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The First State Dream Act: In-State Resident Tuition and Immigration in Texas

IHELG Monograph 09-09

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The First State Dream Act:

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Draft Version: December 2009

ABSTRACT

In 2001, Texas was the first state legislature to pass an in-state resident tuition policy that benefited undocumented immigrant students, a majority of whom are of Latino origin. This analysis is one of the first studies to provide causal estimates of the impact of the Texas in-state tuition policy on students likely to be undocumented. Using a differences-in-differences estimation strategy and two extensive datasets, individual-level data from the U.S. Current Population Survey Merged Outgoing Rotation Groups, and institutional data from the Texas Higher Education Coordinating Board, results suggest that foreign-born noncitizen Latino students were more likely to attend college after the introduction of the Texas benefit. The results were strongest for older high school graduates, who were found to be 4.84 times more likely to have enrolled in college after the tuition policy than their counterparts in Southwestern states without a tuition policy. Multiple tests suggest these results are quite robust, both across states and within Texas regardless of specification.

Search terms: immigrant students; state policy; financial aid; college access

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I. INTRODUCTION

As the number of undocumented students in U.S. public schools has increased over the last few decades, concerns about their educational outcomes have become a matter of state interest (Berger, 2001).[1] The U.S. Supreme Court first considered how education systems should treat undocumented students in the 1982 case *Plyler v. Doe,* which struck down a 1975 Texas law seeking to deny undocumented children a free elementary and secondary public education by charging them tuition to attend the state's schools (Olivas, 2004; *Plyler v. Doe,* 1982). Nearly twenty years after the implementation of this decision, Texas became the first state to successfully pass a tuition-related bill addressing undocumented students' access to Texas public higher education following the passage of the1996 Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) and the Personal Responsibility and Work Opportunity Reconciliation Act, two federal laws that define the most recent context in which immigrants, both legal and undocumented, can receive certain educational and social benefits (Kobach 2007; Olivas, 2004, 2009.) The Texas bill, referred to as the first "state dream act" or more formally as House Bill 1403 (HB 1403), now came in the form of a discount rather than a fee.[2] Under

this bill, which was formally enacted in 2001, undocumented students in Texas are granted the same in-state resident tuition discount as legal residents if they meet specific residency and graduation requirements.

The in-state resident tuition (ISRT)**]** discount is substantial for all students, but it is especially significant for undocumented students because they do not qualify for federal aid to finance a postsecondary education. The difference in in-state and out-of-state tuition in 2004 is close to $2,000 per year at public community colleges; at four-year public colleges it is almost $8,000 (McGee, 2005).[3] The Texas policy also makes undocumented students eligible for state financial aid, a component not present in most other states that offer a similar tuition benefit. Since 2001, more than half of the fifty states have considered in-state residency tuition bills; eleven states in total have passed such legislation: Texas, California, New York, Illinois, Washington, Oklahoma, New Mexico, Kansas, Utah, Nebraska, and now Wisconsin (National Conference of State Legislators, 2006; Olivas, 2004). The movement to pass such state legislation, however, has been accompanied by policy revisions that rescinded parts of the original legislation offered in Oklahoma; by governor vetoes of proposed legislation in Connecticut, Maryland, and Massachusetts; legislated bans on providing any higher education benefits to undocumented immigrants in South Carolina; and a ban passed by a voter referendum in Arizona (Lee, Frishberg, Shkodriani, Freeman, Maginnis, & Bobo, 2009).[4]

The legality of state resident tuition programs has received considerable attention. Although IIRIRA prohibits states from "providing a post-secondary education benefit to an alien not lawfully present unless any citizen or national of the United States is eligible for such a benefit," various state and federal courts have concluded that the act does not

preclude states from passing residency statutes for the undocumented, as long as they do not give more consideration to this population than to the legal population (IIRIRA, 1996; Olivas, 2004). That is, a state is not in violation of the federal law if it also permits U.S. citizens to qualify for the tuition discount by meeting the same requirements of residency and high school graduation set for students residing in that state regardless of citizenship status (National Immigration Law Center, 2006). However, legal challenges to the interpretation of in-state tuition laws are ongoing, as seen in California, North Carolina, and now Texas (Olivas, 2009). In December 2009, a lawsuit challenging the first state dream act in the nation was filed in Texas (Carroll, 2009). Despite the significant legal, policy, and electoral attention given the tuition legislation, there is as yet virtually no empirical evidence of the quantitative impact it has had on the college-enrollment rates of undocumented Latino students in Texas.

This study explores whether the introduction of resident tuition benefits for undocumented students in Texas in 2001 has had an impact on their college participation. The introduction of the policy in fact is a good example of a natural experiment in public policy, an event that occurs when an exogenous event, such as the adoption of a program or law, occurs to affect some groups but not others (Dynarski, 2003). In this case, I specifically examine the effects of in-state resident tuition eligibility in Texas on the college decisions of students likely to be undocumented immigrants – foreign-born non-citizens from Latin American countries—the group most likely to include undocumented residents who may benefit from the policy.[5] I then compare this group to similar students in states that have comparable Latino immigration rates, higher education landscapes as defined by the presence of public four-year and two-year institutions in size and

selectivity, and unemployment rates, but which have not implemented an in-state resident tuition policy for the undocumented.[6] I examine first whether the Texas policy does in fact have an impact on the college enrollment of foreign-born noncitizen Latinos and then whether this outcome varies as a yearly trend post implementation. I focus on Texas because it was the first state to implement this type of tuition legislation. Moreover, two cities in Texas, Dallas and Houston, implemented similar tuition policies at the community college level (although with distinct requirements) even before the state tuition bill was passed (Rincon, 2008). The state therefore provides a particularly relevant case study in the history of in-state tuition laws.

Texas also exemplifies recent U.S. demographic trends: it is one of the largest states to become a majority-minority state, primarily due to its growing Latino population.[7] Moreover, the educational outcomes of first- and second-generation immigrants differ significantly by race and generational status, most notably between Latinos and students of Asian origin (Hagy & Staniec, 2002). For example, first and second-generation Asians are much less likely to choose non-enrollment and are much more likely to enroll in four-year public institutions. Hispanics, regardless of generational status, are more likely to choose non-enrollment as a college choice decision and two-year public institutions as a next option if they do enroll in any form of postsecondary higher education. No other group of any race, ethnicity, or generational status exhibits this same propensity to enroll in two-year institutions as do Hispanic students. Finally, Latino students, many of whom are immigrants, report the lowest educational attainment rates in Texas (Co-author & Author). For these reasons, I do not include Asian, African-origin, or other immigrant groups in this analysis.

The specific research questions for this analysis therefore are:

1. Did the introduction of an in-state resident tuition policy in Texas increase the college-participation rate of students likely to be undocumented in the period examined?
2. Did the introduction of an in-state resident tuition policy have differential effects, if any, by year, after initial policy implementation?

Although undocumented status is not exclusive to one racial or ethnic group, Latin American immigrants comprise approximately 85 percent of all undocumented immigrants in the U.S. (Passel, 2005a). Furthermore, individuals of Mexican origin comprise 77 percent of all unauthorized immigrants in Texas, most of whom are between the ages of fifteen and twenty-nine. The U.S. naturalization rate also differs among groups of various national origins, a trend used to identify the proportion of undocumented individuals using a combination of Census datasets such as the Current Population Survey (CPS) and other detailed immigration surveys sponsored by the U.S. government (Smith, 2006). Immigrants of Asian origin, for example, have some of the highest naturalization rates in the U.S. and are more likely to be citizens than other foreign-born individuals (Dixon, 2006). In contrast, foreign-born individuals from Latin America, particularly Mexico, historically have had some of the lowest naturalization rates (Margon, 2004). Smith (2006), for example, argues that one way to begin identifying the likelihood that an individual is undocumented is by corroborating their ethnicity and country of origin, as measured by the Current Population Survey (CPS), with other datasets such as the New Immigrant Survey-Pilot (NIS-P), a nationally representative sample of new legal immigrants in 1996 complied from Immigration and

Naturalization Service (INS) records although this survey is not in yearly format like the CPS. Others have also used such surveys to estimate the percentage of undocumented immigrants by identifying their ethnicity, country of origin, and educational completion rates (Borjas, Freeman, & Lang, 1991). One conclusion is that analyses of immigrants as a group using government databases do not provide a representative assessment of either the legal resident immigrant population or the undocumented as separate populations (Betts & Lofstrom,2000). Therefore, particular configurations of samples using country of origin, ethnicity, and age are likely to lead to more reliable estimates of groups that have higher percentages of undocumented individuals than others—for example, Latinos versus Asians.

The changes in policy brought about in Texas by HB 1403 provide a unique opportunity to investigate the causal impact of policies targeting undocumented Latino students using quasi-experimental methods employed by other researchers (Dynarski, 2003, 2004, 2008; Kane, 2003; Long, 2004a). I use a treatment-comparison research design similarly applied to the introduction of merit aid in previous studies (Dynarski, 2009). For example, I compare Texas to states in the Southwest that never introduced an in-state resident tuition policy or that introduced such legislation after the period under analysis. I use a subset of the nationally- and state -representative dataset of individuals, the Merged Outgoing Rotation Group Files (MORGs) from the Current Population Survey, to examine the college enrollment rates of the *estimated* undocumented Latino population, as measured by students who are classified foreign-born non-citizens (FBNCs). I use FBNC Latinos as a proxy for the undocumented, although this category is comprised of both legal residents and residents without proper authorization to live in the

United States. Although the proxy for undocumented students in this analysis is imperfect, this category of students has the highest likelihood of containing the greatest percentage of undocumented individuals using available data (Smith, 2006). Moreover, the particular structure of the CPS dataset, as discussed below, suggests that well over 29 percent and potentially more than half of all foreign-born non-citizens of Latin American origin between the ages of eighteen and twenty-four in the sample are undocumented (Passel, 2005a; Passel, Van Hook, & Bean, 2004).[8]

In Section II, I first summarize the demographic and educational context of undocumented immigrants and Latinos in the U.S. and Texas, and then lay out the details of House Bill 1403. In Section III, I provide the theoretical framework and associated research relating to the college-participation rates of Latino and Latino immigrants in the U.S. I follow in Section IV with a description of the research design, including data, analytic strategy, and threats to validity associated with the potential limitations of the design. In Section V, I describe the results of the estimated effect of HB 1403 on the college-enrollment outcomes of Latino immigrant students in Texas, and discuss the range of additional checks to test the robustness of my results. I conclude in Section VI with implications for subsequent policy analysis research in this area of higher education.

