

## Introduction

In 1998, Texas initiated a bold new statewide university admission policy aimed at increasing college access for traditionally underserved students in the state.<sup>1,i</sup> House Bill 588 (known as the Texas Top Ten Percent Plan [TTPP]) guaranteed automatic admission to the college or university of their choice for all top-performing students in Texas public high schools. Importantly, this flexibility left open to the student, rather than the university, the decision of which campus to apply to and enroll, shifting the dynamic interplay between individual and institution that existed in the college choice process in Texas. Subsequently, 4 additional legal and policy changes have added complexity to understanding college choice for highly qualified, traditionally underserved students in Texas. First, the 2003 *Grutter v. Bollinger* United States Supreme Court Case affirmed as constitutional the consideration of race as part of a holistic admissions process seeking to create a diverse student body from which educational benefits could be derived. As a result, the University of Texas at Austin (UT), 1 of 2 elite institutions in the state, reviewed its procedures and, in 2005, began to include again the consideration of race in admissions review.<sup>ii</sup>

Second, also in 2003, the Texas Legislature passed House Bill 3015 deregulating designated<sup>iii</sup> tuition and allowing public university governing boards to set different rates. These changes resulted in both a marked increase in cost of tuition at 4-year institutions overall and a disproportionately higher rate of tuition at the elite institutions relative to all other comprehensive universities in Texas.<sup>4</sup> Third, revisions were made to the percent plan legislation itself (Senate Bill 175) such that caps could be set on the proportion of entering students that were comprised of TTPP beneficiaries. Specifically, only up to 75% of enrolled freshmen are now required to be admitted through TTPP. Finally, a series of related legislative actions were taken in 2009 to support the expansion of the number of elite public institutions in the state. Specifically, House Bill 51 and subsequently voter-approved Proposition 4 designated a set of

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<sup>i</sup>The TTPP was created in direct response to the 5<sup>th</sup> Circuit Court of Appeals' 1996 decision in *Hopwood v. Texas*, which ended the ability for institutions included in the jurisdiction to consider race as part of their admissions processes. It was not created, however, to replace the use of race-conscious policies that had been in place for various decades prior to the creation of this state policy.<sup>1</sup>

<sup>ii</sup>Texas A&M, the state's other elite institution, declined to revise its admissions processes to include consideration of race.<sup>2</sup>

<sup>iii</sup>For a fuller discussion of the types of tuition and other academic charges imposed on students in Texas, see Texas Higher Education Coordinating Board (2010).<sup>3</sup>

funding streams for emerging research universities<sup>iv</sup> in order that they might become increasingly competitive. As such, the 7 identified institutions have distinguished themselves as an important group to understand separately from both the 2 elite publics (i.e., UT Austin and Texas A&M) and the remaining public 4-year colleges and universities.

It is this broader context, then, that sets the stage for understanding the TTPP and its contributions to college access in Texas. Fourteen years after the plan's implementation, we see great strides and complexities in understanding student outcomes as a result of the percent plan. However, the legal controversy over the percent plan both in Texas and other states incorporating similar yet distinctly motivated alternative admissions plans continues to play out from institutional decision boards to the highest court in the nation.

Much has already been written about the importance of as well as the contributions and barriers to college access,<sup>5,6</sup> a term that has come to represent a full range of experiences leading up to and through the admission and enrollment processes.<sup>7</sup> This study seeks to add to that discussion by exploring 2 research questions:

- 1) Descriptively, what are the admission and enrollment patterns within racial/ethnic groups of *percent plan-eligible* students, over time, for Texas elite research, emerging elite research, and remaining public universities?
- 2) Given that all eligible percent plan students may enter the institution of choice in Texas, does which type of institution a TTPP student selects relate to their race/ethnicity?

In particular, the results from this work contribute to 3 related scholarly, policy, and legal discussions. First, it extends the percent plan and college access literature bases by looking explicitly at admission and enrollment patterns of equally eligible students, disaggregated by important state campus classifications, over time. Second, it adds a differentiated perspective through which to consider the effectiveness of governmental and institutional admissions policy decisions as they relate to efforts to increase educational access and attainment levels of the state. Finally, it informs the continuing legal debates regarding enrollment of underrepresented students as a result of those decisions.

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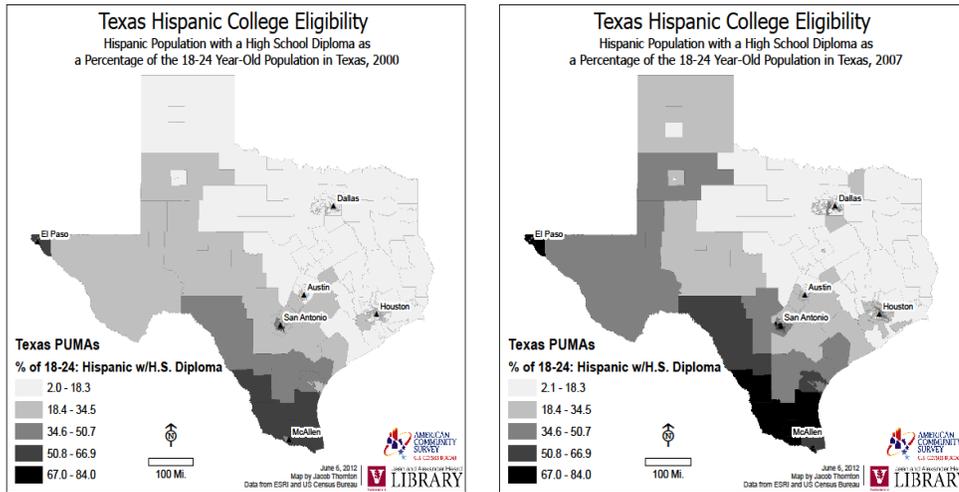
<sup>iv</sup>The identified emerging elite universities include: the University of North Texas, University of Texas at Arlington, University of Texas at Dallas, University of Texas at El Paso, University of Texas at San Antonio, Texas Tech, and the University of Houston. As a point of reference, Texas has 41 public colleges and universities and 50 public community college districts.

The paper is divided into 3 sections. First, a review of 4 relevant bodies of literature is presented: Texas and its current demographic and economic realities; the complex and integrated relationship of college access and choice; the technical realities of evaluating such alternative admissions policies; and the empirical work, to date, on the impacts of such policies. Next, the longitudinal descriptive analyses are presented in the context of those data challenges. Finally, the paper concludes with a discussion of the implications of the analyses for the consideration of access and equity in Texas higher education.

