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# Race, Ethnicity, and College Success: Examining the Continued Significance of the Minority-Serving Institution

Stella M. Flores<sup>1</sup> and Toby J Park<sup>2</sup>

The minority-serving institution (MSI) sector has grown considerably since the 1980s, yet we have less empirical information about what currently influences students to enroll in and complete college at these institutions in comparison to their non-MSI counterparts. We evaluate student postsecondary outcomes by race and ethnicity in Texas's large MSI sector utilizing state administrative data from 1997 to 2008. At the enrollment stage, we find that race is an important predictor of college enrollment, despite controlling for detailed precollege characteristics. At the college-completion stage, however, the effect of race is largely no longer present after accounting for institutional characteristics, including attending an MSI. That is, in most of the cohorts examined, Hispanic and Black students who initially enroll in a four-year institution showed no difference from their White peers in six-year graduation outcomes. In sum, Hispanic-serving institutions are particularly critical locations for Hispanics while the non-MSI community colleges emerge as key institutions for Black students, signaling important implications for how historically Black colleges and universities might address recruitment and transfer strategies. Implications for practitioners and researchers are offered.

**Keywords:** college access; college completion; community colleges; higher education; Hispanic-serving institutions; historically Black colleges and universities; minority-serving institutions; race

The diversification of the higher education market across the United States has created a set of postsecondary options not available to all students prior to the passing of the Civil Rights Act of 1964, although not all postsecondary institutions in southern and border states had officially desegregated their campuses by this decade (Karabel, 2005; Shabazz, 2004). By the early 21st century, however, the U.S. Department of Education documented a rate of growth in minority undergraduate enrollment of 146% since the early 1980s. Indeed, the number of postsecondary institutions serving minority students had grown to an unprecedented high, from 414 in the 1980s to at least 1,200 by 2004 (Li, 2007).

By 2012, an additional significant demographic shift had occurred in U.S. colleges and universities in terms of their minority populations, as Latino/a students replaced African Americans as the largest minority attending our nation's two- and four-year institutions (Fry & Lopez, 2012). Demographics indicate that the nation's colleges and universities must prepare themselves, if they have not already done so, to serve a population that is more racially and ethnically diverse than at any other time in the nation's history. Some institutions, such as minority-serving institutions (MSIs), have served underrepresented minority stu-

dents for some time, whereas other postsecondary institutions have experienced their most impressive growth in racial and ethnic diversity during the past 20 years.

Given these changes in the racial demography of postsecondary institutions, do some postsecondary institutions experience greater success in the enrollment and graduation of underrepresented students? In an age of rapid demographic shifts and increasing access to college, including the expectation of attending college (Ross et al., 2012), does race still matter in predicting college enrollment and completion when accounting for factors known to influence such outcomes? Despite a general increase in college enrollment and completion over time, enrollment and completion rates by race and ethnicity continue to show a gap (Melguizo, 2010). This article explores such questions as they apply to underrepresented students across different stages of the educational pipeline, high school to college completion, in a state—Texas—with a diverse racial and postsecondary market, as well as particular historical significance in regard to race and higher education attainment. This historical significance relates

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to Texas's role in *Sweatt v. Painter* (1950), a case that became the first U.S. Supreme Court case to successfully challenge the separate but equal doctrine of racial segregation established by *Plessy v. Ferguson* (1896). From a contemporary perspective, the forthcoming U.S. Supreme Court ruling in *Fisher v. University of Texas at Austin* on the use of race in college admissions decisions, which also originated in Texas, continues to underscore the important role of race in discussions regarding higher education access and completion. To that end, we examine which U.S. postsecondary education institutions are most likely to serve, from enrollment to graduation, the steadily increasing number of underrepresented minority students.

Texas arguably offers one of the most interesting microcosms of postsecondary market diversity, and therefore provides a rich source of organizational data with which to analyze both Hispanic-serving institutions (HSIs) and historically Black colleges and universities (HBCUs)—first as students' initial college of entry and then as the vehicles that will carry them to college completion.<sup>1</sup> We compare these two types of two- and four-year institutions with what we term *traditional* two- and four-year institutions—non-HBCUs and non-HSIs. We note that we do not use the term *predominantly White institutions*, due to the demography of Texas, as many institutions in the state are not necessarily predominantly White, even if they are not officially an MSI. We specifically ask:

1. What is the role of race (in particular, for Latino/a and African American students) in postsecondary enrollment, across time, for high school graduates in Texas?<sup>2</sup>
2. If these students do enroll in college, in what type of institution are they most likely to matriculate; and what role do precollege characteristics play in these enrollment patterns?
3. What are the postsecondary graduation outcomes of these students; and how do they vary by race and institutional type, particularly by MSI status (i.e., HSI and HBCU)?

We acknowledge the traditional limitations of large quantitative databases in evaluating the factors that should be quantified but cannot due to data constraints, as they pertain to this analysis. These are constraints such as the role of student support services, mentoring effects, the role of racial identity and campus climate, faculty–student interactions at these institutions, and noncognitive measures such as self-esteem (Braxton, Hirschy, & McClendon, 2004; Freeman, 2005; Melguizo, 2010). However, the opportunity to provide a statewide analysis of both HBCUs and HSIs offers analyses not previously available with this level of data detail. Moreover, dissecting a state market that has a large number of MSIs has important implications for other states with similar education landscapes and populations of underrepresented students. Although MSIs are not in every state in the nation, they are located in the states with the largest Hispanic and Black four-year undergraduate populations in the nation. We therefore argue that any national and many state conversations about college access and completion should not be undertaken without the consideration of the role of the minority-serving institution.

## Background and State Enrollment Context

We use definitions from the U.S. Department of Education that define HSIs as institutions that are accredited, grant degrees, and have a full-time equivalent undergraduate enrollment that is at least 25% Hispanic (U.S. Department of Education, 2009). Of particular importance is the fact that HSIs as federally designated institutions in U.S. postsecondary education are somewhat new in comparison to HBCUs, having been developed during the past 35 years.<sup>3</sup> HBCUs, on the other hand, were established well before 1960 with the mission of serving Black students, although admission was open to students of all races (Fletcher & Webster, 2010). In terms of a portrait of student enrollment, MSIs currently enroll more than 2.3 million students, or approximately 14% of all higher education students (Harmon, 2012). HBCUs alone enroll about 16% of Black students, whereas HSIs serve approximately 42% of all Hispanic students—a percentage that is significantly higher in states with a high percentage of Hispanic students (Harmon, 2012). The Texas MSI context, which is the focus of this article, includes nine HBCUs with an undergraduate enrollment of 19,781 as of 2004, a number that has grown since then and does not include graduate and professional student enrollment (Li, 2007). The students enrolled at Texas HBCUs are 62% African American, 21% Hispanic, and 14% White; the remaining percentage is *other*—students of Asian origin or foreign students (Fletcher & Webster, 2010). In the HSI sector, Texas boasts 64 such institutions, with an undergraduate enrollment of 188,785 as of 2004 (Li, 2007). It is second to California in the number of HSIs and Hispanic student enrollment, and accounts for nearly 35% of the total Hispanic enrollment in the U.S. (Li, 2007). The population enrolled at Texas HSIs is 55% Hispanic, 27% White, 9% African American, and 9% Asian American, students of unknown race, and foreign students (Fletcher & Webster, 2010).