II. CONTEXT AND BACKGROUND OF HB 1403

2.1 Undocumented Immigrants and Latinos in the United States and Texas

Estimating the undocumented population in the U.S. has involved a series of methodological developments since the 1980s. I rely on the latest estimation methods by Passel and colleagues (Passel, et al., 2004), which account for various changes in

demographic trends, including the number of refugees and asylees, and changes in immigration policy categories.[9] In 2004, Passel (2005a) reported that 11.3 million undocumented migrants constitute almost 30 percent of all foreign-born individuals living in the U.S. The population of Texas includes the second-largest percentage of undocumented immigrants, 14 percent. Almost 85 percent of the undocumented population in the U.S. is from Latin America, including 57 percent from Mexico. Estimates indicate that approximately 6.3 million U.S. households include undocumented residents, and that one-sixth of the undocumented population is under age eighteen.

The educational attainment rates for this group are below those of legal residents and U.S.-born students. The Urban Institute estimates that 49 percent of "unauthorized youth" of all races and ethnicities do not complete high school, compared to 21 percent of legal immigrants and 11 percent of native-born students in the U.S. (Passel, 2005b).[10] Despite graduation rates well below those of other categories of students, a 2004 report indicates that approximately 48 percent of the 65,000 undocumented students who graduated high school attended some college (Passel, 2005b). Determining what factors facilitated this college attendance and how they did so calls for further exploration.

As a major demographic group, Latinos had lower educational attainment than other racial and ethnic groups in Texas by the turn of the twenty-first century. For example, in 2001, the Latino high school graduation rate in Texas was 55.9 percent, compared to 85.3 percent and 73.5 percent of Asian and white students, respectively (Swanson, 2004). The Latino BA/BS attainment rate of 7.3 percent was the lowest of all racial and ethnic groups in the state: Blacks students were second at 12.8 percent, whites were at 26.6 percent, and Asians, 33.7 percent (Co-author & Author,). Latinos in Texas

also had lower educational attainment than Latinos in other states with a similarly high percentage of undocumented immigrants (Co-author & Author; Passel, 2005a).

The policy context within which native and immigrant Latino students have attended college has undergone some changes in the last decade. In 1996, the *Hopwood* decision in the U.S. Fifth Circuit Court of Appeals prohibited the state of Texas from using race as a factor in admissions; this was later extended to apply to financial aid. In 1998, in response to these changes, the state legislature implemented the Top Ten Percent Plan, which allows the top 10 percent of each Texas high school's graduates to attend the public college or university of their choice (House Bill 588). Eligibility for fellowships associated with the Top Ten Percent Plan was limited to U.S. citizens and permanent residents (Co-author & Author). Undocumented immigrants, although they may have qualified for percent plan admissions during this time, therefore were barred from receiving program benefits, such as scholarships and other federal and institutional financial aid. HB 1403 was introduced in the midst of other state and federal policy decisions being considered during this time. Since then, significant research has emerged about the effects these various state policy initiatives have had on particular groups. Below I detail why and to what extent these policies do or do not compromise my results for my particular population of interest, undocumented Latino students, due to their exclusion from either current research, data availability, or ineligibility for specific programs.

2.2 Background and Criteria of House Bill 1403

In 2001, Hispanics comprised the largest racial and ethnic group in four of the five largest cities in Texas (Houston, Dallas, San Antonio, and El Paso), largely due to migration and

birth rates (Murdock, White, Hoque, Pecotte, You, & Balkan, 2003). When HB 1403 was being debated, it had considerable support from both houses of the legislature, and it passed unanimously in the Texas senate (Berger, 2001). Although the bill was the first state law of its kind in the nation, institutional policies with similar provisions for undocumented immigrants had previously been adopted in the state's two largest community college systems: the Dallas County Community College System in the fall of 1999 and the Houston Community College System in the fall of 2000.[11] HB 1403, however, added two important components that had additional implications for college access: eligibility for state financial aid, and access to all institutions in Texas as an in-state resident.[12] As written, HB 1403 requires that a student meet the following criteria:

1. Must have graduated from a public or private high school or received the equivalent of a high school diploma in Texas.
2. Must have resided in the state for at least three years as of the date graduated from high school, or have received the equivalent of a high school diploma.
3. Must register as an entering student in an institution of higher education not earlier than the 2001 fall semester.
4. Must provide to the institution an affidavit stating that the individual will file an application to become a permanent resident at the earliest opportunity the individual is eligible to do so.[13] (HB 1403, 77th Legl, Reg. Sess. (Tex. 2001))

HB 1403 remained in stable legislative form until 2005. Additional provisions to the bill regarding timing in the application process were passed in 2005 and enacted in 2006.

III. THEORETICAL FRAMEWORK AND REVIEW OF THE LITERATURE

3.1 Costs, Benefits, and Uncertainty in the College Enrollment of Undocumented Students

To understand how undocumented students may respond to a price reduction in college tuition stemming from a state law, I apply a cost-benefit framework developed by Becker (1964) as part of the human capital model. According to Becker, investing in education carries a cost, but it also increases human capital, which translates into skills that can be "rented out" to employers in exchange for income. In deciding whether to prepare for, enroll in, or complete college, an individual weighs the costs and benefits of the educational investment—both monetary and non-monetary. The monetary considerations typically include tuition and forgone earnings while enrolled in school (costs) and higher future earnings (benefits). Non-monetary costs may include the psychological stress associated with an investment in higher education and the uncertainty of whether such an investment will pay off, while non-monetary benefits might include increased public and social prestige and better health outcomes. Within a basic human capital framework, the primary effect of the HB 1403 policy, which provides a tuition discount for students who would otherwise be required to pay international rates, is a reduction in price.

The typical cost-benefit analysis, however, may operate differently for a student who is undocumented, and therefore susceptible to a number of uncertain factors and outcomes. These include the inability to pay for school or to secure the financial aid from sources available to others, such as federal aid in the form of loans and grants; risk of deportation; separation from family in the U.S.; and whether, after attending college as an undocumented individual, there will be any real returns in the labor market. Altonji (1993) suggests that deciding to invest in college is further complicated when individuals

have incomplete information and/or are dealing with uncertain conditions when trying to make the most accurate cost-benefit analysis of their decision.

Applying a conceptual framework of uncertainty, a student who is low income and undocumented may initially see the monetary costs of investing in a college education as unattainable. However, they may also expect that the ultimate benefit of earning higher wages after completing college-level work will outweigh the immediate direct and opportunity costs of attending college. Nevertheless, considerable risks remain without some form of legal or institutional protection: even with affordable tuition, the psychological costs of revealing one's undocumented identity by deciding to enroll in a public institution may be too high. Applying the concept of uncertainty to the potential policy effects of HB 1403, one might expect that state support for the eligibility of undocumented students may reduce their uncertainty by at least providing a safe space where they can continue their education. In other words, a secondary effect of this policy in Texas public postsecondary institutions may be to reduce the uncertainty in the college-enrollment process for these undocumented students.

To supplement the existing theoretical frameworks on the returns to human capital for Latino undocumented students, I provide additional background on the role of other factors such as individual characteristics and external forces such as state policies, in addition to financial aid and cost, that may play a role in the college-enrollment decisions of these undocumented students in U.S. higher education.

3.2 The Immigrant College Student: Individual Characteristics, Response to Aid, and State Policy

Research on immigrant college students has burgeoned over the last decade (Fry, 2006; Gonzales, 2007; Hagy & Staniec, 2002; Leinbach & Bailey, 2006; Olivas, 2009; Rincon,

2008). Generational status, educational attainment, and gender are among the factors relating to this population that are often most examined. Of particular recent interest in the larger college-access puzzle for this population are the roles of financial aid and of state differences in educational attainment, which have long been discussed in the general literature through a variety of multidisciplinary lenses but often have not incorporated the role of foreign-born status. Not surprisingly, merging the limited indicators available on immigrant students by detailed citizenship status from available and representative national and state database with information on financial aid receipt in addition to the differential state education policies, is a more complex undertaking.

Next I discuss key factors of analysis that relate to the research question of interest. They include: individual characteristics likely to affect the postsecondary enrollment rates of undocumented students (age, gender, time in the U.S.); the role and response to financial aid initiatives based on particular background characteristics, such as income, race and ethnicity, language, and citizenship; and state educational policy initiatives that might affect the population of interest. In Texas, these may be accountability practices such as promotion and graduation exams (PGEs), state admissions plans such as the Top Ten Percent Plan, and associated outreach from some state postsecondary institutions (Domina, 2007; Harris, 2007; Long, 2004; Long & Tienda, 2008). That is, how and to what extent (if at all) such initiatives apply to the undocumented Latino population is evaluated below.