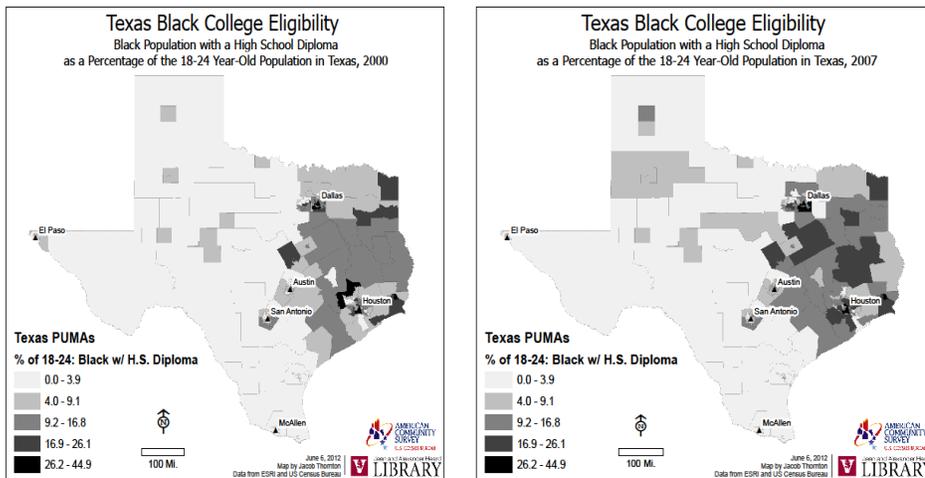
### **The Demography of Student Enrollment in Texas**

In 2010, the US Census documented a population growth of 27.3 million people since 2000; Hispanics constituted over half of this increase. Concomitantly, both Hispanics and black students reached a peak in the number of high school graduates, a condition that also led to a record increase in the number of college graduates, of which Hispanic students also constituted a majority of this growth.<sup>8</sup> Texas data from this decade, which constitutes the majority of the percent plan years under analysis, similarly demonstrated marked increases in the numbers of college-eligible Hispanic and African American students (see Figures 1 and 2). Research by Flores and Park,<sup>9</sup> however, documents that Hispanic and black students are still more likely relative to their white peers to not enroll in college or enroll in a 2-year school as a second choice option.

**Figure 1.** Texas Hispanic population with a high school diploma as a percentage of the 18- to 24-year-old population, 2000 and 2007<sup>10</sup>



**Figure 2.** Texas African American population with a high school diploma as a percentage of the 18- to 24-year-old population, 2000 and 2007<sup>10</sup>

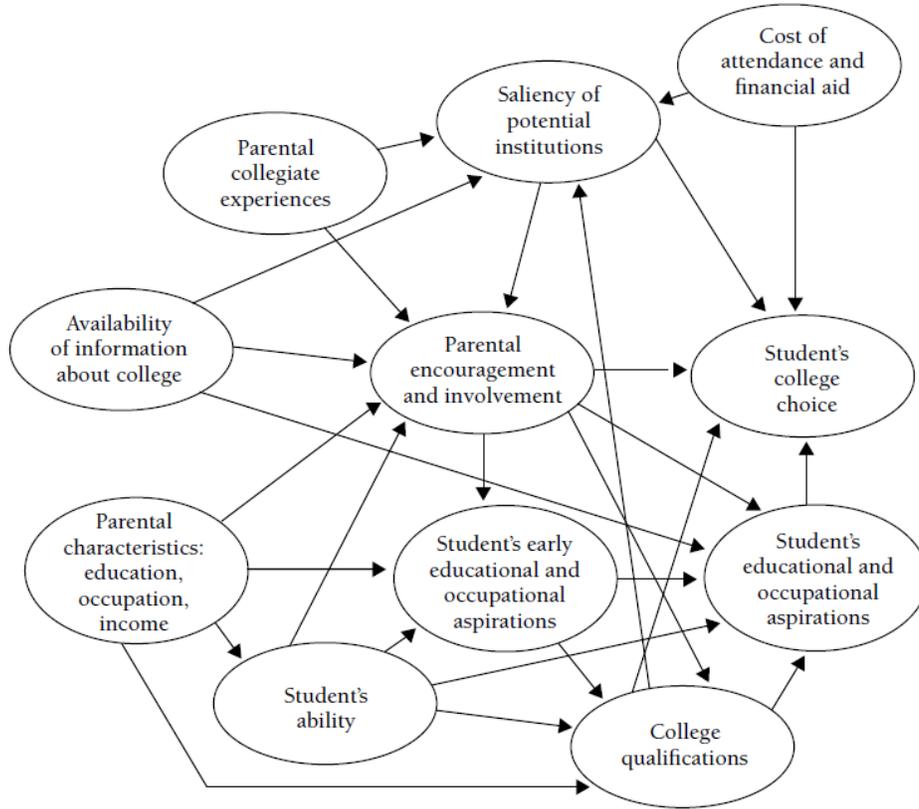


### **College Access and College Choice**

Scholars have, for decades, sought to understand the relative contributions to the ways in which college is accessed and chosen. While a comprehensive review of that literature is beyond the scope of this paper, we present here a synthesis of the primary conclusions. From an economic perspective, college choice is a process by which the short-term costs are weighed against the potential longer benefits accrued as a result of completion.<sup>11</sup> Manski and Wise,<sup>12</sup> for example, describe the process as one that begins, critically, with a decision to apply to a college or colleges. That choice is influenced by a set of individual (e.g., academic achievement, family income, parental education), institutional (e.g., quality of school), and contextual (e.g., peers' plans) factors that ultimately inform the enrollment process as well.<sup>13</sup>

Hossler et al<sup>14</sup> expand those economic frameworks and describe a 3-phase process by which students become predisposed to, search for, and ultimately decide whether and where to enroll in college. Comprehensively, a complex set of contributions interacts with and influences the process during each of those phases, reflected in part in Figure 3. As this diagram suggests, multiple forms of capital (e.g., social, economic) are critical and may distinguish potential students' opportunities to equitably make decisions about where to apply and enroll. In predisposition, specifically, students develop "occupational and educational aspirations as well as the emergence of intentions to continue education beyond the secondary level."<sup>15(p6)</sup> The search phase involves the accumulation of information that is heavily influenced by determinants like access to accurate data, perceptions of ability to pay, and knowledge of financial aid choices. Finally, students make choices about where to enroll, again a decision heavily influenced by contextual contributions like socioeconomic status, academic preparedness, and access to information.