In general, however, a significantly higher percentage of MSIs, including HSIs and HBCUs, have open admissions policies, have lower graduation rates on average, are more likely to serve women, and serve double the percentage of students who are Pell Grant recipients than their non-MSI peer institutions (Li, 2007). Although a number of four-year HBCUs have maintained selective admissions standards, the portrait of MSIs as the institutions likely to serve those students having a high probability of being underrepresented and low income in American higher education has been a consistent trend. It is for this reason that we examine their critical location in the story of U.S. education at the turn of the 21st century.

## Conceptual Framework

Our conceptual framework emerges from the perspective of a high school to college-completion pipeline that includes students' demographic characteristics, their high school context and curriculum participation, and the quality of the postsecondary institution, based on available state administrative data (Adelman, 2006; Bound, Lovenheim, & Turner, 2009; Perna, 2006). As such we draw on three bodies of literature relating to (1) human capital explanations of college access and completion, (2) empirical analyses that note particular factors that have been shown to play an important role in the college enrollment and completion

of Latino/a and African American students, and (3) considerations regarding policy changes in the state's higher education context.

### *A Human Capital Perspective of the Individual and the Institution*

We incorporate a model of students' decision making in terms of their college enrollment and degree completion, as well as institutional responses to students' decisions that are based in human capital theory (Becker, 1964; Bound et al., 2009; Mincer, 1974). According to Becker (1964), students' decisions to attend college include their assessments that investing in education carries a cost, but also their expectations that the cost might increase their human capital in ways that translate into skills or benefits they can exchange for income in the labor market. Weighing the costs and the benefits, both monetary and nonmonetary, becomes part of the student's decision whether to invest in a college education. Bound and colleagues (2009) hypothesize that as the returns to a college degree increase, as they have during the past 30 years, more students may be enticed to enter college. However, as students who might otherwise not have attended college do enter the college market, they find themselves competing with students who would have entered college regardless of the return to a college degree, which leads to two likely circumstances. First, although the increasing returns to a college degree might be expected to lead to an increase in college completion, the preparation levels of students newly entering the U.S. college system may be quite varied and in some cases inadequate, leading to a potential decrease in the college-completion rate. Second, from the supply-side perspective (that of institutions), an increase in the number of students with varied abilities who are entering colleges and universities may change the level of resources to which students have access at these institutions, especially if state budgets do not keep up with the changing demand for higher education services such as those that assist the student in becoming more college ready. Institutions' capacity to respond to student demand therefore likely becomes an essential part of the college-completion question.

### *Additional Research on College Access and Completion*

Our framework also considers multidisciplinary research examining factors associated with the pathways leading to college enrollment and completion (Melguizo, 2010; Nuñez & Bowers, 2011; Perna, 2006). In regard to college readiness, particularly the role of taking mathematics courses in high school, Adelman (2004) finds that taking math one level beyond algebra II, such as a trigonometry course, doubles a student's odds of finishing a bachelor's degree. Others have found that engaging in rigorous coursework, such as advanced placement and international baccalaureate (AP/IB) courses, and participating in dual college/high school enrollment programs may increase the odds of gaining access to and, in some cases, completing college (Adelman, 2004, 2006; American Institute for Research, 2011; Iatarola, Conger, & Long, 2011; Sadler, Sonnert, Tai, & Klopfenstein, 2010). The role racial concentration—or alternatively stated, racial segregation—plays in schools also has been found to play an important and negative role in student achievement, particularly in Texas (Fletcher & Tienda, 2009; 2010; Hanushek, Kain, &

Rivkin, 2009). In a study examining housing and school segregation patterns, Hanushek and colleagues (2009) found that racial segregation in the state explains a "small but meaningful portion of the racial achievement gap" as measured by test scores between Black and White students (p. 350). Specifically, the authors find that the higher the percentage of Black student peers in a school reduces achievement rates for Black students, with no significant effect for White students. The effect of urban schooling seems to prevail as a negative factor in terms of college enrollment, particularly for students who attend urban high schools, highlighting the complex relationship between high school context on college enrollment (Niu & Tienda, 2011). The relationship between working and high school completion by race and ethnicity, either as a complement to or choice between one another, has recently received increased multidisciplinary attention (Bachmeier & Bean, 2011). Bachmeier and Bean (2011), find that for Mexican-origin youth, attending school is conditional on their participation in the labor force, a behavior that is not found among other racial and ethnic groups.

Finally, several studies have examined college choice and completion by institutional type in the United States (Hagy & Staniec, 2002; Manski & Wise, 1983; Ordovensky, 1995; Rouse, 1995). A good deal of research has focused on the effect that college selectivity has on college-completion rates (Bastedo & Jacquette, 2011; Bowen, Chingos, & McPhereson, 2009; Dale & Krueger, 2002; Long, 2008; Melguizo, 2009, 2010). Other institutional characteristics, such as funding per student and percentage of the faculty that is tenured, also have been explored particularly at the two- and four-year college sector level. Bound and colleagues (2009), for example, found that factors affecting completion rates differ by postsecondary institutional sector, in that institutional characteristics are more likely to explain declining college-completion rates at four-year institutions whereas academic preparation levels of the student are more likely to explain declining completion rates among two-year institutions. These findings, however, are not disaggregated by race and ethnicity—an important contribution we make in this analysis.

### *The Texas Higher Education Policy Context*

Texas higher education has undergone significant policy changes in terms of college readiness, access, and completion since 1997 (Domina, 2007). These changes range from a state alternative admissions policy known as the Top Ten Percent Plan (TTPP), or House Bill 588, which was passed in 1998 with alterations to the policy since that time period; to infusions of state financial aid for students who qualify based on need, merit, or in-state residency status in 2001; to the voluntary reinstatement of affirmative action in college admissions via the *Grutter v. Bollinger* (2003) decision and tuition deregulation in 2003; to major high school curricular reform regarding dual enrollment practices in 2006. Although measuring the causal effect of these multiple state policy changes is outside the scope of this analysis, understanding the different policy contexts within which particular student cohorts entered Texas colleges and universities is a relevant consideration. Accounting for the possibility that different cohorts are exposed to various policy interventions previously noted, we include cohorts that began their postsecondary