Individual characteristics

Age, gender, and time in the U.S. are particularly strong determinants of general school participation and the college enrollment of immigrant students in the United States (Betts

& Lofstrom, 2000; Fry, 2005). A foundational issue that leads to the likelihood of high school graduation followed by postsecondary enrollment is time spent in the U.S. For cohorts of foreign-born students who had entered and graduated from a U.S. high school at the turn of the century, time spent in U.S. schools is a strong predictor of persisting in U.S. high schools (Fry, 2005). For example, foreign-born teens who have received much of their schooling in the U.S., particularly if they arrived in the U.S. early in childhood, are much more likely to have a lower dropout rate (approximately 5 percent lower) than foreign-born teens who arrived later in life. Moreover, gender plays an identifiably strong role in high school dropout rates, most notably for males. Immigrant males who arrive later in their school-age life, and who had educational difficulties before they migrated, are particularly vulnerable to dropping out of U.S. high schools. A conventional reason for failure to participate or continue in school is often the individual motivation for migration as males are more likely to be labor migrants, which may contribute to higher dropout rates than those of their immigrant female counterparts (Fry, 2005). Using CPS data, Smith (2006) documents the fact that the historical educational advantage men had in the early 1970s has been eroding, and that by 2002, female migrants to the United States had more schooling than their male counterparts.

While it appears that females are likely to stay in school and enroll in college at higher rates than their male counterparts, foreign-born women also face complex educational decisions related to marriage and family. Immigrant women, particularly from countries with more traditional gender division of labor, such as Mexico, have higher incidences of marriage and fertility (Blau & Kahn, 2005). While marriage rates tend to assimilate toward U.S. nativerates over time, foreign-born Mexican women are

still more likely to be married after a lengthy residence in the U.S. The role of marriage as defined by distinct cultural backgrounds might therefore be a relevant factor in the postsecondary educational decisions of females as well as males. Finally, for foreign-born individuals who do enter U.S. postsecondary institutions, immediate entry after high school or at the traditional college age of approximately eighteen is also *not* likely to occur. In a study examining foreign-born individuals for U.S. Census cohorts from 1970, 1980, and 1990, Betts and Lofstrom (2000) found that individuals in cohort groups over the age of twenty enroll in college at higher rates than younger age groups. They suggest that such enrollment patterns by adult immigrants decrease the educational attainment gap with native groups over time. Age twenty-one and over is therefore a consistent marker of enrollment age for foreign-born individuals, as measured by U.S. Census databases for the three decades just mentioned. Such enrollment patterns resonate with other studies on immigrant college enrollment, which find that foreign-born individuals are more likely to enroll in college at a later age, and most likely enroll in a community college as their first-choice institution (Adelman, 2005).

Price, aid and Latino immigrant students

Numerous studies have suggested a causal link between particular types of financial aid, such as tuition subsidies, and an individual's decision to enroll in college (Dynarski, 2003, 2004; Kane, 1994, 1995, 2003). More specifically, students' response to college financial aid has been shown to differ according to the type of aid available to mitigate costs, perceptions of price, and individual background characteristics, such as income status, and race and ethnicity. Research on the role of income and background status, in particular, suggests that response to financial aid differs by background and may be

greater for low-income students and underrepresented minority students (Ellwood & Kane, 2000; Heller, 1997; Kane, 1994; St. John & Noell, 1989). Kane (1994), for example, finds that both black and low-income white individuals were sensitive to tuition increases in the 1980s. Perna (2000) finds that students respond differentially to particular forms of financial aid. Using data from the National Education Longitudinal Sample of 1988 (NELS 88), she presents descriptive results suggesting that African Americans and Hispanics are more likely to receive grants than Whites, although African Americans are also more likely to receive loans than their White and Hispanic counterparts.

Latinos' response to various forms of financial aid has recently received increased public and empirical attention. Research dating back to 1990 began to decipher the role of cost on the postsecondary intentions of Chicano families in California. Post (1990), for example, found that financial considerations in the form of college costs were a large determinant in college attendance plans, which depended on language status; for example, Post noted a stronger relationship for children of Spanish speakers than of English speakers. However, the research did not detail differences by citizenship status. More recently, other research has begun a more systematic study of differences in the reaction to college costs and financial aid awareness by race and ethnicity. Alfonso (2004) suggests that Hispanics appear to be more price sensitive to college costs than non-Hispanics. Another national study found that Hispanic parents were twice as likely as non-Hispanics to have no idea how to pay for college, and they were less likely to receive any information related to financial aid while their child was young (Sallie Mae Foundation, 2004). The same study found that Hispanic parents were more likely to

receive financial aid information later than their black and white counterparts, and it highlighted the important role language plays in the receipt of such information. The only certainty in Latino college-enrollment patterns that has existed consistently over three decades is that Latino students are more likely to enroll in a community college as a first-choice institution than other racial and ethnic groups (Adelman, 2005). Kurlaender (2006) confirms this trend, using the National Education Longitudinal Sample of 1988 (NELS 88).

I now turn to studies examining distinct state policies regarding high school graduation and college enrollment in Texas as they relate to students who are Latino immigrant origin individuals.

Relevant K-16 state educational policy in Texas

In attempting to decipher the exact role the introduction of an in-state resident tuition benefit played in Texas, it is also important to examine whether other related state policies enacted or in operation during a similar window of time as the ISRT policy and are potentially associated with the college participation of foreign-born individuals of Latino origin in Texas may have played an important role. These policy factors may include (1) the presence and retraction of race-conscious policies in college admissions, (2) new state alternative admissions policies, (3) comprehensive postsecondary institutional outreach initiatives and state grant programs, and (4) K-12 accountability policies, such as promotion and graduation exams; the latter is a major state accountability practice that began in Texas in the late 1980s and remains in effect although with some alterations over time (Martorell, 2005).

Latino-origin individuals comprise a high majority of all immigrants in Texas. The ethnicity of such students is therefore applicable to traditional race-conscious admissions practices associated with affirmative action practices (policy factor 1). One earlier examination of the impact immigrant students have on college admissions outcomes finds that some immigrant students, particularly those that are wealthier and with higher levels of parental education, "crowd out" U.S.-born black and Hispanic students at selective institutions (Hoxby, 1998). However, this study focused on California's distinct higher education landscape. In addition, the study found inconclusive results in regard to non-selective institutions, the locations where Latinos, regardless of citizenship status, are most likely to attend. Changes in admissions policy, as dictated by *Hopwood v. Texas* and subsequent legislative action in the form of a state alternative admissions policy known as the Top Ten Percent Plan, removed the role of race in college admissions for all students in Texas by 1997. However, the practice was reinstated in 2005 by some Texas institutions with the *Grutter v. Bollinger* decision (Chapa & Horn, 2007). By 1998, all public postsecondary institutions were required to admit the top 10 percent of a school's graduating class to the Texas college or university of their choice. This included any student, regardless of race or citizenship status. Research on the effects of the percent plan admissions policy, however, has consistently found that the level of underrepresented minority students, including Hispanics, attending selective colleges and universities had not risen to the levels of admission prior to the retraction of race-conscious admissions practices in 1996 (Long, 2004; Long & Tienda, 2008).

Domina (2007) argues that a combination of factors (2 and 3) in fact worked explicitly to link postsecondary opportunities to high school performance, ultimately operating as K-16 school reforms in the state. Of particular relevance is whether and how such state policies and their associated criteria affected the postsecondary enrollment rates (and decisions) of students likely to be undocumented. While the institutional scholarship programs sponsored by the most selective flagship universities in Texas proved effective in increasing the percentage of underrepresented students at these institutions, undocumented students are not eligible, due to their citizenship status. Domina (2007) examines a state grant program aimed at four-year institutions and for which undocumented students are eligible—the Texas Grant Program. While undocumented students do qualify for such state aid, the study does not examine effects of the program by immigrant or foreign-born status, most likely due to data limitations.

K-12 school reform efforts in Texas that may lead to postsecondary participation are also of interest for the purpose of this analysis. In Texas, promotion and graduation exams are an important intervention of interest. The last ten years have produced a series of studies examining the effects of PGEs nationally and across state contexts. Harris (2007) provides a summary of the evidence on such exams across the U.S., concluding that the overall research is mixed, although general gains from PGEs are offset by a reduction in rates of high school graduation. Of particular relevance to Texas is Martorell's (2005) study on the effects, by cohorts, of failing the state's high school exit exam in the early to mid-1990s. Using a regression discontinuity method, the study finds no support for a discouragement hypothesis. It documents the fact that students who fail the exam in early high school grades are no more likely to drop out of high school than

students who pass the exam. However, the author does find that the exam reduced the number of individuals who receive a traditional high school diploma and increased the number who receive a General Education Diploma (GED). The study also finds that failing the "last chance" PGE exam significantly reduces the rate of enrollment in Texas public postsecondary education institutions.

Although perhaps one of most rigorous quantitative studies on PGEs in Texas, Martorell's (2005) study focuses on differences between white and non-white groups, and does not disaggregate by immigrant or foreign-born status. The unique and rich dataset used by Martorell, the Texas Schools Microdata Project (TSMP), is not well-suited to analyzing educational outcomes by *detailed* citizenship status differences, making it more difficult to assess Latino foreign-born non-citizen students' response to these exams. Dee and Jacob (2006) do provide an examination of promotion and graduation exams using census data, a source with detailed citizenship information and a high level of representation at the state level. While census data show that exit exams significantly reduce the probability of completing high school nationally, particularly for black students, the authors note that these data exclude all residents who are foreign-born, which significantly reduces the number of Hispanic students and all immigrant students in their sample. The authors also find no effect for any groups on college enrollment, with the exception of U.S.-born Hispanic females.