**Figure 3.** The College Choice Model<sup>15</sup>



**Differing Models of College Choice**

Testing and expanding the generalized model presented above, scholars have also sought to understand in an empirical and increasingly finer grained way the extent to which models of college access and choice vary for different groups of students. For example, Heller<sup>16</sup> found that lower income students are more sensitive in their decision making to tuition increases than are students in middle- and upper-income brackets. As another, Kinzie et al<sup>17</sup> describe that “geography, religion, an institution’s social reputation and familial preferences were strong factors in [African American] students’ choice of HBCUs. Reasons for choosing predominately white colleges include athletic recruitment, proximity to home, and an institution’s academic reputation. . . .”(pp37-38) In short summary, then, comprehensive college choice is one that often provides

“a distinctly different set of destinations”<sup>17(p47)</sup> for students, too often based on inequitable factors.

### **The Technical Realities of Studying Affirmative Action Bans and Alternative Admissions**

In understanding the technical challenges of studying percent plans, a relevant broader line of research includes examinations of the effect of state policy bans on the use of affirmative action in college admissions. Much of this research employs econometric methods and utilizes individual-level census data.<sup>18</sup> While these analyses are able to account for poverty, race, and geographic variables, they are not able to identify enrollment by institution or even by levels of selectivity due to the nature of the data. Another line of econometric analysis utilizes institution-level data from the Integrated Postsecondary Education Data System (IPEDS) to also assess the effect of state bans on affirmative action practices.<sup>19</sup> The advantages of this evaluation include the ability to capture student enrollment by race by institutional sector but also by selectivity. Disadvantages, however, include the inability to capture student level characteristics such as socioeconomic status, parental education, or measures of academic rigor.

A third set of analyses has made use of nationally representative longitudinal data collected by the National Center for Education Statistics.<sup>20,21</sup> While they benefit from the use of individual-level and longitudinal data, the studies represent simulations of bans on affirmative action during periods not directly relevant to those of the percent plan in Texas under review. The analyses, nonetheless, arrive at similar conclusions regarding the negative effect of affirmative action bans on the enrollment of underrepresented students at selective colleges and universities. Of interest is whether a proposed alternative admissions plan, then, is effective in preventing the loss of underrepresented minorities caused by the bans.

Recent developments in the access to student unit record data from state agencies include the availability of individual-level data from the Texas Education Agency and the Texas Higher Education Coordinating Board. However, the current data availability does not allow for the identification of percent plan eligible students while in high school.<sup>v</sup> Moreover, these data are confidential, requiring approval from a state advisory board. Finally, the work of Long and Tienda<sup>23</sup> and Niu and Tienda,<sup>24</sup> for example, incorporate a component of administrative data

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<sup>v</sup> One exception is data utilized by Kain and colleagues.<sup>22</sup> However, these data are also confidential and not widely available to external researchers.

from the Texas Higher Education Opportunity Project. Data are individual level and have significant detail on percent plan eligibility status but are also a sample of students and rely on survey response across a limited number of years throughout the transition to college. In sum, then, the data required to execute a quasi-experimental analysis of all TTPP students are not easily accessible or available for verification as to the data validity to execute such an analysis. Those limitations, notwithstanding, however, there have been several important studies on the TTPP. Those studies are discussed in turn below.

### **What the Empirical Literature Has Documented**

#### **About the Impacts of the Alternative Admissions Policies**

The immediate aftermath of contemporary bans on race-conscious practices yielded a series of hypothetical simulations from the field of economics on the potential outcomes of such an event. Chan and Eyster<sup>25</sup> contend that, because most elite institutions consider student-body diversity as part of their missions, if affirmative action is banned, they will find other avenues to promote this retracted practice. An example, then, is an admissions policy that ignores standardized test scores or other traditional measures of academic ability as seen in the Texas and Florida percent plans. The authors find, however, that such an alternative admissions practice is likely to be inefficient and not any fairer than affirmative action policies, as the outcome is likely to be lower quality students from both minority and majority populations. For every arbitrary admissions rule, therefore, there is an affirmative action rule with the capacity to achieve the same level of diversity in the student body that is also of higher quality.<sup>25</sup> Similar results are documented by other econometric studies examining the effect of color-blind admissions on underrepresented student enrollment at selective institutions.<sup>20,21,26</sup>

Using data from the College Board, Card and Krueger<sup>27</sup> extend the discussion with an examination of whether the elimination of affirmative action caused any change in the college application behavior of minority students in states with a percent plan at somewhat selective public universities (California and Texas). They find no such change in the SAT-sending behavior of highly qualified black or Hispanic students in these states, suggesting that student and institutional behaviors are not “improved” under a race-neutral regime.

#### **Outcomes of the Texas Top Ten Percent Plan**

Research on outcomes associated with the TTPP, to date, has focused on its most selective flagship sector. Very few studies, however, have sought

to additionally examine the unique state and institutional policy characteristics that further contextualize the college choice process and attendance outcomes undertaken by students in Texas. Among the few, Domina<sup>28</sup> found with respect to flagship institutions that implementation of associated scholarships boosted rates of percent plan student enrollment at designated high schools. Flores and Horn<sup>29</sup> used a unique institutional dataset and determined that the state's tuition discount provided through House Bill 1403 was associated with increased persistence rates of high-achieving undocumented students.

Instead, in assessing the impact of the percent plan on the race and ethnic diversity of a postsecondary institution's student body, 3 key benchmarks have been considered in the literature: 1) the level of student body diversity as measured by race and ethnic representation compared to pre-ban years marked by the *Hopwood* (1996) decision; 2) the level of student body diversity as a measure of the increasing demography of race and ethnic minority students in the state; and 3) whether or not the percent plan beneficiaries are also persisting and completing in the colleges in which they enroll.

Kain et al<sup>22</sup> provide some of the earliest assessments of percent plan versus affirmative action effects on the share of black and Hispanic students attending selective flagship institutions in the state. Using a unique and confidential Texas administrative database, the authors find that any recovery in the share of underrepresented minority students attending selective public institutions after the elimination of affirmative action was likely due to the changing and increasingly minority applicant demographic pool over time, as minority students represented a larger percentage of the high school graduating classes in the state. They illustrate that the percent plan intervention, 4 years after its inception, had not undone the disadvantage experienced by black and Hispanic students after the elimination of affirmative action. Using a different dataset with individual-level administrative data, Long and Tienda<sup>23</sup> assess changes in admissions decisions that favored minority applicants prior to the dissolution of affirmative action and find that such advantages had disappeared under a new race-neutral policy regime. They further determined that these changes prevented a restoration of black and Hispanic student shares in institutional student bodies as compared to levels achieved under a policy regime using race-conscious admissions prior to the *Hopwood* decision.