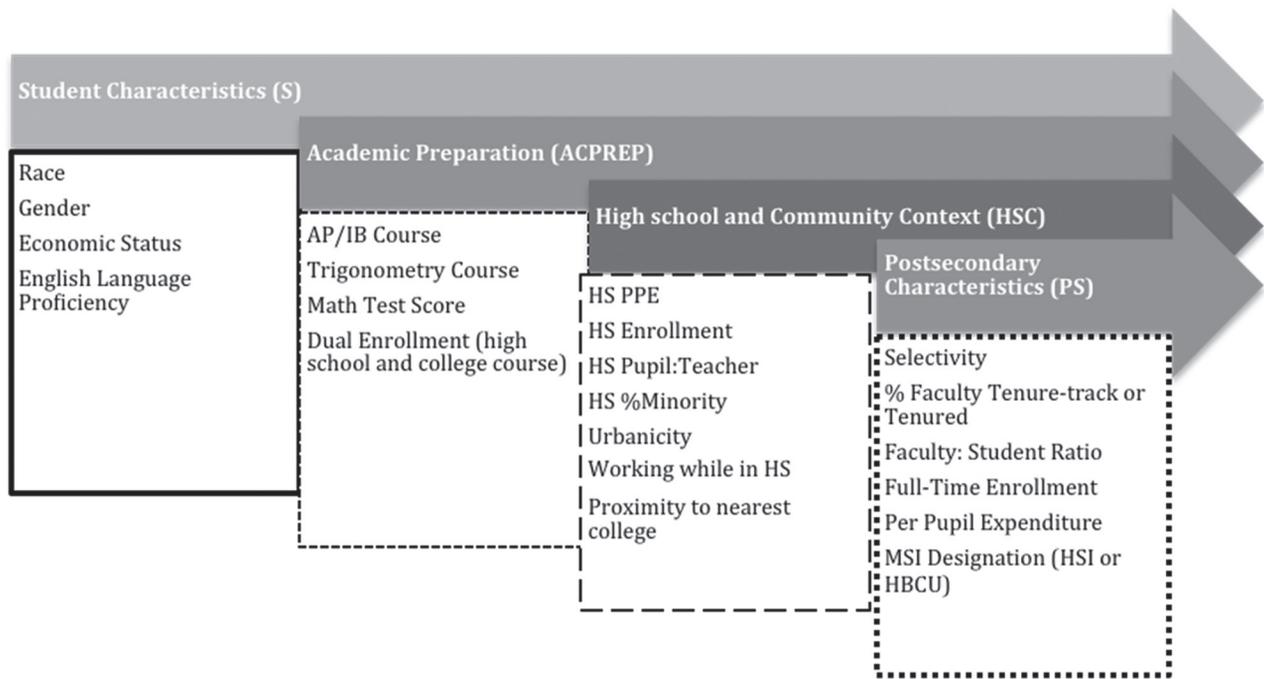


FIGURE 1. *A modified college completion trajectory model*

AP/IB = advanced placement/international baccalaureate; HS = high school; PPE = per-pupil expenditures; MSI = minority-serving institutions; HSI = Hispanic-serving institutions; HBCU = historically Black colleges and universities.

education in Texas in 1997 (pre-TTPP), 2000 (before the infusion of state financial aid), 2002 (pretuition deregulation and pre-Grutter), 2006 (post-Grutter and before formal implementation of dual credit), and 2008 (multiple policy conditions).

## Research Design

We begin with a description of the model specifications for our three key outcomes for select cohorts from 1997 to 2008: (1) enrollment in any college; (2) enrollment in a particular type of college, including a minority-serving institution (an HSI or an HBCU); and (3) completion of a four-year college degree. Our descriptions account for whether or not a student attended a minority-serving institution in the four-year college sector.

### Model Specification

From an econometric perspective, we assume that a high school graduate makes his or her college-enrollment decision based on a number of factors that collectively influence the graduate's propensity to enroll. To answer our first research question regarding likelihood of enrollment to any college, we model this behavior and the associated factors as a logistic regression model with college enrollment as the dichotomous outcome of interest and a series of individual student characteristics as predictors of enrollment. To answer our second research question regarding where a student is likely to enroll by race and ethnicity, we estimate the likelihood of student enrollment across institutional type by employing a multinomial logistic regression model. Instead of a dichotomous college enrollment indicator, this model provides estimates for individual student characteristics' influence on enrollment into six different institutional types: (1) two-year

traditional, (2) two-year HSI, (3) two-year HBCU, (4) four-year traditional, (5) four-year HSI, and (6) four-year HBCU.<sup>4</sup> Our college-completion model that was established to answer our third research question, the postsecondary outcomes by race and institutional type, follows the logistic regression model outlined above; however, we include a set of covariates specific to the institution in which a student is enrolled. For this analysis, we include only those students who initially enrolled in a four-year institution and define our outcome as degree completion within six years of initial enrollment.

### Data

We employ a restricted-use longitudinal state administrative data set from the Texas Education Agency (TEA) and the Texas Higher Education Coordinating Board (THECB) known as the Texas Schools Microdata Panel (TSMP), supplemented by data from the Texas Workforce Commission (TWC), as well as publicly available data from the National Center for Education Statistics (the Common Core of Data and Integrated Postsecondary Education Data System) and the Bureau of Labor Statistics to build our full models. To observe changes over time and to account for multiple changes in the state's higher education policy context, as previously discussed, we examine enrollment outcomes for five cohorts of high school graduates in the years 1997, 2000, 2002, 2006, and 2008; for completion outcomes, we examine only up to the cohort for 2002.<sup>5</sup> We are able to link together data from high school, postsecondary, workforce, and national data sets by using unique student identifiers as well as high school identification codes. Figure 1 presents our variables by level of analysis. The appendix describes the metrics for each level in greater detail.

At the individual student level (S), we include the variables of race, gender, economic status (defined by TEA as a composite indicator for students receiving free or reduced lunch), and limited English proficiency (LEP) status. Our academic preparation variables (ACPREP) include the successful completion of a trigonometry course, and completion of either an AP or IB course. We also control for student performance on the state math exam and whether a student was dual enrolled—that is, simultaneously enrolled in high school and doing college coursework. Our high school context (HSC) variables include the pupil–teacher ratio, school enrollment, the percentage of underrepresented minority students in the school (Black and Hispanic), per-pupil expenditures, and whether the high school is located in an urban setting, as defined by the U.S. Department of Education; these data are available from the TSMP. Using data from the TWC, we include a control for working during high school as an indicator of whether a student worked during his or her spring semester in high school immediately preceding graduation. We also include controls for community context (where the high school is located), including the unemployment rate in the county where a student attended high school (from the Bureau of Labor Statistics) and whether a student’s high school is located within 25 miles of a postsecondary institution. Finally, in later models that predict college completion, we control for such postsecondary characteristics (PS) as selectivity (as measured by the Barron Index), the percentage of tenured faculty members, the faculty–student ratio, full-time equivalent enrollment, per-pupil instructional expenditures, and whether the institution is designated as an HSI or HBCU; these data (as well as overall enrollment and completion data) are available from the TSMP. Limitations of the data set include the inability to account for SAT or ACT score, parental education, and generational status. First, in response to these limitations, we argue that SAT/ACT is not as relevant for college enrollment in Texas as it might be for other states, as a result of the Top Ten Percent Plan that de-emphasizes the role of the SAT and privileges high school rank (Horn & Flores, 2012). However, we do account for standardized test scores from the state accountability exams. Second, a lack of information on parental education and generational status in state administrative data is quite common in state administrative data sets and is an unfortunate tradeoff when using these data as opposed to national level data sets (Garcia & L’Orange, 2010). We remind the reader that few studies have tracked the role of race over time by this level of institutional sector detail that includes a state’s minority-serving institution context.