IV. RESEARCH DESIGN

4.1 The Landscape of Data on Immigrant Students and Educational Attainment

Assessing the impact of a state financial aid benefit, such as an in-state resident tuition law, requires data that is timely, as representative as possible, sufficiently detailed to capture differences in citizenship status, rich in educational trajectory outcomes, and must have appropriate variables to reasonably define the characteristics of the policy requirements. While data such as the NELS 88 is representative, individual level, and contains information on generational status (whether one is born in the U.S. and/or time spent in the country after the family's initial migration), it lacks timeliness in terms of recent state higher education policy. The National Longitudinal Survey of Youth 1997 provides rich individual-level data; it also has some information to capture generational status (not sufficiently detailed citizenship), but is not representative at the state level. These longitudinal datasets, including the Beginning Postsecondary Student (BPS) Longitudinal Study, also suffer from significant sample attrition. A seemingly ideal dataset for measuring an impact in Texas is the Texas Schools Microdata Project mentioned earlier, a confidential administrative dataset that links K-12 to higher education (from the Texas Education Agency and the Texas Higher Education Coordinating Board) student data through encrypted social security numbers. However, with these data, two key barriers prevent a design leading to causal inference using the proposed treatment and comparison research design. First, the TSMP-related data include an "immigrant" variable that captures whether a student entered the country by the age of three. No other defining citizenship data is available to further disaggregate citizenship status. Second, a similar level of detailed administrative data that is publicly accessible for the comparison/control states selected for this design is not readily available. Therefore, the best available dataset to measure the effect of the HB 1403 policy and its

associated requirements such as information on length of time in the U.S. on the population of interest is the U.S. Current Population Survey, a nationally representative sample sponsored by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics. These data are representative at the state level, are collected yearly, and contain the most publicly available and detailed information on citizenship status. As research on immigration, both documented and undocumented, has grown in the last decade, a series of quantitative analyses relating to the national effects of the in-state resident tuition policies using the CPS has recently emerged (Author; Batalova & Fix, 2006; Kaushal, 2008).

4.2 The Data

I utilize two datasets for this analysis. The first and primary dataset is annual data from the CPS, for the years 1998 to 2004.[14] The survey is a multistage, stratified monthly sample that contains information on approximately 60,000 housing units across the United States for the civilian population age sixteen and older. In the CPS, households are interviewed each month for four months, ignored for eight months, and then interviewed again for four months. For this particular analysis, I use a subset of the CPS, the Merged Outgoing Rotation Group Files, which includes approximately 30,000 individuals nationwide per monthly extract, to answer how HB 1403 affected the college enrollment of students likely to be undocumented. These data are also representative the state level, a primary requirement for this analysis. The CPS consists of independent samples in each state and the District of Columbia and is specifically tailored to the demographic and labor market conditions present in that particular state (U.S. Census

Bureau, 2006). Since the CPS design consists of independent designs for each state and substate areas, it can be considered "state-based" (U.S. Census Bureau, 2006).

I use logistic regression to estimate my equation. Because the MORG dataset has multiple observations for most individuals over time, I calculate robust standard errors to account for clustering of observations at the individual level (within person), and so that standard error estimates reflect the structure of the data. The second dataset contains institutional data from the Texas Higher Education Coordinating Board on students admitted under the provisions of HB 1403.

Data on the undocumented have some limitations. [15] Since no government agency in the U.S., including the Census Bureau, directly counts the undocumented migrant population due to obvious legal and ethical reasons, their numerical presence cannot be measured with complete certainty (Passel, 2005a; Passel et al., 2004). However, the CPS does include undocumented immigrants in their survey, which is a principal source of information for current estimates of the number of unauthorized immigrants in the U.S. (U.S. Department of Labor, 2002). Undocumented individuals within this population are instead counted in the data category of foreign-born non-citizens. The FBNC category in the CPS, however, does not include naturalized citizens; it is comprised instead primarily of individuals who are undocumented and are legal permanent residents. Citizenship status in the CPS MORGs is represented by the following categories: (1) Native, born in the U.S.; (2) Native, born in Puerto Rico or U.S. outlying areas; (3) Native, born abroad of American parents; (4) Foreign-born, U.S. citizen by naturalization; and (5) Foreign-born, not a citizen of the U.S.—the last being the primary category of interest for this study. I use FBNC as a proxy for the undocumented because the category includes only

legal residents, residents without proper authorization to live in the United States, and refugees, although not naturalized citizens.[16]

The percentage of individuals who are undocumented is therefore considerably higher than 30 percent, using the specific CPS definition of FBNC. The presence of both legal permanent residents and undocumented individuals thus causes a downward bias in estimating the effect of the tuition policy. That is, it will be more difficult to find an effect of the policy if it only affected undocumented students.

I consider two other perspectives regarding potential measurement error in estimating the effect of the Texas ISRT bill on the population it is most likely to benefit. First, I verify that the law does not change the enrollment behavior of Latino U.S. citizen students, in the case that Latino FBNC misreport their citizenship status. Second, it is extremely relevant to assess that other state policies, to the extent possible, have not affected the academic preparation of the various control groups examined, including non-Latinos, other foreign-born individuals, and other U.S. natives.

With no other available dataset to capture the exact percentage of the undocumented U.S. population, the CPS remains one of the best national datasets with which to estimate their behavior regarding educational outcomes, using the FBNC of Latino-origin as a proxy for undocumented status.

4.3 The Sample

I focus on the Latino/Hispanic population in the sample and define Latino as any individual who has self-identified as Hispanic in the survey, has listed a Latin American country of origin, or has at least one foreign-born parent who has listed a Latin American

country as their nation of origin. Specifically, I use the FBNC sample of Latinos in Texas as the treatment group, and as a control group, I use the FBNC sample of Latinos in states that have a large Latino immigrant population or similar regional higher education profile but *do not have* the tuition policy.

My primary control/comparison group is states in the Southwest, including Arizona, New Mexico, Colorado, and Nevada. The southwestern states were chosen because they are among the states with the highest population of Latinos in the country; they experienced dramatic population growth between 1990 and 2000 that significantly surpassed the national average; they have a significant population of foreign-born non-citizens ages eighteen to twenty-four; they had similar unemployment rates in 2001 (except for Colorado); and are all part of the Western Interstate Commission for Higher Education. Previous versions of this analysis examined states in the Southeast as an additional comparison group. However, the South has experienced particularly distinct shifts in labor market conditions, occupational availability, and population characteristics, which have not occurred in other parts of the country (Card & Lewis, 2007;Dynarski, 2009; Durand, Massey & Capoferro, 2005). Some of these shifts suggest that the waves of migration in the South may make the region's immigrant population distinct from the typical population waves migrating to the Southwest. As such, states in the Southwest provide a better counterfactual to Texas than other regions in the country.

I restrict the CPS portion of the sample in accordance w*ith restrictions dictated by HB 1403:* years of residency in the state, marked by year of entry into the U.S., and the completion of a high school diploma and/or a GED. First, I limit the sample to individuals who were in the United States by 1998 for 2001 HB 1403 beneficiaries, and

so on, based on year-of-entry categorizations available from CPS, which allows for the three-year residency period required to receive the state tuition benefit, within the time period analyzed. Second, I limit the analysis to students who have completed a high school diploma or GED, and exclude all individuals who have completed a BA or higher, also according to the policy requirements.[17] Third, I test my results for individuals within various age ranges (e.g., 18-24, 18-20, 21-24) and within separate gender samples, including whether an individual ever married as a covariate, as documented by the literature. The age categorization allows me to explore whether the "take-up" of the policy is likely to occur with recent high school graduates or older students, or both. In regard to gender, I test whether females and males respond to the policy intervention distinctly if at all. While my research design does not allow me to test for an associated impact of a high school exit exam on college enrollment, I do build on previous studies examining the effects of promotion and graduation exams on the likelihood to enroll in college for a population found to have benefitted from these practices -- U.S. born Hispanic females -- as an additional robustness check. I find no results for this hypothesis in this analysis. That is, this group of females is not more likely to enroll in college as result of the introduction of the policy nor did they exhibit any increased college enrollment odds. Table 1 displays summary statistics for the sample that include the percentage of foreign-born students, as well as year-of-entry restrictions for students age eighteen to twenty-four, by region.

4.4 Empirical Strategy

In my analysis, I capitalize on the passing of HB 1403 as a plausible source of exogenous variation to measure the effects of a price reduction on college enrollment, using a quasi-experimental method to measure the causal impact of aid policies (Dynarski, 2003, 2004; Hoxby, 1998; Kane, 1994; Long, 2004c). Specifically, I employ a differences-in-differences strategy to estimate the effect of eligibility for in-state tuition on the college enrollment of FBNC Latino students, relative to this same population group in states without the tuition policy. It is important to note that this study examines the intent-to-treat effect; that is, students may not actually use the benefit even if they are eligible.

To answer whether HB 1403 increased college participation among FBNC Latino students in Texas public higher education, I use the MORG subsample to estimate the following logistic regression models:

$$(1)\quad \text{LOGISTIC}\,(\text{INCOLL}_i = 1) = \beta_0 + \beta_1\,\text{TEXAS}_i + \beta_2\text{AFTER}_i + \beta_3\,(\text{TEXAS}_i * \text{AFTER}_i) + \beta_4 X_i + \delta_t + \delta_s + \varepsilon_i$$

$$(2)\quad \text{LOGISTIC}\,(\text{INCOLL}_i = 1) = \alpha_0 + \alpha_1\,\text{TEXAS}_i + \alpha_2\text{TXPOL\_01}_i + \alpha_3\,\text{TXPOL\_02}_i + \alpha_4\,\text{TXPOL\_03}_i + \alpha_5\text{TXPOL\_04}_i + \alpha_6 X_i + \delta_t + \delta_s + \gamma_i$$

where in Equation (1), INCOLL_i is a binary variable and a measure of whether a person is currently enrolled in college (1=Yes; 0=No). TEXAS_i is a binary variable set to 1 if a student is living in Texas; students residing outside of Texas are set to 0. AFTER_i is a binary variable set to 1 if after the date of the policy intervention (July 2001 or later).