Importantly, a significant number of black and Hispanic students have become eligible percent plan beneficiaries since 1998, but the informational gap on knowledge of the percent plan program has been an

important area of consideration. In a study using an original survey relating to the presence and implementation of the percent plan in Texas, Niu et al<sup>30</sup> examine how knowledge of the TTPP influences the college enrollment decisions of high-achieving minority and nonminority individuals. The authors find that high-achieving black and Hispanic students know less about the plan in comparison to similar white students. Students whose parents lack fluency in English fare even worse. The study empirically concludes that socioeconomic status and concentrated disadvantage largely account for these gaps. Further, with regard to the state's historically racially segregated patterns, the authors find that, while the high levels of residential and school segregation do, in fact, facilitate minority enrollment at selective public institutions because black and Hispanic students overwhelmingly are enrolled mostly minority high schools, concentrated disadvantage of these students more precisely explains their lower likelihood of enrolling in college.<sup>31</sup>

It is to this point that we focus our subsequent analyses. Does having a percent plan in place mean the application and enrollment of students should be an automatic behavior? What examples of enrollment might need to be present with this hypothesis in mind? This paper seeks to begin to answer these questions through longitudinal descriptive analyses of admission and enrollment patterns of equally eligible TTPP students, by institutional type.

The research on Texas percent plan specific data does not find positive effects of the policy on minority student enrollment without scholarship interventions at flagship institutions. However, we know less about the percent plan effects in relation to less selective sectors of higher education or in the context of the reinstitution of the consideration of race in admissions by select institutions in the state, in particular for African American and Hispanic students relative to their white and Asian American peers, an issue this paper takes up descriptively. We now turn to the data choice and design constructed to illuminate this question.

### **Data and Methods**

To address our research questions regarding the admission and enrollment of students to various institutions in Texas, we utilize the most accessible and detailed data in relation to institutional affiliation for this analysis: campus-level data over time from the Texas Higher Education Coordinating Board (see Texas Higher Education Coordinating Board<sup>32</sup>). Specifically, this study includes information from 1998 to 2010, the most current year for which data are available and a complete overlap with the initial and ongoing implementation of the TTPP. Table 1 presents the total

counts of TTPP admitted and enrolled students over time (see Appendix A for similar information disaggregated by race/ethnicity). As can be seen, the number of students who were admitted in 2010, 12 years after the first year of the percent plan, was twice that of those admitted in 1998 (13,092 as compared to 26,600). A similar rate of increase is exhibited in the actual enrollment of these students.

**Table 1.** Total application/admission and enrollment counts for TTPP-eligible students, 1998-2010

Year	Total Unduplicated Admission Count*	Total Enrollment Count
1998	13,092	9,597
1999	14,136	10,989
2000	15,063	11,747
2001	18,499	13,060
2002	17,748	12,782
2003	19,163	13,541
2004	19,590	13,733
2005	20,002	13,885
2006	22,886	15,842
2007	21,856	14,975
2008	23,325	15,795
2009	25,071	16,797
2010	26,600	17,701

\*Note that while this table represents unduplicated admission counts, the analyses necessarily include duplication due to student applications to multiple campuses in a single year.

As a way of better assessing the admission and enrollment patterns relative to institutional type, institutional data are categorized and aggregated into 3 distinct groups: elite institutions; emerging elite institutions; and nonselective institutions. (See Appendix B for a full list of Texas public colleges and universities by institutional type.) By race/ethnicity, the study uses descriptive analyses to represent the admission and enrollment distributions, respectively, of TTPP eligible students across the 3 institutional groups. To answer the second research question, and given the institutional-level nature of the data, the study uses chi square tests of independence to inferentially assess whether there are differences in institutional enrollment distributions by racial/ethnic groups.

## Findings

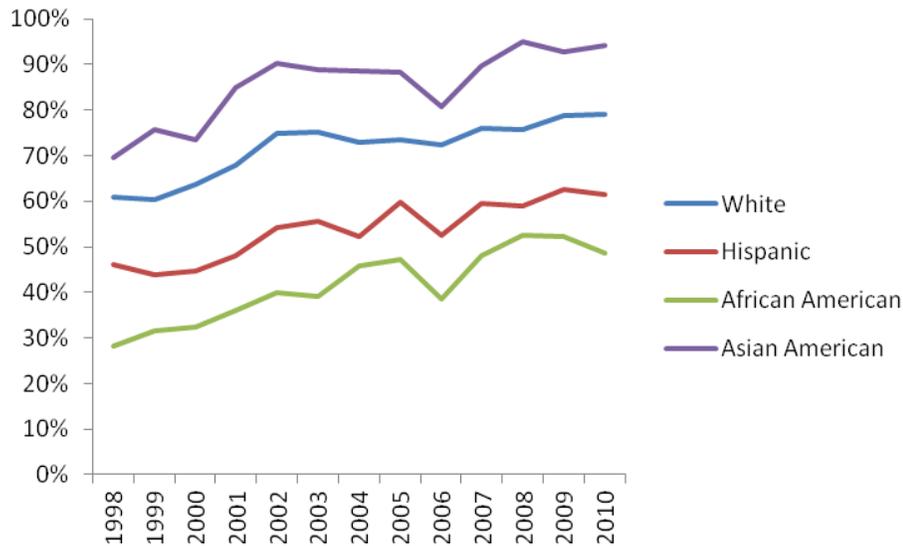
The findings of this study are presented in 2 parts: admission (only preconditioned on application as a result of TTPP eligibility) and enrollment. Each is discussed in turn.

### Admissions

Figures 4 through 6 represent the proportion of distribution of admitted TTPP eligible students, *within racial/ethnic group*, by institutional type. In considering these figures, it is important to note 2 clarifications. First, as noted in the titles, the TTPP policy guarantees admission to all eligible students who apply. In essence, then, these figures represent both application and admission (not enrollment) trends. Second, across figures, some totals for racial/ethnic groups are greater than 100%, a result of individuals applying to more than 1 public university in the state. For example, 61%, 50%, and 53% of TTPP eligible Hispanic students applied and were automatically admitted to elite, emerging elite, and nonselective institutions, respectively.