## Results

### *The Senior-Year Portrait*

Table 1 provides initial descriptive statistics of our various high school graduates and their precollege characteristics over time for entering cohorts from 1997 to 2008. At the individual level, we see the greatest growth among Hispanic students—which is not surprising, given the state’s demographic growth—from representing 28% of the high school graduate population among our cohort in 1997 to 36% in 2008. During the same period, the Black student population grew less than 2%, from 11.8% to 13.3%, while the percentage of Asian students grew less than

1%. At the college enrollment level, the percentage of White students enrolled in postsecondary education from 1997 to 2008 increased from 53.3% to 58.5%, and the portion of Hispanic students increased from 40.7% to 45.7%. However, Black students experienced nearly twice the increase in postsecondary enrollment rates of their White and Hispanic peers from 39.1% in 1997 to 48.4% in 2008.

### *Race and Postsecondary Enrollment*

Table 2 presents logistic regression results, by year, for postsecondary enrollment in the fall semester immediately following high school graduation for these same cohorts. The precollege factors behave as previous research suggests—with males being less likely to enroll in college than their female counterparts—as does academic preparation, showing a strong positive influence. In addition, taking trigonometry, an AP/IB course, and participating in dual enrollment are particularly important for predicting college access, confirming previous research that emphasizes the role of taking rigorous courses in high school.

However, the results from this analysis also demonstrate that even after controlling for these important precollege influences, race continues to be a factor in postsecondary enrollment in Texas, more so among Hispanic and Black students than White students. For example, Hispanic students represent the most significant growth in the 12th-grade cohorts over time, yet they are less likely to enroll in any college during this same period, controlling for other factors in the model. In contrast, after conditioning on other factors in the model, Black students experience increasing odds of enrolling in any college in Texas postsecondary education over time, with a particularly sizeable effect for the 2006 and 2008 cohorts. Asian students still have higher odds of enrollment than White students, but this advantage seems to decrease over time. Our next research question addresses the role of race in where students enroll, by sector and MSI status.

### *Race and Locations of College Enrollment*

To better understand enrollment patterns, both in a general sense and those specific to different types of institutions, we next explore enrollment in a multinomial fashion. Table 3 presents descriptive information of enrollment by race and institutional type, over time. In 1997, White students enrolled largely in traditional settings (22.82% in the two-year sector, 23.80% in the four-year sector), with some students enrolled in a two-year HSI (4.83%) or a four-year HSI (1.74). These enrollment patterns of White students in MSIs remain relatively consistent across time; however, notable differences are found in 2008 with regard to the share of White students enrolling in traditional schools at different levels: 19.84% in two-year schools (down roughly 3% from 1997) and 31.13% in four-year schools (up roughly 8% from 1997). Enrollment for White students across our time frame has increased overall, with a particular increase in the traditional four-year sector.

Hispanic students, whose primary college decision is not to enroll in college across the time frame, show the next enrollment option in 1997 of a two-year HSI (16.46%), followed by a four-year HSI (8.76%), traditional two-year schools (7.50%), and traditional four-year schools (7.08%). These enrollment

**Table 1**  
**Descriptive Statistics, Senior Year**

	1997		2000		2002		2006		2008	
	<i>M</i>	<i>SD</i>								
Student Characteristic										
Hispanic	0.29	0.45	0.31	0.46	0.32	0.47	0.34	0.47	0.36	0.48
Black	0.12	0.32	0.12	0.33	0.13	0.33	0.13	0.34	0.13	0.34
Asian	0.03	0.17	0.03	0.18	0.03	0.18	0.04	0.19	0.04	0.19
Male	0.49	0.50	0.49	0.50	0.49	0.50	0.50	0.50	0.49	0.50
LEP	0.02	0.16	0.02	0.15	0.02	0.14	0.02	0.15	0.03	0.16
Economic Disadvantage	0.23	0.42	0.26	0.44	0.28	0.45	0.34	0.47	0.35	0.48
High School Academic Preparation										
AP/IB Course	0.22	0.41	0.36	0.48	0.36	0.48	0.40	0.49	0.41	0.49
Trigonometry Course	0.27	0.44	0.36	0.48	0.37	0.48	0.39	0.49	0.40	0.49
Math Exam Score	43.13	14.86	46.07	13.78	47.15	14.96	38.50	15.12	41.17	14.21
Dual Enrollment	0.09	0.29	0.12	0.33	0.16	0.37	0.19	0.39	0.22	0.42
High School and Community Context										
Pupil-Teacher Ratio	15.01	2.63	14.71	2.68	14.85	2.73	15.03	9.86	14.74	2.77
HS Enrollment/1000	16.69	9.49	16.56	9.42	16.99	9.53	18.28	10.16	18.46	9.98
HS Percent Minority	0.46	0.30	0.47	0.30	0.49	0.30	0.53	0.30	0.54	0.30
HS PPE (logged)	8.10	0.12	8.28	0.11	8.36	0.11	8.44	0.11	8.44	0.11
HS Urbanicity	0.40	0.49	0.40	0.49	0.41	0.49	0.31	0.46	0.31	0.46
Worked in HS	0.20	0.40	0.22	0.42	0.17	0.37	0.11	0.31	0.11	0.31
County Unemployment	5.66	3.54	4.52	1.52	6.38	1.42	4.97	0.91	5.00	0.95
Proximity to PS	0.82	0.38	0.81	0.39	0.78	0.41	0.75	0.44	0.72	0.45
Postsecondary Enrollment										
Overall Percent Enroll	0.48		0.42		0.51		0.53		0.53	
White Percent Enroll	0.53		0.47		0.58		0.59		0.58	
Hispanic Percent Enroll	0.41		0.35		0.46		0.44		0.46	
Black Percent Enroll	0.39		0.35		0.42		0.47		0.48	
<i>N</i>	144,672		165,549		172,464		197,242		208,722	

*Note.* Source: Authors' calculations. Texas Education Agency and Texas Higher Education Coordinating Board. LEP = English language proficiency; AP/IB = advanced placement/international baccalaureate; HS = high school; PPE = per-pupil expenditures; PS = postsecondary institution.

patterns hold over time, with one exception: four-year traditional schools and four-year HSIs began to have a nearly equal share of Hispanic students in 2008 (10.17% and 10.85%, respectively). Overall, however, these findings corroborate previous research, which has documented that the HSI is a primary staple of Latino/a higher education, enrolling close to a majority of the Hispanic students in postsecondary education (Benitez & DeAro, 2004; Laden, 2004). Black students, who are also most likely not to enroll in college across the time frame, show the next enrollment option in 1997 of two-year traditional schools (15.75%), four-year traditional schools (11.77%), and four-year HBCUs (6.43%). Again, these patterns remain relatively consistent over time, with one exception: a larger share of Black high school graduates in 2008 is enrolling in traditional four-year schools (19.02%) than traditional two-year schools (15.64%), with four-year HBCUs remaining a third option (7.14%). Overall, however, for both Latino/a and Black students, community colleges remain a vital source of entry into postsecondary education in Texas, signaling the need for a more directed strategy for college transfer and persistence to college completion. Figure 2 provides a graphical representation of enrollment by race into institutional type in 2006, indicating Hispanics have the highest share of non-enrollment followed by Black students.