The estimate X_i (β_4 in Equation (1) and α_6 in Equation (2)) captures the effect of individual covariates, described in more detail below, in measuring relevant demographic

characteristics correlated with educational attainment, as well as local economic conditions that may affect the schooling decisions of an individual: age, gender, living in a metropolitan area, and state unemployment rate across time. In addition, I include δ_t and δ_s in both equations to account for time trend and state fixed effects of the dependent variable (INCOLL), respectively. The variable ε represents an error term in Equation (1). Equation (2) follows the same definitions set forth in Equation (1), with one major difference. While Equation (1) tests for a single discontinuous change in Texas relative to other states after the policy change in 2001 via the parameter $\beta_3(\text{TEXAS}_i * \text{AFTER}_i)$, the variables of interest in Equation (2) α_2 to α_5 represent the impact of the policy by year in Texas. These are included to test for an impact on enrollment as a result of the policy, if any, that may build over time. In Equation (2), γ_i represents an error term.

Previous work (Dynarski, 2003) has noted that the CPS only collects pertinent family background information related to educational outcomes, such as parental income and education, for individuals who live with their parents or are away at college. Limiting a sample to individuals with this information therefore introduces bias, especially when conducting an analysis using educational attainment as the dependent variable of interest. The CPS MORGs dataset does have wage information. However, although hourly and weekly wage information is available in these data, there are numerous observations missing for this variable for all racial and ethnic groups, but particularly for individuals of Latino and Black origin. In addition, since my population of interest is undocumented individuals who do not have a legal right to live and work in the United States, it is unclear whether the missing wage information may be a function of a person's undocumented status. While being employed may be another measure of income

available in the dataset, this variable is not ideal, since both enrollment status and employment status may be affected by the policy change.

The local and state conditions in which an individual attends college may also vary across regions of the United States. To account for this potential variation, I include variables to capture local characteristics by state. These include whether one lives in a metropolitan area, along with a state's unemployment rate for each year in the sample. The unemployment rate is included to account for state-specific economic shocks in the labor market. In addition, to account for lower college enrollment over the summer terms, I include a term for month fixed effects to capture enrollment variation over the course of the year. Similarly, I include year fixed effects for all states in the sample to control for general trends over time in the outcome variable of whether an individual is currently in college. To account for intrastate variation and control for the average differences in any observable or unobservable predictors not explained by state unemployment rate and year-specific trends in my outcome, I include a control for state fixed effects. I present models without (main effects model) and with state fixed effects. Finally, although I present the results of robust standard errors clustered at the individual level, I also provide estimates clustered at the state level, since the model employs a state-level covariate (before and after Texas implements the tuition policy). These estimates are provided in the event that standard errors at the individual level are too optimistic, using a group-level regressor while not allowing for group-level random effects (Moulton, 1986).

The coefficient of primary interest in this study is β_3 in Equation (1), the coefficient for the interaction term of TEXAS and AFTER. Since undocumented immigrant students, who are more likely to live below the poverty level than the general

population (Erisman & Looney, 2007), do not qualify for any federal financial aid that might reduce the cost of tuition charged to international students or out-of-state residents, I hypothesize that there will be a different effect of the in-state tuition policy on the college-enrollment rates of undocumented Latino students, relative to similar students in states that did not experience the same policy change. Therefore, if β_3 in Equation (1) is non-zero, positive, and statistically significant, then I will reject the null hypothesis that the tuition policy has no effect. This will be suggestive evidence that HB 1403 has a positive effect on the college-enrollment rates of Latino FBNC students in Texas. Similarly, in Equation (2), if α_2 to α_5 are non-zero, positive, and statistically significant, then I will reject the null hypothesis that the tuition policy has no effect. This will be suggestive evidence that HB 1403 has a positive effect for that particular year after the policy on the college-enrollment rates of Latino FBNC students in Texas.

4.5. Threats to Validity and Robustness Checks

In regard to the measurement error concerns described above, I apply the following strategies. First, although the CPS category of foreign-born non-citizens does include undocumented immigrants, it is also possible that people having this vulnerable legal status will not answer citizenship questions truthfully. To test the reliability of the citizenship question, I examine the effect of HB 1403 on all Latinos and on Latinos who are U.S. citizens (naturalized and U.S. born) across the various state contexts as well as within Texas. Second, to confirm that a policy effect on college enrollment, if any, is specific to Texas and not a trend affecting other states in the sample, I test my results on all individuals, using Texas as a predictor. Third, to test whether a policy effect is indeed occurring for the students most likely to benefit from this policy, foreign-born students of

Latino origin, I test my results on students of different racial and ethnic groups, such as black and Asian U.S. citizen students, as separate samples. Since Latinos of any citizenship status are associated with programs related to diversity or race-conscious programs, I examine other racial and ethnic groups to assess whether these students may be responding to other race-conscious, either directly or indirectly, operating in the state at this time. Finally, to assess the presence of other state educational policies that may be increasing the academic preparation leading to increased college-participation rate, I conduct similar treatment and comparison group analyses *within* Texas to further test the effect of HB 1403. For example, I construct a series of alternative analyses with associated control groups within Texas (See Table 6) to ensure that the college enrollment odds of other populations have not significantly increased due to factors not related to the in-state resident tuition policy. These additional control groups include students who are FBNC, Non-Latino FBNCs, US Natives, US born Latinos, and Non-Latino US Natives.

V. RESULTS

5.1 Program Take-Up: HB 1403 Student Enrollment Trends since 2001

Using data from the Texas Higher Education Coordinating Board, Figure 1 presents the enrollment figures of students classified as HB 1403 eligible by Section 2 and Section 4 status, for the period from fall 2001 to fall 2005. Under HB 1403, Section 2 students are individuals who have been classified as [state] residents, and Section 4 students are individuals whose legal and state residency status is pending. Although aggregated in this graph, Section 4 students with pending resident status make up the majority of the HB

1403 students (author's calculations). The data show significantly lower numbers for the summer enrollment terms than for the spring and fall. However, according to the state enrollment data presented, the general enrollment trend has increased steadily since 2001 (including across the summer months) from 800 to 6,000 students at the public two-year level, and from 600 to 2,000 students at the public four-year level. Figure 1 also shows that an overwhelming majority of HB 1403 students are enrolling in the two-year sector, a trend that is not surprising, given the college-enrollment patterns of Latino students over the last three decades (Adelman, 2005; Kurlaender, 2006). The results shown in Figure 1 signal a gradual increase in enrollment of HB 1403 students since 2001, rather than a sudden one-time jump in enrollment after the policy was enacted.

Data analysis on college enrollment for the population of interest prior to implementation of the 2001 policy is a necessary examination. Figure 2 displays the mean college enrollment rates of Latino foreign-born noncitizen individuals who are high school diploma/GED completers without a BA degree, ages eighteen to twenty-four and from 1998 to 2004, by treatment (Texas) and control group (southwestern states). A vertical line marks the year of the implementation of the Texas ISRT policy. The trend lines for both the treatment and comparison groups are relatively similar, with Texas having a slightly larger percentage of eligible Latino FBNC from 1998 to 1999. Both groups experience a sharp drop in enrollment odds during this period, culminating in nearly equal enrollment odds in 2000. However, 2001 marks the beginning of a distinct trend pattern. Latino FBNCs in Texas show a steady increase in college-enrollment rates, with sharper jumps from 2001 to 2002, a slight increase in 2003, and a marked drop in 2004. The Southwest control group experiences a steady decline since 2000, with a

sudden rebound in 2004. Three hypotheses may be considered relating to these trends. First, it is possible that the events of September 11, 2001, and the subsequent associated drop in immigration rates affected other states differently than Texas. Alternatively, it is possible that the in-state tuition benefit induced students and their families to stay in the country, despite a nationwide reaction to the terrorist attacks. Finally, the spring of 2003 marked the first year that tuition caps were removed from Texas public colleges and universities, which introduced a new era of tuition deregulation for the state. A sudden increase in college price at some institutions may have induced some students who otherwise would have enrolled to nnot do so in 2004, the first full year of implementation of this new state policy.

5.2 Logistic Regression Analysis

I next use logistic regression analysis to estimate whether students living in Texas were more likely to be enrolled in college after the policy than students not living in Texas. I begin with a description of the results as an average impact in the years after the policy's enactment, as measured in Equation (1), and follow with a description of results by individual year after the policy change, as measured in Equation (2). Note that in the specifications presented below, the coefficient for "Live in Texas" in the full models with state fixed effects is omitted, since it is not relative to an arbitrary baseline state rather than the whole control group.

In the following tables, I present estimates of odds ratios and robust standard errors clustered at the individual level within the sample of FBNC Latinos in Texas, which are compared to similar students in the selected control group states in the Southwest that are *without* the policy. I also include results clustered at the state level for

select tables. I then test the robustness of the results by adding a set of covariates at the individual and state levels to each regression model. For example, as the subsequent tables show, I add a set of variables—including demographics, family background, local conditions, and time trends—to each model, comparing Texas to the selected control group. Finally, I conduct additional robustness checks to confirm the results of the policy on the intended population of interest and not other groups. I limit the selection of covariates to those that are available for all individuals.