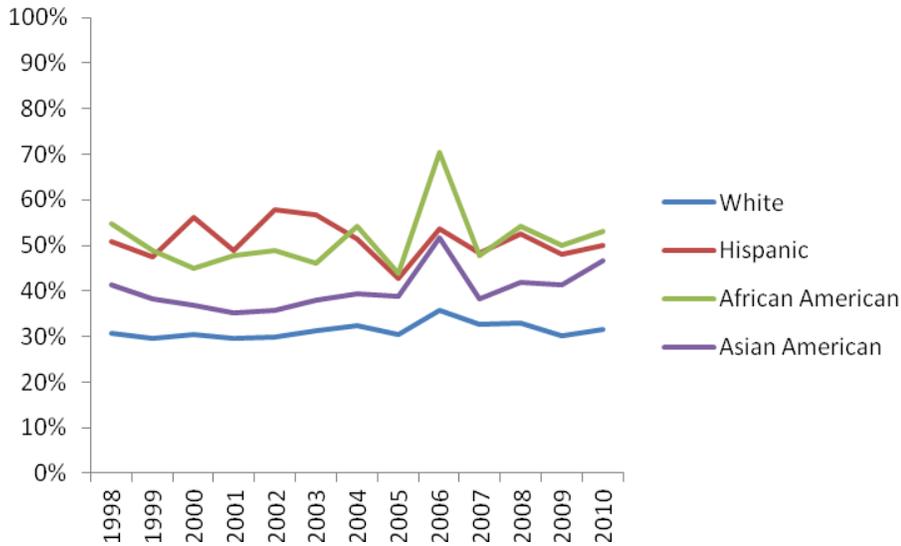
Figure 4 describes a steady but in some cases subtle increase of the proportion of TTPP students admitted to the elite institutions over time. In 1998, 61% of white TTPP eligible students applied and were automatically admitted to UT Austin and/or Texas A&M; by 2010 that proportion had risen to 79%. For Asian American TTPP students, the substantial proportion of the applications and admissions were to elite universities, a high of almost 94% of eligible students having admission to UT Austin and/or A&M in 2010. Although in smaller percentages than whites and Asian Americans, increasing proportions of Hispanic TTPP students also applied and were admitted to Texas's elite institutions, rising almost 20 percentage points from 46% in 1998 to 61% in 2010. Relative to all their TTPP counterparts, however, the proportion of African American TTPP students who applied and were admitted to elite institutions was low and remained so over time. Even by 2010, less than half of eligible African American students were gaining access to UT Austin and/or Texas A&M.

**Figure 4.** Proportion of TTPP-eligible students, within race/ethnicity, who applied and were automatically admitted to elite institutions, 1998-2010



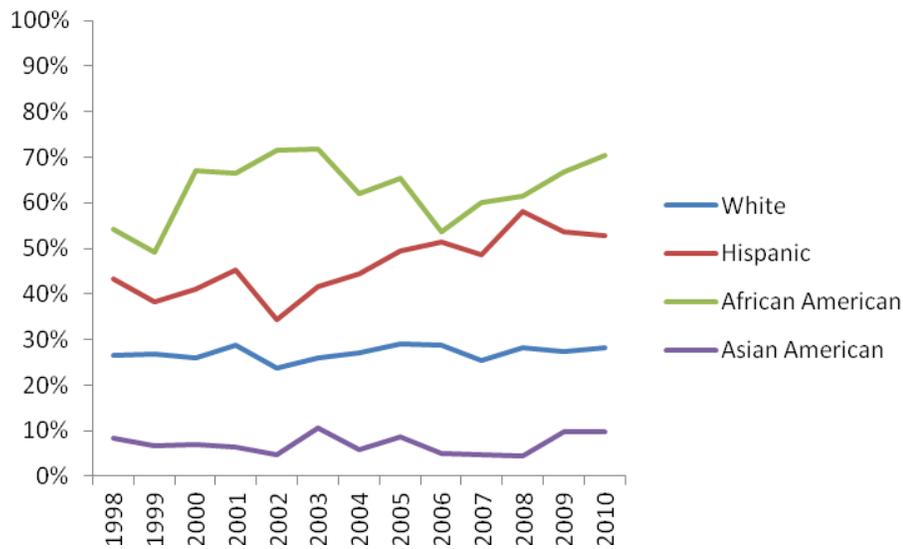
In contrast, the proportion of white TTPP students applying and being automatically admitted to emerging elite institutions remained small and stagnant over the 12-year period (see Figure 5). Among Asian Americans, the proportion of students admitted to emergent elite institutions increased slowly but steadily (from 38% to 47% over the available time period). Both Hispanics and African Americans had sizable proportions (consistently over 50%) being admitted to emerging elite institutions.

**Figure 5.** Proportion of TTPP-eligible students, within race/ethnicity, who applied and were automatically admitted to emergent elite institutions, 1998–2010



Similar descriptive trends exist at nonselective institutions (see Figure 6). Under 30% of white TTPP students chose to apply and be automatically admitted to such universities. The proportion of the Asian American TTPP student admissions at nonelite universities was even smaller, never rising above 11% in the 12-year period. In contrast, substantial shares of Hispanic (between 43% and 53%) and African American TTPP students (from 49% in 1998 to 71% in 2010) were applying and being admitted to nonselective institutions.

**Figure 6.** Proportion of TTPP-eligible students, within race/ethnicity, who applied and were automatically admitted to nonselective institutions, 1998-2010



To determine whether there was a statistically significant relationship between TTPP student race/ethnicity and the type of institution to which he or she applied and was automatically admitted, McNemar's chi square test for related data was applied.<sup>vi</sup> The results were significant ( $X^2(3) = 37,652$ ,  $p < .01$ ) and indicate that white and Asian American students were more likely to apply and be automatically enrolled at an elite institution, while Hispanic and African American students were more likely to do so at either an emerging elite or nonselective university.

### Enrollments

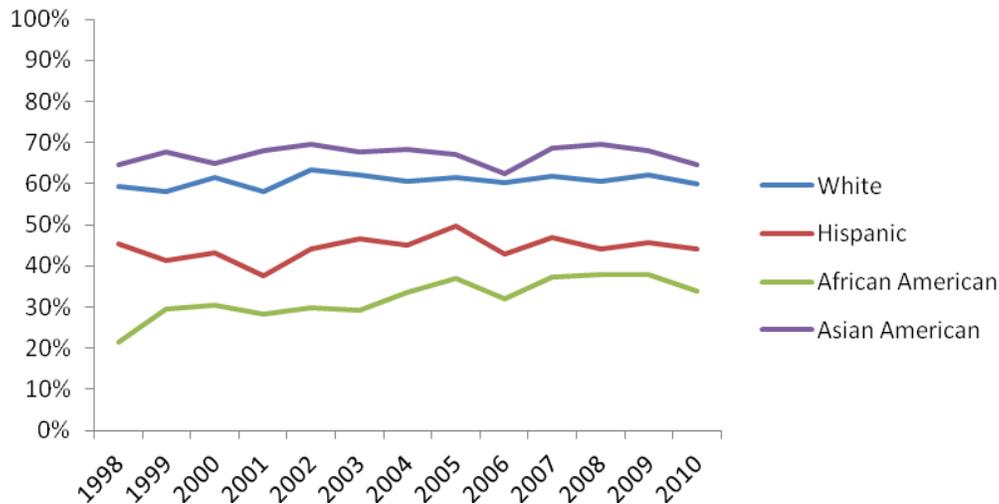
The next set of figures (Figures 7 through 9) represents the same kinds of within-racial/ethnic group distributions, over time, of *enrolled* TTPP students. Across figures, totals for racial/ethnic groups are 100%, within rounding error. Again, for example, 44%, 27%, and 29% of TTPP-eligible

<sup>vi</sup>The nature of this analysis required that white and Asian American students be combined, allowing the model to test whether there were differences between traditionally majority, African American, and Hispanic student proportions.