Next, Table 4 presents the results from our multinomial logistic regression models designed to measure the impact of race on postsecondary enrollment by institutional type, after accounting for a number of precollege factors. In these models, we account for the same individual, academic preparation, and school/community context factors used in the simple logistic model shown in Table 2. These analyses present point estimates for each of the covariates relative to nonenrollment, and we use White students as our basis of comparison by race. In the multinomial framework, we find similarities to our logistic model with one notable difference regarding academic preparation. Students who take an AP or IB course are more likely to enroll in either a four-year traditional or four-year HSI, as expected, but we see no influence of these factors for enrolling in the HBCU sector (two- or four-year). These results suggest that the outcomes may be related to the open-access nature of many HBCUs in Texas that could be leading to greater enrollment of students who are not as academically prepared as students who enroll in other institutions in the state.

After controlling for precollege factors and consistent with recent research (Nunez & Bowers, 2011), Hispanic students are consistently less likely to enroll in traditional two- and four-year institutions than their White peers, and are considerably more

**Table 2**  
**Enrollment Logistic Results, 1997 to 2008**

	1997	2000	2002	2006	2008
Hispanic	-0.1846*** [0.02]	-0.1789*** [0.02]	-0.3277*** [0.02]	-0.2881*** [0.01]	-0.2422*** [0.01]
Black	-0.0611** [0.02]	0.0275 [0.02]	0.0491** [0.02]	0.2470*** [0.02]	0.2318*** [0.02]
Asian	0.3055*** [0.03]	0.3839*** [0.03]	0.2715*** [0.03]	0.0302 [0.03]	0.0776** [0.03]
Male	-0.2331*** [0.01]	-0.2195*** [0.01]	-0.1735*** [0.01]	-0.2110*** [0.01]	-0.1906*** [0.01]
Economic Disadvantage	-0.4711*** [0.02]	-0.3976*** [0.01]	-0.4439*** [0.01]	-0.4518*** [0.01]	-0.4186*** [0.01]
LEP	-0.4122*** [0.04]	-0.3926*** [0.04]	-0.5637*** [0.05]	-0.6864*** [0.04]	-0.7777*** [0.04]
AP/IB Course	0.0278 [0.02]	0.1968*** [0.01]	0.4015*** [0.01]	0.3547*** [0.01]	0.3569*** [0.01]
Trigonometry Course	0.2443*** [0.01]	0.4602*** [0.01]	0.6492*** [0.01]	0.4701*** [0.01]	0.4096*** [0.01]
Math Exam Score	0.0262*** [0.00]	0.0214*** [0.00]	0.0205*** [0.00]	0.0235*** [0.00]	0.0231*** [0.00]
Dual Enrollment	0.5405*** [0.02]	0.5736*** [0.02]	1.0234*** [0.02]	1.0368*** [0.02]	1.0184*** [0.01]
Pupil-Teacher Ratio	-0.0212*** [0.00]	-0.0072* [0.00]	-0.0150*** [0.00]	0.0009 [0.00]	-0.0156*** [0.00]
HS Enrollment/1000	0.0085*** [0.00]	0.0055*** [0.00]	0.0087*** [0.00]	0.0045*** [0.00]	0.0063*** [0.00]
HS Percent Minority	-0.2070*** [0.03]	-0.1723*** [0.03]	-0.2026*** [0.03]	-0.0996*** [0.03]	0.039 [0.02]
HS PPE (logged)	0.1608** [0.06]	0.2300*** [0.06]	0.2009*** [0.06]	0.3448*** [0.05]	0.1067* [0.05]
HS Urbanicity	-0.0962*** [0.01]	-0.1259*** [0.01]	-0.0553*** [0.01]	-0.0855*** [0.01]	-0.1055*** [0.01]
Worked in HS	-0.0008 [0.01]	0.0580*** [0.01]	-0.0671*** [0.01]	-0.0163 [0.02]	0.0016 [0.02]
County Unemployment	0.0066* [0.00]	0.0441*** [0.01]	0.0220*** [0.01]	0.0351*** [0.01]	0.0105 [0.01]
Proximity to PS	0.1377*** [0.02]	0.1657*** [0.02]	0.0783*** [0.01]	0.0916*** [0.01]	0.1136*** [0.01]
Regional Controls	yes	yes	yes	yes	yes
Constant	-1.8742*** [0.51]	-3.2641*** [0.48]	-2.2952*** [0.50]	-3.5853*** [0.44]	-1.5847*** [0.48]
<i>N</i>	144,672	165,549	172,464	197,242	208,722
chi <sup>2</sup>	13,678.38	17,767.46	32,671.93	38,602.45	37,625.64

*Note.* Source: Authors' calculations. Texas Education Agency and Texas Higher Education Coordinating Board. LEP = English language proficiency; AP/IB = advanced placement/international baccalaureate; HS = high school; PPE = per-pupil expenditures; PS = postsecondary institution.  
\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

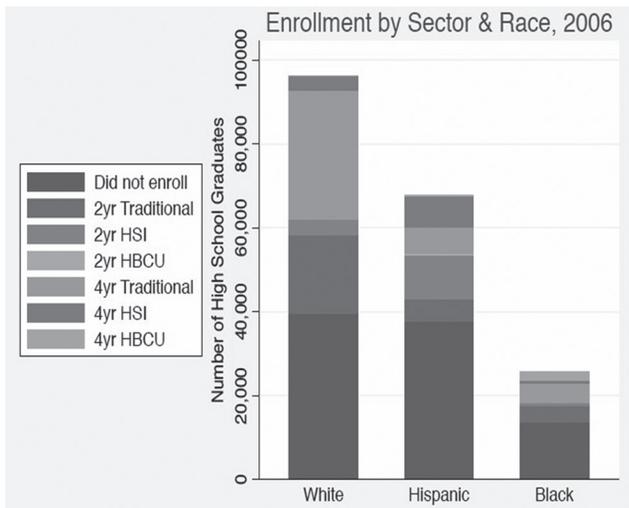
likely to enroll in either two- or four-year HSIs, with a particular effect for enrolling in a four-year HSI. In addition, Hispanic students are either equally likely or more likely than their White peers to enroll in a two- or four-year HBCU. For Black students, we observe a consistently positive and strong effect for enrolling in either a two- or four-year HBCU, as well as a strong and positive effect for enrolling in four-year traditional institutions and four-year HSIs and a negative effect for enrolling in a two-year HSI. Across time, however, we observe a shift in the odds of

enrolling in a traditional two-year institution for Black students, with a negative effect in the early years of our analysis and a positive effect by 2006 and 2008. In other words, after controlling for precollege factors, Black students are more likely to enroll in all types of institutions than their White peers, except two-year HSIs. In sum, we are less likely to see Black students at HSIs, whereas Hispanic students are more likely than White students to attend HBCUs. In addition Black students are increasingly likely to attend traditional two-year schools that are not MSIs.

