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<td>Domestic and Immigrant Blacks &amp; Hispanics</td>
<td>2,709 (1)</td>
<td>788 (56)</td>
<td>601 (46)</td>
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<td>Immigrant Blacks &amp; Hispanics</td>
<td>1,765 (1)</td>
<td>624 (66)</td>
<td>559 (68)</td>
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<tr>
<td>Domestic Blacks &amp; Hispanics</td>
<td>35,487 (17)</td>
<td>12,845 (74)</td>
<td>12,445 (68)</td>
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<tr>
<td>Total</td>
<td>50,830 (25)</td>
<td>15,587 (65)</td>
<td>15,315 (57)</td>
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1 'Domestic' refers to non-immigrant students who apply from within the United States. 'Immigrant' refers to students who were born outside the United States but who attended a Texas high school.
2 'Foreign' refers to students who were born outside the U.S. and attended non-U.S. high schools.
3 Total university enrollment at UT-Austin between 1991-2003 was 205,733 (including whites and Asians). Total university enrollment at A&M between 1992-2002 was 160,021 (including whites and Asians).
4 T-tests for significance are based on differences between foreign students and each comparison group. *** Significant at .001, ** Significant at .01, and * Significant at .05, and + Significant at .10.
Table 3. Mean Standardized Test Scores (SAT or equivalent\(^1\)) of All Applicants and Admits, by Group, Policy Regime, and Institution

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<tr>
<td></td>
<td>Pre-Top 10</td>
<td>Post-Top 10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>All (1)</td>
<td>Admit (2)</td>
<td>All (3)</td>
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<tr>
<td>Foreign</td>
<td>1140</td>
<td>1264</td>
<td>1181</td>
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<tr>
<td>Domestic and Immigrant Blacks &amp; Hispanics</td>
<td>1133</td>
<td>1228</td>
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<td>Immigrant Blacks &amp; Hispanics</td>
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<td>1124</td>
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<tr>
<td>Total</td>
<td>1091</td>
<td>1141</td>
<td>1112</td>
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Note: Standard deviations in parentheses.

1 Where SAT was not provided, converted ACT scores were substituted.

2 ‘Domestic’ refers to non-immigrant students who apply from within the United States. ‘Immigrant’ refers to students who were born outside the United States but who attended a Texas high school. ‘Foreign’ refers to students who were born outside the U.S. and attended non-U.S. high schools.

3 T-tests for significance are based on differences between foreign students and each comparison group. *** Significant at .001, ** Significant at .01, and * Significant at .05, and + Significant at .10.
### Table 4. STEM vs. Non-STEM Applicant and Admission Rates, by Group, Policy Regime, and Institution

<table>
<thead>
<tr>
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<tr>
<td></td>
<td>Overall</td>
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<tr>
<td></td>
<td>STEM Admits</td>
</tr>
<tr>
<td>Foreign</td>
<td>5,787</td>
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<tr>
<td>Domestic and Immigrant Blacks &amp; Hispanics</td>
<td>934</td>
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<tr>
<td>Immigrant Blacks &amp; Hispanics</td>
<td>691</td>
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<tr>
<td>Domestic Blacks &amp; Hispanics</td>
<td>11,591</td>
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<td>Total</td>
<td>19,003</td>
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<table>
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<tr>
<th>Group 1</th>
<th>A&amp;M (1992-2002)</th>
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<tbody>
<tr>
<td></td>
<td>Overall</td>
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<tr>
<td></td>
<td>STEM Admits</td>
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<tr>
<td>Non-Texas</td>
<td>2,265</td>
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<tr>
<td>Domestic and Immigrant Blacks &amp; Hispanics</td>
<td>2,019</td>
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<td>Immigrant Blacks &amp; Hispanics</td>
<td>581</td>
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<td>Domestic Blacks &amp; Hispanics</td>
<td>15,274</td>
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<td>Total</td>
<td>20,139</td>
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1 'Domestic' refers to non-immigrant students who apply from within the United States. 'Immigrant' refers to students who were born outside the United States but who attended a Texas high school. 'Foreign' refers to students who were born outside the U.S. and attended non-U.S. high schools.

2 Total university enrollment at UT-Austin between 1991-2003 was 205,733 (including whites and Asians). Total university enrollment at A&M between 1992-2002 was 160,021 (including whites and Asians).

3 T-tests for significance are based on differences between foreign students and each comparison group. *** Significant at .001, ** Significant at .01, and * Significant at .05, and + Significant at .10.
Table 5. Predicted Probabilities and Percentage Point Differences in Probabilities of Admission, by Group, STEM vs. non-STEM Proposed Major, Policy Regime, and Institution

<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>Pre-Top 10</td>
<td>Post-Top 10</td>
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<tr>
<td></td>
<td>%Point Diffs</td>
<td>%Point Diffs</td>
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<tr>
<td>Group 1</td>
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<tr>
<td>Foreign</td>
<td>.294</td>
<td>.267</td>
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<tr>
<td>Dom. &amp; Immig Blacks</td>
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<td>.627***</td>
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<tr>
<td>&amp; Hispanics</td>
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<tr>
<td>Immigrant</td>
<td>.760***</td>
<td>.764***</td>
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<tr>
<td>Blacks &amp; Hispanics</td>
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<tr>
<td>Domestic</td>
<td>.881***</td>
<td>.896***</td>
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<tr>
<td>Total</td>
<td>.643</td>
<td>.638</td>
</tr>
</tbody>
</table>

1 'Domestic' refers to non-immigrant students who apply from within the United States. 'Immigrant' refers to students who were born outside the United States but who attended a Texas high school. 'Foreign' refers to students who were born outside the U.S. and attended non-U.S. high schools.

2 As shown in Table 4, predicted probabilities include controls for: 1) Individual demographic and prior achievement characteristics (gender, in-state Texas resident indicator, whether or not a student took at least one AP exam in high school, SAT/converted ACT score along with quadratic and cubic SAT terms to account for non-linearities, and proposed STEM or non-STEM major); 2) School-level characteristics (private and 'feeder' high school indicators), and 3) Interactions between group x SAT (as well as group x SAT^2 and group x SAT^3) and group x major.

3 Chi-squared tests for significance are based on differences between foreign students and each comparison group. *** Significant at .001, ** Significant at .01, and * Significant at .05, and + Significant at .10.
Figure 1. Foreign Student Applicants & Admits at UT and A&M
Figure 2. Group Admission Probabilities by Major and Institution, Pre- and Post- Top 10 Plan

Models include controls for gender, AP exams taken, major, high school type, TX residency, and group x major and group x SAT interactions.
Figure 3. Group Admission Probabilities by SAT Score and Institution, Pre- and Post- Top 10 Plan

Models include controls for gender, AP exams taken, major, h.s. type, TX residency, and group x major and group x SAT interactions.

--- --- TX Dom Black & Hisp · · TX Immig Black & Hisp · · · · · · · · Non-TX Black & Hisp ----- - Foreign