Hispanic students enrolled at elite, emerging elite, and nonselective institutions, respectively.

For eligible white students, enrollment distributions have remained almost unchanged over the 12-year period for which data are available; roughly 60% of white TTPP students have chosen to attend elite institutions (see Figure 7). Distributional shares of Asian American TTPP beneficiaries enrolled in elite institutions were similar to their white counterparts, ranging from 68% in 1998 to 65% in 2010. Hispanic trends were similarly stable but lower over time, with roughly 45% of TTPP beneficiaries enrolling at elite institutions. For African Americans, shares enrolled at elite institutions are lower than all other racial/ethnic groups and have increased only modestly, rising to 36% in 2010 from 29% in 1998.

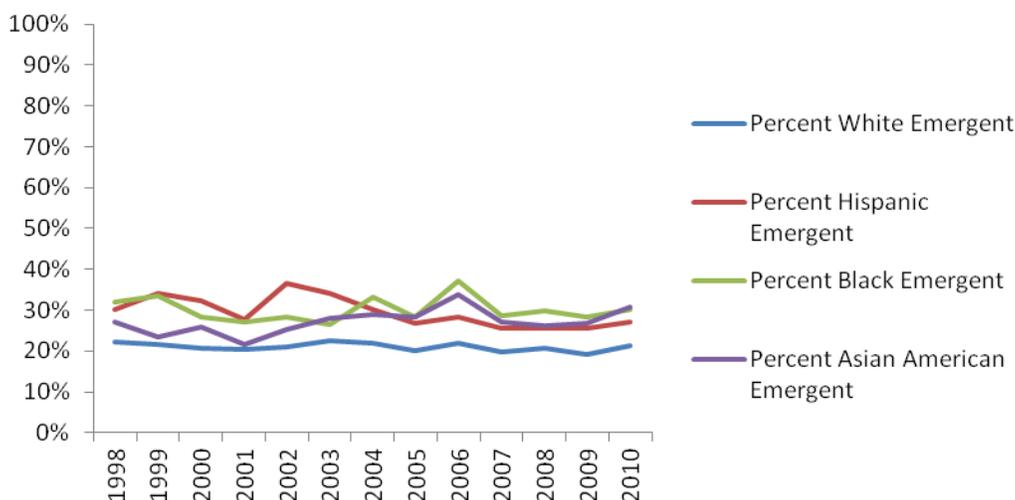
**Figure 7.** Proportion of TTPP-eligible students, within race/ethnicity, who enrolled at elite institutions, 1998-2010



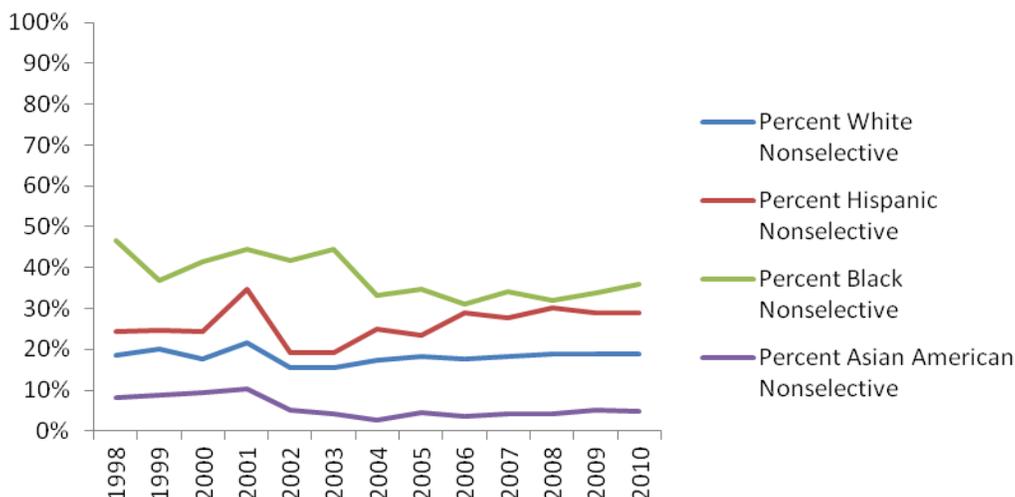
As Figures 8 and 9 represent, the remaining shares of white TTPP student enrollment distributed roughly evenly between emerging elite and nonelite universities. The proportion of Asian American beneficiaries enrolled in nonelite institutions (see Figure 9) never rose above 10% (at 5% in 2010). The remaining roughly one-third of the Asian American TTPP enrolled student body was located in emerging elite institutions (see Figure 8). As was the case with the admissions trends, however, Hispanic TTPP enrollment distributions diverged from their white and Asian

American counterparts. The proportion of these students who enroll in emerging elites has slightly declined over time (from 34% in 1998 to 29% in 2010), offset by similarly subtle increases in shares attending nonselective public institutions in the state. African American TTPP students diverge from all their counterparts in their enrollment distributions, by institutional type, over time. Although in decline over time, the greatest shares of African American TTPP enrollments have been at nonselective institutions. In 2010, for example, 36% of these eligible students were enrolled in such colleges and universities. Emerging elite universities have yielded generally similar proportions of African American TTPP students over time (at roughly 30% of the enrollment distribution).

**Figure 8.** Proportion of TTPP-eligible students, within race/ethnicity, who enrolled at emergent elite institutions, 1998-2010



**Figure 9.** Proportion of TTPP-eligible students, within race/ethnicity, who enrolled at nonselective institutions, 1998-2010



A chi square test of independence was undertaken to determine whether there was a statistical relationship between TTPP student race/ethnicity and the type of institution at which he or she enrolled. The results were again significant ( $X^2(6) = 8,971$ ,  $p < .01$ ) and similarly indicate that white and Asian American students were more likely to enroll at an elite institution, while Hispanic and African American students were more likely to do so at either an emergent elite or nonselective university.