Table 2 presents estimated odds ratios and robust standard errors by age group, relative to states in the Southwest, from the sample of "HS Diploma/GED Completers." The data indicate that there is a significant positive effect on the odds of college enrollment for older FBNC Latino Texans (ages 21 to 24) after the policy's implementation, compared to the same population of non-Texans in the Southwest (column 7, Table 2). Students ages twenty-one to twenty-four are 4.85 times more likely to be enrolled in college than not after the policy, in the full model with state fixed effects (pseudo R-square of 0.1898). This shows that Latino FBNCs who live in Texas and meet the policy criteria are far more likely to enroll in college than not as compared to their student counterparts in the southwest. The magnitude of this difference expressed as odds ratios is borne out by the observed enrollment odds of students from 2001 to 2004 illustrated in Figure 3 and discussed in greater additional below. Figure 2 also suggests a similar pattern albeit descriptively. I find a modest effect ($p<0.10$) on younger students ages eighteen to twenty-one. Results for data clustered at the state level, however, rather than the individual level (column 3, Table 2) indicate a significant effect of the policy on all age-range samples (ages 18-24) at 2.33 ($p<0.05$) times with a pseudo R-square of

0.1270. Having been married plays a significant role in decreasing the odds of college enrollment in the larger age-range sample, and on the sample with older students. Age is significant in the larger sample, although not by separate ranges of younger and older students. Living in a metropolitan area does not appear to have an effect on the odds of current college enrollment for any of the age groups in the sample. Interestingly, gender also does not appear to have an effect on the odds of college enrollment for Latino FBNCs who are high school diploma/GED completers as a result of the policy except for a modest effect for older females age 21-24 at the $p<0.10$ level.

Table 3 presents the estimated odds ratios and robust standard errors from the fitting of the regression model in Equation (2) within the larger CPS sample of Foreign-Born Non-Citizen Latino FBNCs in Texas who have completed a high school diploma or GED, relative to the same population (Latino FBNC) in the Southwest, by year at and after the policy's implementation. Specifically, this model tests whether there was a gradual increase in the policy's impact on a sample of students likely to be undocumented in each year after the policy's implementation.

Using the CPS data, Table 3 shows positive results for some years and age groups but not others. For example, column 2 indicates that the policy had no immediate impact in the fall of 2001 for students ages 18 to 24, nor for any of the other groups of students assessed during that year, except for the model clustering at the state level (column 3). In this specification, the odds of enrolling in college after the policy's implementation were 2.6 times greater than for students in Texas before the policy ($p<.01$ level). In 2002, however, the odds of enrolling increased and are significant for the larger 18-to-24 age group, but are particularly higher for older students ages 21 to 24 (columns 6 and 7). The

odds of enrolling in college for all students ages 18 to 24 are 4.09 times (column 2), and 10.3 times for students ages 21 to 24 (column 7) in the full model, with state fixed effects in 2002 (pseudo R-square of 0.1291 and 0.1974, respectively). By 2003, the odds of enrolling decrease for students ages 18 to 24 and are not significant (column 2), while they remain significant and increase to 11.34 times for older students ages 21 to 24 in 2003. I find no effect from the policy on any of the age groups examined in 2004. Figure 3 referred to earlier provides a visual presentation of the odds ratios by year after the policy's implementation, using the CPS data. Figure 3 provides a graphical representation of the fitting of the regression models from Equations (1) and (2) measuring the *average* impact per year the policy has had since 2001 on the sample of FBNC Latinos in Texas, relative to the same population in the control-group states.

Table 4 further highlights the differing roles of age and marital status by gender across state contexts on the Latino FBNC population in the relationship between tuition and college enrollment. Column 4 in Table 4 shows that females ages 21 to 24 who have completed their high school diploma or GED in Texas are 18.02 times more likely than not to be enrolled in college after the policy, compared to their female counterparts in southwestern states without a tuition policy. In this female-only sample, the role of having been married is a strong determinant in decreasing the odds of college enrollment. For females ages 21 to 24, having been married significantly decreases the odds of college enrollment. Surprisingly, there were no policy effects for males for any of the age ranges explored (Table 4, columns 5-8) in Texas. The lack of an effect in the male sample and the extremely robust results in the female sample signals that continued and more specified attention should be paid to the gender divide among this population.

5.3 Additional Robustness Checks

Across States Comparison

To test whether results regarding the effects of the tuition policy are indeed measuring the behavior of FBNC Latinos or are instead a result of measurement error and may potentially be affecting all Latinos, I test the robustness of my results using the current estimated fitted regression model on the outcome on "All Latinos," "U.S. Citizen Latinos" (naturalized and U.S. born), and "U.S.-Born Latinos," as compared to their counterparts in states in the Southwest using the "High School Diploma/GED Completer" samples in Table 5.

The data indicate that the policy has no effect on the college enrollment of these groups when compared to their counterparts in the Southwest for either of the samples examined (columns 1-3). These results provide further evidence that the effect of the tuition policy on the college enrollment of students likely to be undocumented is a pattern particular to Latino FBNC students in the sample, and not to all Latinos or U.S.-citizen Latinos (U.S. born and naturalized).

Next, I explore whether the effect of an increase in college enrollment on Latino FBNCs is a result of the policy, and not a Texas-specific trend or a trend affecting racial and ethnic groups other than Latinos, such as Asians or African Americans (columns 4-6). For example, if the tuition policy does indeed have an effect on the college-attainment rates of Latino FBNCs, then we should not see any results for Texas as a state, including all races and ethnicities, or in separate samples of African American or Asian individuals. Utilizing the specified fitted regression model with state fixed effects, Table 5 shows no

significant effect for Texas as a state, or for any of the other selected U.S.-citizen populations, when compared to similar populations in states in the Southwest.

Within State Comparison

I employ a series of within state comparisons to test whether other trends in the state, such as other college access and readiness policies might be affecting the academic preparation of students who are not likely to benefit from the in-state resident tuition policy thereby potentially increasing their college enrollment odds and signaling that other policies in Texas may be contributing to increased college enrollment odds of all students. Table 6 shows such analyses by a series of control groups that include all FBNCs, all non-Latino FBNCs, all U.S. Natives, all US-born Latinos, and all Non-Latino U.S. Natives. I find no effect on the college enrollment odds after the policy implementation for any of these groups examined. Particular attention is paid to column (4) examining the behavior of US born Latinos within Texas. This category would be the most likely to capture Latino FBNCs within the state who may have misreported their citizenship status. In addition, Latino individuals who are U.S. born represent the most comparable group to Latino FBNCs in educational outcomes and financial barriers related to college access.

VI. CONCLUSION AND POLICY IMPLICATIONS

This study is the first, to my knowledge, to estimate the impact of the first in-state resident tuition policy in the nation, Texas bill HB 1403, on the college-enrollment odds of students most likely to be undocumented: Latino foreign-born non-citizen students. The analysis, which is based on two extensive datasets, the individual-level data from the U.S. Current Population Survey Merged Outgoing Rotation Groups and institutional data

from the Texas Higher Education Coordinating Board, finds that students likely to be undocumented Latinos were more likely to attend college after the introduction of the Texas benefit. The results were strongest for older high school graduates, who were found to be 4.84 times more likely to have enrolled in college after the tuition policy than their counterparts in the Southwest. This pattern is consistent with previous research documenting that immigrant individuals are more likely to enroll in college starting at the age of 21 (Betts & Lofstrom, 2000). Descriptive institutional data from the Texas Higher Education Coordinating Board on actual students classified as HB 1403 eligible, a majority of whom are of Latino origin, also confirm previous findings that Latino immigrant students are more likely to enroll in the community college sector than the four-year sector. These patterns suggest that financial aid and admissions policies at non-selective institutions are particularly relevant for immigrant populations in Texas. For results examined in closer detail by year of implementation, the CPS data showed a gradual increase in the estimated take-up of the policy from 2001 to 2003, with no effect in 2004. Further attention should be paid to this year as it represents a period in which tuition deregulation, also a critical financial cost related policy, was in operation in Texas.

Gender, age, and citizenship status remain a complex and interconnected set of issues in the college access puzzle in Texas and most likely other states. Older female high school graduates were dramatically much more likely to enroll in college after the policy than their female counterparts in the Southwest. Such a finding calls for additional research on whether female high school graduates perform better in some states over others. Finally, the data indicate that this effect of higher college-enrollment odds is

particular to FBNC Latinos, the primary beneficiary group, and not to all Latinos or U.S.-citizen Latinos.

Ten states to date currently have active in-state tuition legislation for undocumented individuals. However, state tuition policies can only address issues of cost, not the federal laws regarding employment. Various cohorts of HB 1403 students have now graduated from two- and four-year colleges, but they have no real hope of getting legal employment until federal law resolves the legal status of the student beneficiaries of the state tuition policy. In the interim, policy activity around the issue of immigration and educational attainment continues. For example, states with such tuition policies, such as Kansas, California and now Texas, have been formally challenged in federal court to rescind them. Other states and localities are including or have successfully passed legislation to specifically ban or retract any form of postsecondary benefits for this population (Arizona, California, Pennsylvania, South Carolina and now Colorado). For now, Texas is the longest standing example of the limits and opportunities state legislation on this issue can provide.

Although previous versions of the proposed legislation, known as the Development, Relief, and Education for Alien Minors (DREAM) Act, would exceed all versions of current in-state tuition policy provisions by allowing eligible undocumented students to begin the path to legal residency and secure employment upon graduation (Olivas, 2004), the political atmosphere for this legislation is all but predictable. The U.S. Congress has once again failed to pass the DREAM Act, with no hard evidence of the impact this legislation may have on the college participation of undocumented students in the U.S or on the communities in which they reside. Until a federal solution is reached,

data at the state level on in-state resident tuition policies is the only formal evidence of the educational costs, benefits, and trajectories available to these students. Regardless of one's stance on this highly contested issue, empirical evidence on the impact of this educational policy for the eleven million undocumented, many of whom are high school and college age, will continue to be of great interest to educators, lawmakers, and immigrant communities both within and beyond the Texas border.