**Table 3**  
**Multinomial Enrollment Descriptive Statistics, by Race and Year (in %)**

	Did Not Enroll	Two-Year Institution			Four-Year Institution		
		Traditional	HSI	HBCU	Traditional	HSI	HBCU
<b>1997</b>							
White	46.67	22.82	4.83	0.12	23.80	1.74	0.01
Hispanic	59.32	7.50	16.46	0.85	7.08	8.76	0.02
Black	60.89	15.75	2.87	0.62	11.77	1.67	6.43
<b>2000</b>							
White	53.52	17.55	3.95	0.16	23.19	1.63	0.01
Hispanic	65.13	6.06	14.26	0.86	6.41	7.24	0.03
Black	65.42	12.85	2.78	0.55	10.86	1.44	6.11
<b>2002</b>							
White	41.72	18.38	4.29	0.16	32.70	2.72	0.03
Hispanic	57.95	6.48	14.17	0.74	8.93	11.60	0.13
Black	55.87	12.98	2.81	0.56	15.40	2.22	10.16
<b>2006</b>							
White	41.10	19.46	3.86	0.15	31.78	3.62	0.03
Hispanic	55.60	7.94	15.47	0.66	9.22	10.98	0.12
Black	52.95	15.00	2.80	0.53	17.64	2.84	8.24
<b>2008</b>							
White	41.51	19.84	3.83	0.13	31.13	3.53	0.04
Hispanic	54.29	8.94	15.08	0.53	10.17	10.85	0.15
Black	51.61	15.64	2.99	0.44	19.02	3.17	7.14

*Note.* Source: Authors' calculations. Texas Education Agency and Texas Higher Education Coordinating Board. HSI = Hispanic-serving institutions; HBCU = historically Black colleges and universities.



**FIGURE 2.** *Enrollment by minority-serving institution sector in 2006.*

Source: Authors' calculations. Texas Education Agency and Texas Higher Education Coordinating Board. HSI = Hispanic-serving institutions; HBCU = historically Black colleges and universities.

### *Race and College Completion*

In this study, we also examine completion, defined as successfully completing an undergraduate degree within six years of initial enrollment at a four-year institution. Data on six-year completion

rates were available for the 1997, 2000, and 2002 cohorts at the time of this analysis. We include only students who initially enrolled in a four-year postsecondary institution and condition on individual characteristics, high school academic preparation, high school context, and working and community context, as well as postsecondary factors that include the designation of an HSI or HBCU. We acknowledge the particular selectivity of these cohorts, as low-income and Hispanic students are much more likely to begin their postsecondary institution at two-year colleges (Adelman, 2006; Hagy & Staniec, 2002). Table 5 provides two models for each year. In the first model, we condition on the same precollege characteristics used in the previous models. In the second model, we include postsecondary characteristics based on where a student enrolled and include indicators for MSI designation. In all cases, we observe a negative impact of race on college completion in the first set of models without accounting for the role of postsecondary characteristics, yet a strong influence on the same precollege characteristic shown earlier to positively predict college enrollment. With one exception (a negative and statistically significant coefficient for Black students in 2000), however, we see the effect of race disappear in each model after accounting for postsecondary characteristics and, specifically, for MSI status. In the later years of the analysis, we observe a negative impact on completion for students enrolling at both an HSI and an HBCU with some differences in magnitude. That is, the effect of enrolling at an HBCU appears to be more negative than that of enrolling at an HSI. Although causal inference is not possible from these models due to selection into MSIs, this finding is still particularly telling, given the strong

**Table 4**  
**Multinomial Logistic Enrollment Model, by Race and Year**

	Two-Year Institution			Four-Year Institution		
	Traditional	HSI	HBCU	Traditional	HSI	HBCU
1997						
Hispanic	-0.2724*** [0.03]	0.0564 [0.03]	0.6193*** [0.14]	-0.4252*** [0.03]	0.5049*** [0.04]	0.5816 [0.45]
Black	-0.2810*** [0.03]	-0.4356*** [0.05]	1.6238*** [0.16]	0.1583*** [0.03]	0.5746*** [0.07]	5.7514*** [0.30]
2000						
Hispanic	-0.3031*** [0.03]	0.1095*** [0.03]	0.5790*** [0.12]	-0.4370*** [0.03]	0.5199*** [0.04]	1.1849** [0.40]
Black	-0.1767*** [0.03]	-0.3657*** [0.05]	1.2439*** [0.14]	0.1448*** [0.03]	0.4721*** [0.07]	5.8810*** [0.32]
2002						
Hispanic	-0.3495*** [0.02]	-0.0288 [0.03]	0.1952 [0.12]	-0.6982*** [0.02]	0.4504*** [0.04]	1.1159*** [0.22]
Black	-0.1795*** [0.03]	-0.4577*** [0.05]	1.2513*** [0.14]	-0.0384 [0.03]	0.3573*** [0.06]	5.1927*** [0.19]
2006						
Hispanic	-0.3263*** [0.02]	0.1461*** [0.03]	0.2410* [0.12]	-0.6221*** [0.02]	0.3727*** [0.03]	1.2671*** [0.23]
Black	0.0668** [0.02]	-0.3486*** [0.05]	1.2063*** [0.13]	0.4304*** [0.03]	0.4327*** [0.05]	5.3991*** [0.20]
2008						
Hispanic	-0.2265*** [0.02]	0.1367*** [0.03]	0.0528 [0.13]	-0.5556*** [0.02]	0.3799*** [0.03]	0.9520*** [0.19]
Black	0.0613** [0.02]	-0.3246*** [0.04]	1.2375*** [0.15]	0.4557*** [0.02]	0.5409*** [0.05]	4.7545*** [0.17]

*Note.* Source: Authors' calculations. Texas Education Agency and Texas Higher Education Coordinating Board. HSI = Hispanic-serving institutions; HBCU = historically Black colleges and universities.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

influence of race we have observed thus far in the analysis. Given the strong influence of precollege academic preparation and post-secondary contextual factors such as selectivity, our results suggest that additional work is warranted to further disentangle the influence of MSI status (HBCU and HSI) with respect to race, a topic we will discuss in more detail.

## Discussion

The forthcoming U.S. Supreme Court ruling on the use of race in college admissions (*Fisher v. University of Texas at Austin*) will likely address whether having a diverse student body in elite colleges and universities remains an educational benefit for all students. The subject of this article, however, is not to evaluate the role race and ethnicity play on selective college admissions but, rather, to examine where the largest racial and ethnic concentrations of students are entering and progressing through Texas postsecondary education. First, in a state that has spent the past 15 years implementing various admissions policies, our logistic results indicate that for many underrepresented students, not attending college immediately after high school is a more likely outcome than attending a postsecondary institution. The second part of this postsecondary participation story, as shown by our multinomial descriptive statistics, is that among underrepresented students who do enroll in college, Hispanics remain the

most concentrated in HSIs—and most of these are Hispanic-serving community colleges. Black students also are opting to enroll in two-year colleges, although not those designated HSIs. Interestingly, as most HBCUs are four-year schools, they actually represent a fourth option—behind not attending college, attending a traditional two-year school, and attending a traditional four-year institution. In other words, Black and Latino/a high school graduates are not enrolling in elite college campuses in Texas in large numbers. If they do attend college, these students most often enter through a community college, although not necessarily an MSI as is the case for Black students. The third and final part of the enrollment story told by our multinomial logistic regression results is that race and ethnicity, despite accounting for a series of individual, curricular, and high school and community context factors, do not disappear as predictive factors for college enrollment. Despite being the group with the greatest demographic growth, Hispanics are experiencing a greater decline in college enrollment than White students. Although the state has experienced an increase in college enrollment for Black students, it has been in the sector that has traditionally not received them at current enrollment rates—community colleges. Given these findings, it seems more imperative than ever to understanding the role of newly emerging Black-serving institutions, a growing yet somewhat undervalued sector of higher education.