### Discussion and Implications

The observational story told by the admission and enrollment distributions of equally eligible TTPP students is a complex but compelling one. Fundamentally, it identifies that statistically different application and enrollment patterns exist for Hispanic and especially African American TTPP beneficiaries relative to their white and Asian American counterparts. This conclusion is in line with the work of other scholars who have identified a complex set of contributors described above beyond simple policy “opportunity” that ultimately has strong, perhaps the strongest, effect on such important decisions.<sup>14</sup>

From a policy perspective, these findings suggest that the TTPP has not been associated on its own with the creation of racially and

ethnically diverse student bodies. While previous work utilizing multivariate and propensity score methods has reached a similar conclusion, this analysis goes beyond a flagship institution evaluation to also provide the perspective of enrollment trends at other eligible 4-year institutions in which students may also enroll. It also underscores the importance of institutional autonomy in admission processes. The intractable patterns for African American TTPP students, for example, suggests that universities, particularly those that are most elite, need flexibility in their ability to increase representation within both the admitted and enrolled pools of students.

From a legal perspective, these findings suggest both that the Top Ten Percent Plan has not proven to be a successful stand-alone race-neutral alternative in the creation of diverse student bodies from which the benefits of that diversity can be reaped. In fact, it highlights well the continued importance of an institution's ability to consider race/ethnicity in its admission process. These findings are particularly important given the US Supreme Court's decision to hear the *Fisher v. University of Texas at Austin* case, a case which once again challenges the consideration of race/ethnicity as part of a holistic admission process. While the plaintiff in that case argues that the Top Ten Percent Plan is sufficient to achieve a diverse student body, the findings of this study strongly suggest otherwise.

The study's findings also reinforce the complexity of the college choice process in a unique state policy context in which choice is arguably more ample due to policy change, yet structures to reduce disadvantage prior to the college choice process have not been mitigated. Returning to our theoretical frameworks, it appears that forms of social and economic capital present prior to the application stage such as school context, parental education, and income may be influencing the predisposition to apply and search.<sup>14</sup> Findings regarding the effect of concentrated disadvantage and knowledge about the automatic admission plan also provide such evidence.<sup>30</sup> Moreover, the high shares of enrollment at the emergent elite and nonselective sectors particularly for Hispanic and black TTPP-eligible students in general but also after changes in tuition policy post-2003 suggest that issues of cost might also play a role given the differences in tuition across institutions or that these costs might require methods of financing higher education based on family ability to pay by race and ethnicity.<sup>16</sup>

### **Limitations**

The findings of this study are contextualized by several important limitations of the data. First, the aggregate nature of the available data does not allow for finer grained understanding of enrollment and particularly admission trends over time. Student-level information would allow for a more thorough disentangling of the number and types of schools TTPP-eligible students are applying to and then ultimately choosing to attend. Second and related, while the data did not support such efforts, more robust inferential analyses would provide more robust answers to similar questions. Third, the lack of information about the kinds of characteristics (e.g., socioeconomic status, high school, parents' education, etc.) known to affect college choice truncate the results. While the data used were appropriate, the ideal choice, if such data were adequately accessible to researchers, would be accurately identified TTPP-eligible students before the transition to college in the state's student unit record database.

### **Conclusion**

What has become overwhelmingly clear over the course of the last 14 years in Texas is the ineffectiveness of percent plans, on their own, as vehicles for increasing the level of race and ethnic diversity on Texas' most selective flagship universities. Such conclusions are certainly critical on their own. But while the college completion agenda begins with this critical discussion about equity of access, it does not end there. Institutions have serious work to do to be increasingly ready to supply the necessary supports to make students' enrollment efficacious. Reaping the benefits of a diverse student body is only achieved through active and ongoing efforts that make sure that, importantly, all students have an opportunity to succeed.

## Appendix A

**Table A1.** Texas Top Ten Percent Plan total admission counts, by race/ethnicity, 1998-2010

Year	White	African American	Hispanic	Asian American	Total*
1998	8,584	866	2,313	1,172	13,092
1999	9,020	1,030	2,613	1,280	14,136
2000	9,410	1,038	2,992	1,393	15,063
2001	11,442	1,268	3,747	1,768	18,499
2002	10,907	1,198	3,481	1,863	17,748
2003	11,537	1,327	4,017	1,901	19,163
2004	11,392	1,441	4,387	1,972	19,590
2005	11,364	1,505	4,652	2,002	20,002
2006	11,964	1,874	5,795	2,647	22,886
2007	11,548	1,689	5,661	2,542	21,856
2008	11,952	1,720	6,548	2,615	23,325
2009	12,448	1,811	7,333	2,958	25,071
2010	11,992	1,813	8,241	2,743	26,600

\*Note that sums, by year, do not equal total enrollment because American Indian, international, and “other” students were left off.

**Table A2.** Texas Top Ten Percent Plan total unduplicated enrollment counts, by race/ethnicity, 1998-2010

Year	White	African American	Hispanic	Asian American	Total*
1998	6,376	611	1,552	966	9,597
1999	7,093	744	1,959	1,085	10,989
2000	7,476	756	2,144	1,220	11,747
2001	8,235	854	2,560	1,262	13,060
2002	8,039	821	2,391	1,379	12,782
2003	8,440	910	2,633	1,361	13,541
2004	8,212	984	2,942	1,395	13,733
2005	8,112	1,030	3,133	1,391	13,885
2006	8,597	1,218	3,968	1,829	15,842
2007	8,179	1,114	3,738	1,773	14,975
2008	8,512	1,103	4,236	1,739	15,795
2009	8,586	1,170	4,836	1,997	16,797
2010	8,340	1,131	5,612	1,859	17,701

\*Note that sums, by year, do not equal total enrollment because American Indian, international, and “other” students were left off.

## Appendix B

**Table B1.** Texas public colleges and universities by institutional type, 2012<sup>32,33</sup>

Elite Institutions	Emergent Elite Institutions	Nonselective Institutions
Texas A&M Univ. Univ. of Texas at Austin	Texas Tech Univ. Univ. of Houston Univ. of North Texas Univ. of Texas at Arlington Univ. of Texas at Dallas Univ. of Texas at El Paso Univ. of Texas at San Antonio	Angelo State Univ. Lamar Univ. Midwestern State Univ. Prairie View A&M Univ. Sam Houston State Univ. Stephen F. Austin State Univ. Sul Ross Rio Grande College Texas A&M International Univ. Texas A&M Univ.at Galveston Texas A&M Univ.-Central Texas Texas A&M Univ.-Corpus Christi Texas A&M Univ.-Kingsville Texas A&M Univ.-San Antonio Texas A&M Univ.-Commerce Texas A&M Univ.-Texarkana Texas Southern Univ. Texas State Univ.-San Marcos Texas Women's Univ. Univ. of Houston-Clear Lake Univ. of Houston-Downtown Univ. of Houston-Victoria Univ. of Texas at Brownsville Univ. of Texas at Tyler Univ. of Texas-Permian Basin Univ. of North Texas at Dallas West Texas A&M Univ.