References

Adelman, C. (2005). *Moving into town—and moving on: The community college in the lives of traditional-age students.* Washington, DC: U.S. Department of Education.

Alfonso, M. (2004, April). *What students of different racial/ethnic groups do after high school: An empirical analysis with focus on why students attend two-year colleges.* Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

Altonji, J. G. (1993). The demand for and return to education when education outcomes are uncertain. *Journal of Labor Economics, 11*(1), 48-83.

Author.

Batalova, J., & Fix, M. (2006). *New estimates of unauthorized youth eligible for legal status under the DREAM Act*. Washington, DC: Migration Policy Institute.

Bean, F., & Lowell, B. L. (2007). Unauthorized migration. In M. Waters, R. Ueda, & H. Marrow (Eds.), *The new Americans: A guide to immigration since 1965* (pp. 78-92). Cambridge, MA: Harvard University Press.

Becker, G. (1964). *Human capital: A theoretical and empirical analysis*. New York: Columbia University Press.

Berger, E. (2001, May 22). Undocumented students may get big tuition break. *Houston Chronicle,* p. 1A.

Betts, J. R., & Lofstrom, M. (2000). The educational attainment of immigrants: Trends and implications. In G. Borjas (Ed.), *Issues in the economics of immigration* (pp. 51-115). Chicago: University of Chicago Press for National Bureau of Economic Research.

Blau, F. D., & Kahn, L. (2005). *Gender and assimilation among Mexican Americans* (Working Paper 11512). Cambridge, MA: National Bureau of Economic Research

Borjas, G. J., Freeman, R. B., & Lang, K. (1991). Undocumented Mexican-born workers in the United States: How many, how permanent? In J. M. Abowd & R. B. Freeman (Eds.), *Immigration, trade, and the labor market* (pp. 77-100). Chicago: University of Chicago Press.

Card, D. & Lewis, E. G. (2007). The diffusion of Mexican immigrants during the 1990s: Explanations and impacts. In G. J. Borjas (Ed.), *Mexican immigration to the United States* (pp. 193-223). Chicago: University of Chicago Press.

Carroll, S. (2009, December 15). Lawsuit challenges in-state tuition for illegal immigrants. *Houston Chronicle.* Retrieved December 16, 2009, from http://blogs.chron.com/immigration/archives/2009/12/lawsuit_challen.html

Co-author & Author.

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Chapa, J., & Horn, C. L. (2007). Is anything race neutral? Comparing "race-neutral" admissions policies at the University of Texas and the University of California. In G. Orfield, P. Marin, S. M. Flores, & L. M. Garcés (Eds.), *Charting the future of college affirmative action: Legal victories, continuing attacks, and new research* (pp. 157-172). Cambridge: The Civil Rights Project at Harvard University

Dee, T. S., & Jacob, B. A. (2006). Do high school exit exams influence educational attainment or labor market performance? (Working Paper 12199). Cambridge, MA: National Bureau of Economic Research. Retrieved June 26, 2008, from http://www.nber.org/papers/w12199

Dixon, D. (2006, March). *Characteristics of the Asian-born in the United States.* Washington, DC: Migration Policy Institute. Retrieved January 31, 2007, from http://www.migrationinformation.org/Feature/display.cfm?ID=225

Domina, T. (2007). Higher education policy as secondary school reform: Texas public high schools after *Hopwood. Educational Evaluation and Policy Analysis, 29,* 200-217.

Durand, J., Massey, D. S., & Capoferro, C. (2005). The new geography of Mexican immigration. In V. Zuniga & R. Hernández-León (Eds.), *New destinations: Mexican immigration in the United States* (pp. 1-20). New York: Russell Sage.

Dynarski, S. (2003). Does aid matter? Measuring the effect of student aid on college attendance and completion. *American Economic Review, 93,* 279-288.

Dynarski, S. (2004). The new merit aid. In C. Hoxby (Ed.), *College choices: The economics of where to go, when to go, and how to pay for it* (pp. 63-100). Chicago: University of Chicago Press.

Dynarski, S. (2008). Building the Stock of College-Educated Labor. *Journal of Human Resources 43(3)*, 576-610. Ellwood, D. T., & Kane, T. J. (2000). Who is getting a college education? Family background and the growing gaps in enrollment. In S. Danziger & J. Waldfogel (Eds.), *Securing the future* (pp. 283-324). New York: Russell Sage.

Erisman, W., & Looney, S. (2007, April). *Opening the door to the American dream: Increasing higher education and success for immigrants.* Washington, DC: Institute for Higher Education Policy.

Feliciano, C. (2008). Gendered selectivity: U.S. Mexican immigrants and Mexican non-migrants, 1960-2000. *Latin American Research Review, 43*(1), 139-160.

Fry, R. (2005, November 1). *The higher dropout rate of foreign-born teens: The role of schooling abroad.* Washington, DC: Pew Hispanic Center. Retrieved December 17, 2009, from http://pewhispanic.org/files/reports/55.pdf

Ganderton, P. T. (1992). The effect of subsidies in kind on the choice of a college. *Journal of Public Economics, 48,* 269-292.

Gonzales. R. (2007, October). Wasted talent and broken dreams: The lost potential of undocumented students. *In Focus, 5,* 13.

Hagy, A., & Staniec, J. F. O. (2002). Immigrant status, race, and institutional choice in higher education. *Economics of Education Review, 21,* 381-392.

Halter, M. (2007). Africa: West. In M. Waters, R. Ueda, & H. Marrow (Eds.), *The new Americans: A guide to immigration since 1965.* Cambridge, MA: Harvard University Press.

Harris, D. (2007). Educational outcomes of disadvantaged students: From desegregation to accountability. In H. Ladd & E. Fiske (Eds.), *AEFA handbook of research in education finance and policy* (pp. 551-572). London: Taylor & Francis.

H.B. 1403, 77th. Leg., Reg. Sess. (Tex. 2001), amended by S.B. 1528, (Tex. 2005).

Heller, D. E. (1997). Student price response in higher education: An update of Leslie and Brinkman. *Journal of Higher Education, 68,* 624-659.

Hoxby, C. M. (1998). Do immigrants crowd disadvantaged American natives out of higher education? In D. S. Hamermesh & F. D. Bean (Eds.), *Help or hindrance?*

The economic implications of immigration for African-Americans (pp. 282-321). New York: Russell Sage Foundation.

Illegal Immigration Reform and Immigrant Responsibility Act of 1996. (1996). Washington, DC: U.S. Department of Justice. Retrieved Nov. 30, 2005, from http://www.visalaw.com/docs/IIIRA.html

Kane, T. J. (1994). College attendance by blacks since 1970: The role of college cost, family background and the returns to education. *Journal of Political Economy, 102,* 878-911.

Kane, T. J. (1995). *Rising public college tuition and college entry: How well do public subsidies promote access to college?* (Working Paper 5164). Cambridge, MA: National Bureau of Economic Research.

Kane, T. J. (2003). *A quasi-experimental estimate of the impact of financial aid on college-going* (Working Paper 9703). Cambridge, MA: National Bureau of Economic Research.

Kaushal, N. (2008). In-state tuition for the undocumented: Education effects on Mexican young adults. *Journal of Policy Analysis and Management, 27,* 771–792.

Kobach, K. W. (2007). Immigration nullification: In-state tuition and lawmakers who disregard the law. *N.Y.U. Journal of Legislation & Public Policy, 10,* 473-523.

Kurlaender, M. (2006). Choosing community college: Factors affecting Latino college choice. *New Directions for Community Colleges, 133,* 7-19.

Kusow, A. (2007). Africa: East. In M. Waters, R. Ueda, & H. Marrow (Eds.), *The new Americans: A guide to immigration since 1965.* Cambridge, MA: Harvard University Press.

Lee, J. B., Frishberg, E., Shkodriani, G. M., Freeman, S. A., Maginnis, A. M., & Bobo, S. H. (2009). *Study on the admission of undocumented students into the North Carolina Community College System* [A report to the North Carolina Community College System]. Bethesda, MD:

Leinbach, T. & Bailey, T. (2005). Access and Achievement of Hispanics and Hispanic Immigrants in the City University of New York. *New Directions for Community Colleges*,

133(2), 27-40.

Long, B. T. (2004a). Does the format of an aid program matter? The effect of in-kind tuition subsidies. *Review of Economics and Statistics, 86,* 767-782.

Long, B. T. (2004b). How have college decisions changed over time? An application of the conditional logistic choice model. *Journal of Econometrics, 121,* 271-296.

Long, B. T. (2004c). How do financial aid policies affect colleges? The institutional impact of the Georgia HOPE Scholarship. *Journal of Human Resources, 39,* 1045-1066.

Long, M. C., & Tienda, M. (2008). Winners and losers: Changes in Texas university admissions post-Hopwood. *Educational Evaluation and Policy Analysis, 30,* 255-280.

McGee, P. (2005, July 24). More illegal immigrants in colleges: Enrollment has increased ninefold since the state allowed them to pay lower tuition. *Fort Worth Star Telegram*, p. B6.

Moulton, B. R. (1986). Random group effects and the precision of regression estimates. *Journal of Econometrics, 32,* 385-397.

Murdock, S., White, S., Hoque, M. N., Pecotte, B., You, X., & Balkan, J. (2003). *The new Texas challenge: Population change for the future of Texas*. College Station: Texas A&M University Press.

National Immigration Law Center. (2006, April). *Basic facts about in-state tuition for undocumented immigrant students.* Retrieved December 3, 2006, from http://www.nilc.org/immlawpolicy/DREAM/in-state_tuition_basicfacts_041706.pdf

National Conference of State Legislators. (2006, July 26). http://www.ncsl.org/programs/immig/immig_InStateTuition0706.htm

Olivas, M. (1995). Storytelling out of school: Undocumented college residency, race, and reaction. *Hastings Constitutional Law Quarterly, 22,* 1019-1086.