**Table 5**  
**Logistic Regression: College Completion in Six Years, Cohorts Entering From 1997 to 2002**

	1997 Precollege	1997 (add PSE Effects)	2000 Precollege	2000 (add PSE Effects)	2002 Precollege	2002 (add PSE Effects)
Hispanic	-0.1635*** [0.04]	-0.0216 [0.04]	-0.1668*** [0.04]	-0.0502 [0.04]	-0.0901** [0.03]	0.0266 [0.04]
Black	-0.1407** [0.04]	-0.0362 [0.05]	-0.3054*** [0.04]	-0.1373** [0.05]	-0.2779*** [0.04]	-0.0701 [0.04]
Asian	0.1159* [0.06]	0.0931 [0.06]	0.0986 [0.06]	0.0446 [0.06]	0.2187*** [0.05]	0.1520** [0.05]
Male	-0.4947*** [0.02]	-0.5343*** [0.02]	-0.4019*** [0.02]	-0.4415*** [0.03]	-0.3682*** [0.02]	-0.4199*** [0.02]
Economic Disadvantage	-0.4127*** [0.04]	-0.3328*** [0.04]	-0.2323*** [0.04]	-0.1667*** [0.04]	-0.3437*** [0.03]	-0.2883*** [0.03]
LEP	0.1382 [0.15]	0.203 [0.15]	-0.0524 [0.18]	0.1005 [0.18]	-0.0893 [0.22]	-0.0411 [0.23]
AP/IB Course	0.3634*** [0.03]	0.2197*** [0.03]	0.4543*** [0.03]	0.2711*** [0.03]	0.5860*** [0.02]	0.3644*** [0.02]
Trigonometry Course	0.5125*** [0.03]	0.3714*** [0.03]	0.5175*** [0.03]	0.4132*** [0.03]	0.5943*** [0.02]	0.4761*** [0.02]
Math Exam Score	0.0324*** [0.00]	0.0240*** [0.00]	0.0253*** [0.00]	0.0185*** [0.00]	0.0121*** [0.00]	0.0092*** [0.00]
Dual Enrollment	0.3080*** [0.03]	0.2324*** [0.04]	0.2209*** [0.03]	0.1354*** [0.03]	0.3384*** [0.02]	0.2474*** [0.03]
HS Pupil-Teacher Ratio	-0.0048 [0.01]	-0.0158 [0.01]	0.0091 [0.01]	0.0021 [0.01]	0.0137 [0.01]	-0.0034 [0.01]
HS Enrollment/1000	0.0140*** [0.00]	0.0108*** [0.00]	0.0135*** [0.00]	0.0087*** [0.00]	0.0165*** [0.00]	0.0102*** [0.00]
HS Percent Minority	-0.5755*** [0.06]	-0.4989*** [0.07]	-0.5917*** [0.06]	-0.4756*** [0.07]	-0.6948*** [0.05]	-0.7268*** [0.06]
HS PPE (logged)	-0.0338 [0.13]	-0.1134 [0.13]	0.2445 [0.13]	0.1042 [0.14]	0.0837 [0.12]	-0.0638 [0.12]
HS Urbanicity	-0.0086 [0.03]	-0.0029 [0.03]	-0.0879** [0.03]	-0.0741* [0.03]	0.0274 [0.03]	0.0376 [0.03]
Worked While in HS	-0.2605*** [0.03]	-0.2191*** [0.03]	-0.2013*** [0.03]	-0.1683*** [0.03]	-0.1959*** [0.03]	-0.1379*** [0.03]
County Unemployment	0.0085* [0.00]	0.0191** [0.01]	v0.0079 [0.01]	0.0116 [0.01]	0.0196* [0.01]	0.0023 [0.01]
Proximity to PS	0.0066 [0.04]	0.0155 [0.04]	-0.0606 [0.04]	-0.0538 [0.04]	-0.0314 [0.03]	v0.0073 [0.03]
Barron 1 (Nonselective)		0.104 [0.07]		0.0103 [0.07]		-0.1226* [0.06]
Barron 2 (Moderately Selective)		0.2898** [0.10]		0.2817** [0.09]		0.0654 [0.07]
Barron 3 (Highly Selective)		0.6959*** [0.11]		0.6020*** [0.11]		0.3750*** [0.09]
PS Percent Tenure		-0.6909** [0.25]		-0.352 [0.25]		1.0742*** [0.20]
PS Faculty-Student Ratio		-1.8062 [1.84]		-6.1676*** [1.49]		2.1285 [1.49]
PS FTE		0 [0.00]		0.0000*** [0.00]		0.0000*** [0.00]
PS PPE (logged)		0.6760*** [0.13]		0.2508** [0.10]		0.3401*** [0.08]
HSI		-0.1039 [0.08]		-0.1804* [0.08]		-0.1976** [0.07]
HBCU		-0.1958 [0.10]		-0.3095*** [0.09]		-0.2438** [0.07]

*(continued)*

Table 5 (continued)

	1997 Precollege	1997 (add PSE Effects)	2000 Precollege	2000 (add PSE Effects)	2002 Precollege	2002 (add PSE Effects)
Constant	-1.1009 [1.08]	-6.1121*** [1.58]	-2.8495* [1.16]	-3.2840* [1.49]	-1.7572 [1.04]	-3.6003** [1.28]
<i>N</i>	32,852	32,852	35,043	35,043	43,125	43,125
chi <sup>2</sup>	3,896.9446	4,957.3791	3,366.9501	4,283.1326	5,259.0672	6,750.1601

Note. PSI = postsecondary institution enrollment; LEP = English language proficiency; AP/IB = advanced placement/international baccalaureate; HS = high school; PPE = per-pupil expenditures; PS = postsecondary institution; FTE = full-time equivalent enrollment; HIS = Hispanic-serving institution; HBCU = historically Black college and university.

Source: Authors' calculations. Texas Education Agency and Texas Higher Education Coordinating Board.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

At the college-completion level, our most important finding regarding the role of race in a diverse higher education market has to do with the influence of postsecondary characteristics. At this end of the educational pipeline, we find that the role of race disappears in our full models for the student cohorts examined (those entering in 1997, 2000, and 2002). In other words, although we are not making causal claims, we observe that after accounting for precollege characteristics and postsecondary characteristics, including enrollment in an MSI, Hispanic and Black students show no difference from their White peers in six-year graduation outcomes. Although it may not be surprising that attending a more selective school is the most significant postsecondary factor in predicting the odds of completion across all cohorts, per-pupil expenditure by postsecondary institution (across all cohorts) and the percentage of faculty that is on tenure track or tenured (in select cohorts) also play a significant role.