### References

1. Horn CL, Flores SM. *Percent Plans in College Admissions: A Comparative Analysis of Three States' Experiences*. Cambridge, MA: The Civil Rights Project at Harvard University; 2003.
2. Arnone M. Texas A&M won't consider race in admissions or financial-aid decisions. *The Chronicle of Higher Educ.* 2003;50:A17
3. Overview: Tuition deregulation. Texas Higher Education Coordinating Board Web site. <http://www.theccb.state.tx.us/reports/PDF/1527.PDF>. Published April, 2010. Accessed September 26, 2012.
4. Interim charge #3: Impacts of tuition de-regulation on university enrollment trends. Texas Higher Education Coordinating Board Web site. [http://www.theccb.state.tx.us/reports/PDF/1607.PDF?CFID=25822234&CF\\_TOKEN=79229537](http://www.theccb.state.tx.us/reports/PDF/1607.PDF?CFID=25822234&CF_TOKEN=79229537). Published May 28, 2008. Accessed May 1, 2012.
5. Hurtado S, Inkelas KK, Briggs C, Rhee B-S. Differences in college access and choice among racial/ethnic groups: identifying common barriers. *Res Higher Educ.* 1997;38:43-75.
6. Tierney WG, Hagedorn LS. *Increasing Access to College: Extending Possibilities for All Students*. Albany, NY: Suny Press; 2002.
7. Perna LW. Studying college access and choice: a proposed conceptual model. *Higher Educ: Handbook Theory Res.* 2006;21:99-157.
8. Fry R. Hispanic college enrollment spikes, narrowing gaps with other groups. Pew Hispanic Center Web site. <http://www.pewhispanic.org/2011/08/25/hispanic-college-enrollment-spikes-narrowing-gaps-with-other-groups/>. Published August 25, 2011. Accessed May 1, 2012.
9. Flores SM, Park TJ. College markets by race and ethnicity: accounting for minority-serving institutions from enrollment to completion. Paper presented at: American Educational Research Association; April 2012; Vancouver, Canada.
10. American Community Survey, 2000 and 2007. US Census Bureau Web site. <http://www.census.gov/acs/www/>. Accessed August 2, 2012.
11. Perna L. Differences in the decision to attend college among African Americans, Hispanics, and Whites. *J Higher Educ.* 2000;71:117-141.
12. Manski CF, Wise DA. *College Choice in America*. Cambridge, MA: Harvard University Press; 1983.
13. DesJardins SL, Dundar H, Hendel DD. Modeling the college application decision process in a land-grant university. *Econ Educ Rev.* 1999;18:117-132.

14. Hossler D, Braxton J, Coopersmith G. Understanding student college choice. *Higher Educ: Handbook Theory Res.* 1989;5:231-288.
15. Cabrera AF, La Nasa SM. Understanding the college-choice process. *New Dir Inst Res.* 2000;107:5-22.
16. Heller DE. Student price response in higher education: an update to Leslie and Brinkman. *J Higher Educ.* 1997;68:624-659.
17. Kinzie J, Palmer M, Hayek J, Hossler D, Jacob SA, Cummings H. *Fifty Years of College Choice: Social, Political, and Institutional Influences on the Decision-Making Process.* Indianapolis, IN: Lumina Foundation; 2004.
18. Hinrichs P. The effects of affirmative action bans on college enrollment, educational attainment, and the demographic composition of universities. *Rev Econ Stat.* 2012;94:712-722.
19. Backes B. Do affirmative action bans lower minority college enrollment and attainment? evidence from statewide bans. *J Hum Resources.* 2012;47:435-455.
20. Fryer RG Jr, Loury GC, Yuret T. An economic analysis of color-blind affirmative action. *J Law, Econ, Organ.* 2008; 24: 319-355.
21. Howell JS. Assessing the impact of eliminating affirmative action in higher education. *J Labor Econ.* 2010;28:113-166.
22. Kain, JF, O'Brien, DM, Jargowsky, PA. *Hopwood and the Top 10 Percent Law: How They Have Affected the College Enrollment Decisions of Texas High School Graduates.* Dallas, TX: The Texas Schools Project. [http://www.utdallas.edu/research/tsp-erc/pdf/wp\\_kain\\_2005\\_hopwood\\_top\\_10\\_percent.pdf](http://www.utdallas.edu/research/tsp-erc/pdf/wp_kain_2005_hopwood_top_10_percent.pdf). Published May 25, 2005. Accessed September 26, 2012.
23. Long MC, Tienda M. Winners and losers: changes in Texas university admissions post-Hopwood. *Educ Eval Policy Anal.* 2008;30:255-280.
24. Niu S, Tienda M. Minority student academic performance under the uniform admission law: evidence from the University of Texas at Austin. *Educ Eval Policy Anal.* 2010;32:44-69.
25. Chan J, Eyster E. Affirmative action and student quality. *Am Econ Rev.* 2003;93:858-872.
26. Arcidiacono P. Affirmative action in higher education: how do admission and financial aid rules affect future earnings? *Econometrica.* 2005;73:1477-1524.
27. Card D, Krueger AB. Would the elimination of affirmative action affect highly qualified minority applicants? evidence from California and Texas. *Ind Labor Relations Rev.* 2005;58:416-434.
28. Domina T. Higher education policy as secondary school reform: Texas public high schools after *Hopwood.* *Educ Eval Policy Anal.* 2007;29:200-217.

29. Flores SM, Horn CL. College persistence among undocumented students at a selective public university: a quantitative case study analysis. *J Coll Student Retention*. 2009-2010;11:57-76.
30. Niu SX, Sullivan T, Tienda M. Minority talent loss and the Texas top 10% law. *Soc Sci Q*. 2008;89:831-845.
31. Tienda M, Niu SX. Capitalizing on segregation, pretending neutrality: college admissions and the Texas top 10% law. *Am Law Econ Rev*. 2006;8:312-346.
32. Hamilton R. Emerging research universities vie for tier one status. *The Texas Tribune*. <http://www.texastribune.org/texas-education/tier-one-universities/emerging-research-universities-tier-one-status/>. Published August 19, 2010. Accessed September 26, 2012.
33. Texas higher education data: Public universities. Texas Higher Education Coordinating Board Web site. <http://www.txhighereddata.org/Interactive/Institutionsshow.cfm?Type=1&Level=1> Updated 2011. Accessed September 26, 2012.