Finally, although the influence of MSI status shows a significant negative influence for our latter two cohorts, it is unclear whether these measures for an MSI indicator, despite accounting for other measures of institutional quality, represent measures of racial concentration at largely nonselective institutions or other unexplored phenomena particular to MSIs. Ultimately, the data strongly indicate that the institution most likely to enroll underrepresented students and launch them on the path toward completing a bachelor's degree in Texas is the community college, specifically the Hispanic-serving community college for Hispanic students and the traditional community college for Black students. In a context of declining support for higher education and cash-strapped states with growing minority populations that need financial assistance, institutions that serve high-minority populations and have fewer resources will continue to struggle with poorer completion rates than those of better resourced schools with better prepared students.

## Conclusion and Implications

The purpose of this study is to present an updated analysis of the role of race and ethnicity in college success, accounting for the role of the MSI in the larger high school to college completion trajectory. However, because we have not addressed concerns related to self-selection into MSIs (nor to our knowledge has any other research to date), we are not making causal claims regarding enrollment in an MSI and subsequent degree completion.

Furthermore, the aim of this research is not to detract attention from the documented success of MSIs over time (Gasman, Baez, & Turner, 2008) but instead to contribute to the higher education literature by further disentangling patterns of enrollment and completion in key postsecondary institutions for underrepresented students of color. Minority-serving institutions in both the two- and four-year sector are an integral part of the college-enrollment and college-completion question in various ways, and their representation in higher education research should be as necessary as that of the community college. Hispanic-serving institutions are the likely home for Hispanic high school graduates who enter college at both the two- and four-year level. Moreover, although HBCUs are not the first institution of choice for Black students, as traditional two-year colleges top that list, they are still some of the most open-access four-year institutions for Black high school graduates who enter college, even if they enter underprepared.

Our results indicate that there is much to uncover about the role of MSIs in college access and completion after accounting for race and ethnicity, but there is even more to address relative to Black students who are enrolling in increasing numbers in non-MSIs in Texas. How might four-year HBCUs and traditional two-year colleges alter their recruitment strategies with these enrollment trends in mind? Findings of the research on the likelihood that students who start at two-year institutions will complete a four-year degree is not positive (Doyle, 2009; Long & Kurlaender, 2009; Park, 2012), which signals that four-year MSIs are in a more important position than ever to play a role in students' odds of transferring from a two-year to a four-year institution. The relationship between two-year schools that serve growing numbers of Black students and four-year HBCUs may be the most important institutional partnership in Texas responsible for the college-completion rate of this student population. For Hispanic students, the partnership of interest operates in a slightly different direction in that four-year HSIs and non-HSIs should likely place most of their emphasis on the two-year HSI. Institutional leaders, although likely aware of these patterns, now have direct evidence, controlling for a range of precollege characteristics, of where they might direct existing or new resources.

Finally, as data linking K-12 to postsecondary sectors become more available, we see an even greater need for MSIs to play a more prominent role in the rigorous program evaluation

literature. For example, we know less about successful programmatic interventions at these institutions than we do about those at institutions defined purely by their two- or four-year sector status. That is, large-scale quantitative program evaluations examining successful college-completion interventions are becoming more prominent, yet most do not address the role of the growing MSI sector. We also know less about how to quantify the needs of these institutions than we do about similar non-MSIs, assuming their needs are indeed qualitatively and quantitatively different from one another. Research and federal support for these institutions strongly support this case, but additional data and research for the purpose of sustained policy and programmatic attention at the state and federal level is likely needed (Freeman, 2005; Gasman et al., 2008; Kim & Conrad, 2006). Moreover, if the political and judicial tides turn toward an environment that prohibits paying any attention to race at colleges and universities regarding admissions or retention programs, it is unclear how MSIs will fare in the future and, as a result, how the futures of the students who are most likely to attend these institutions will play out.

## Appendix

Figure 1 presents four levels of variables utilized for our three outcomes of analysis. At the individual student level (S), we include the variables of race, gender, economic status (defined by the Texas Education Agency as a composite indicator for students receiving free or reduced lunch), and limited English proficiency (LEP) status. Our academic preparation variables (ACPREP) include the successful completion of a trigonometry course, and completion of either an advanced placement (AP) or an international baccalaureate (IB) course. We also control for student performance on the state math exam and whether a student was dual enrolled—that is, simultaneously enrolled in high school and doing college coursework. Our high school context (HSC) variables include the pupil–teacher ratio, school enrollment, the percentage of underrepresented minority students in the school (Black and Hispanic), per-pupil expenditures, and whether the high school is located in an urban setting, as defined by the U.S. Department of Education; these data are available from the Texas Schools Microdata Panel (TSMP). Using data from the Texas Workforce Commission, we include a control for working during high school as an indicator of whether a student worked during his or her spring semester in high school immediately preceding graduation. We also include controls for community context (where the high school is located), including the unemployment rate in the county where a student attended high school (from the Bureau of Labor Statistics) and whether a student’s high school is located within 25 miles of a postsecondary institution.

Finally, in later models that predict college completion, we control for such postsecondary characteristics (PS) as selectivity (as measured by the Barron Index), the percentage of tenured faculty members, the faculty–student ratio, full-time equivalent enrollment, per-pupil instructional expenditures, and whether the institution is designated as an HSI or HBCU; these data (as well as overall enrollment and completion data) are available from the TSMP. Limitations of the data set include the inability to account for SAT or ACT score, parental education, and generational status. First, in response to these limitations, we argue that SAT/

ACT is not as relevant for college enrollment in Texas as it might be for other states, as a result of the Top Ten Percent Plan that de-emphasizes the role of the SAT and privileges high school rank (Horn & Flores, 2012). However, we do account for standardized test scores from the state accountability exams. Second, a lack of information on parental education and generational status in state administrative data is quite common in state administrative data sets and is an unfortunate trade-off when using these data as opposed to national-level data sets (Garcia & L’Orange, 2010). We remind the reader that few studies have tracked the role of race over time by this level of institutional sector detail that includes a state’s minority-serving institution context.

## NOTES

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The data include administrative records from the Texas Education Agency and the Texas Higher Education Coordinating Board. The conclusions of this research do not necessarily reflect the opinions or official position of the Texas Education Agency, the Texas Higher Education Coordinating Board, or the state of Texas.

<sup>1</sup>The only MSIs in Texas at the time of our analyses were HSIs and HBCUs largely due to demographics and postsecondary institutional history. We use Texas as a case study to help understand states with alternatively diverse markets, such as those that serve Tribal colleges and universities and institutions serving Asian American and Native American Pacific Islanders.

<sup>2</sup>We use the terms *Latinola* and *Hispanic* interchangeably. We do the same for *Black* and *African American*.

<sup>3</sup>For an expanded review of HSI and HBCU development, see Gasman, Baez, and Turner (2008).

<sup>4</sup>Low enrollment numbers of Asian and Native American students in MSIs in the state, particularly HSIs and HBCUs, prevents their inclusion in these models.

<sup>5</sup>Data are available for all cohorts for students enrolling at public institutions in Texas. Students who leave the state are coded as not enrolling. Data on private institutions in Texas are included for the 2002, 2006, and 2008 cohorts.

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