Olivas M. (2004). IIRIRA, the Dream Act, and undocumented college student residency. *Journal of College and University Law, 30,* 435-464Olivas, M. (2009). Undocumented college students, taxation, and financial aid: A technical note. *Review of Higher Education, 32,* 407-416.

Passel, J. S. (2005a, March 21). *Estimates of the size and characteristics of the undocumented population.* Washington, DC: Pew Hispanic Center. Retrieved September 1, 2005, from http://pewhispanic.org/reports/report/php?ReportID=44

Passel, J. S. (2005b, June 14). *Unauthorized migrants: Numbers and characteristics* [Background briefing prepared for Task Force on Immigration and America's Future]. Washington, DC: Pew Hispanic Center. Retrieved September 1, 2005, from http://pewhispanic.org/reports/

Passel, J. S., Van Hook, J., & Bean, F. D. (2004). *Estimates of legal and unauthorized foreign born population for the United States and selected states, based on Census 2000* (Report to the Census Bureau). Washington, DC: Urban Institute.

Perna, L. W. (2000). Differences in the decision to attend college among African Americans, Hispanics, and Whites. *The Journal of Higher Education*, *71,* 117-141.

Plyler v. Doe, 457 U.S. 202 (1982).

Post, D. (1990). College-going decisions of Chicanos: The politics of misinformation. *Educational Evaluation and Policy Analysis, 2,* 174-187.

Rincon, A. (2008). Undocumented immigrants and higher education. New York: LFB Scholarly.

Sallie Mae Foundation. (2004). *Caught in the financial aid information divide: A national survey of Latino perspectives on financial aid* (PowerPoint presentation). Retrieved March 20, 2006, from www.thesalliemaefund.org/news/TRPI%20Presentation.ppt

Smith, J. P. (2006). Immigrants and the labor market. *Journal of Labor Economics, 24,* 203-233.

St. John, E. P., & Noell, J. (1989). The effects of student financial aid on access to higher education: An analysis of progress with special consideration of minority enrollment. *Research in Higher Education, 30,* 563-581.Swanson, C. B. (2004). Sketching a portrait of public high school graduation: Who graduates? Who doesn't? In G. Orfield (Ed.), *Dropouts in America: Confronting the graduation rate crisis* (pp. 13-40). Cambridge, MA: Harvard Education Press.U.S. Census

Bureau News. (2005). *Texas becomes nation's newest "majority-minority" state, Census Bureau announces.*

U.S. Census Bureau (2006, October). *Current population survey—design and methodology* (Tech. Paper 66). Washington, DC: Bureau of Labor Statistics.

U.S. Department of Labor. (2002, March). *Current population survey—design and methodology* (Tech. Paper 63RV). Washington, DC: Bureau of Labor Statistics.

Yin, X. (2007). China: People's Republic of China. In M. Waters, R. Ueda, & H. Marrow (Eds.), *The new Americans: A guide to immigration since 1965.* Cambridge, MA: Harvard University Press.

Tables & Figures

Table 1: Summary Statistics
Sample: Latino Foreign-Born Non-Citizens, Ages 18-24

	Before the Policy 1998 to July 2001		After the Policy August 2001 to 2004	
	(1) TX	(2) SW	(5) TX	(6) SW
Pct FBNC of All Latinos	0.3522	0.3397	0.3404	0.3259
Age	21.0564	21.0190	21.0991	21.0411
	(0.0357)	(0.0291)	(0.0383)	(0.0299)
Female	0.4677	0.4657	0.4776	0.4736
Married	0.2693	0.2582	0.2754	0.2576
Employed	0.6561	0.6626	0.6653	0.6632
	(0.0085)	(0.0065)	(0.0092)	(0.0068)
Live in Metro Area	0.9102	0.8436	0.8976	0.8315
Pct. with HS Diploma and No BA Degree	0.5080	0.5516	0.5379	0.5605
Pct with BA and Higher	0.0218	0.0166	0.0332	0.0208
Average Year of Entry to U.S.	7.5829	5.9044	8.2187	5.9090
	(0.1573)	(0.1445)	(0.1771)	(0.1519)
Observations	3,620	6,227	3,036	5,870

S*ource*: U.S. Current Population Survey, Merged Outgoing Rotation Groups.
Note: Policy intervention in summer 2001. Southwest states include AZ, CO, NM, and NV. For "average year of entry," a value of 11 = entry in 1988-89; 12 = entry in 1990-91; 13 = entry in 1992-95; 14 = entry in 1994-97. Robust standard errors were calculated to account for clustering within person over time and so that standard error estimates would reflect the structure of the data.
Robust standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%

Table 2: Impact of Texas Tuition Policy on College Enrollment (Average), High School Diploma/GED Completion, 1998-2004
Sample: Latino Foreign-Born Non-Citizens, by Age Group: 18-24, 18-20, 21-24
Outcome: Enrolled in College; Control Group: Southwestern States—Arizona, Colorado, New Mexico, Nevada

	Ages 18-24			Ages 18-20		Ages 21-24	
	Main Model	**Add State Fixed Effects**	**Cluster at State Level**	**Main Model**	**Add State Fixed Effects**	**Main Model**	**Add State Fixed Effects**
HS-GED Completers	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
*Policy Impact (TX*AFTER)*	2.1786*	2.3353*	2.3353**	1.3039	1.6028	4.9405**	4.8491**
	(0.9836)	(1.0502)	(0.7808)	(0.7751)	(0.9718)	(3.3564)	(3.3945)
Live in Texas	0.9785			1.0890		0.8398	
	(0.3188)			(0.4532)		(0.3876)	
After Policy Change	1.5593	1.6043	1.6043	1.8825	2.0398	1.1014	1.1235
	(0.8498)	(0.8805)	(0.6372)	(1.3844)	(1.5335)	(0.9715)	(0.9955)
Age	0.8172***	0.8212***	0.8212***	0.8446	0.8591	0.7722*	0.7726*
	(0.0498)	(0.0502)	(0.0385)	(0.1417)	(0.1532)	(0.1090)	(0.1109)
Female	1.1502	1.1429	1.1429	0.7549	0.7280	1.6613	1.7088*
	(0.2663)	(0.2680)	(0.3426)	(0.2323)	(0.2340)	(0.5145)	(0.5484)
Ever Married	0.2560***	0.2593***	0.2593***	0.5285	0.5313	0.1557***	0.1673***
	(0.0820)	(0.0828)	(0.0739)	(0.2570)	(0.2585)	(0.0622)	(0.0664)
Metro Area	1.2523	1.3837	1.3837	1.3732	1.5710	1.0025	0.9661
	(0.4069)	(0.4640)	(0.8042)	(0.6041)	(0.7101)	(0.4260)	(0.4494)
State Unemp. Rate	0.8793	0.6613	0.6613	0.8971	0.4466*	0.8703	1.4265
	(0.2004)	(0.2075)	(0.1961)	(0.2892)	(0.2004)	(0.2832)	(0.7453)
Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Fixed Effects	No	Yes	Yes	No	Yes	No	Yes
Pseudo R^2	0.1142	0.1270	0.1270	0.0732	0.1101	0.1797	0.1898
Observations	1,007	1,007	1,007	372	372	635	603

Source: U.S. Current Population Survey, Merged Outgoing Rotation Groups.

Note: Policy intervention in July 2001. Southwest states include AZ, CO, NM, and NV. The coefficient for "Live in Texas" in the State Fixed Effects model columns is omitted, since it is not relative to an arbitrary baseline state rather than the whole control group. Robust standard errors were calculated to account for clustering within person over time and so that standard error estimates would reflect the structure of the data.
Robust standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%

Table 3: Impact of Texas Tuition Policy on College Enrollment by Year, High School Diploma/GED Completion, 1998-2004
Sample: Latino Foreign-Born Non-Citizens, by Age Group: 18-24, 18-20, 21-24
Outcome: Enrolled in College; Control Group: Southwestern States—Arizona, Colorado, New Mexico, Nevada

	Ages 18-24			Ages 18-20		Ages 21-24	
	Main Model	Add State Fixed Effects	Cluster at State Level	Main Model	Add State Fixed Effects	Main Model	Add State Fixed Effects
HS-GED Completers	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Policy Effect in 2001	2.5219*	2.5998*	2.5998***	1.8884	2.0010	3.3444*	4.2228*
	(1.3636)	(1.4029)	(0.7254)	(1.5209)	(1.6056)	(2.4138)	(3.1994)
Policy Effect in 2002	3.8677**	4.0921**	4.0921***	3.4959	4.2370*	8.9487**	10.3271**
	(2.4376)	(2.5246)	(1.9274)	(2.8715)	(3.5667)	(9.4036)	(10.5898)
Policy Effect in 2003	2.8568	3.2649*	3.2649***	0.7749	1.3332	15.9675***	11.3379**
	(1.8615)	(2.0974)	(0.9978)	(0.7297)	(1.2707)	(16.0133)	(12.3116)
Policy Effect in 2004	1.2060	1.3659	1.3659	0.7549	1.0746	2.5701	1.7525
	(0.8175)	(0.9498)	(0.6092)	(0.6688)	(0.9906)	(2.6038)	(1.8552)
Live in Texas	0.9275			0.9750		0.8343	
	(0.2944)			(0.3943)		(0.3724)	
Age	0.8193***	0.8234***	0.8234***	0.8521	0.8687	0.7575**	0.7578*
	(0.0494)	(0.0499)	(0.0385)	(0.1452)	(0.1557)	(0.1071)	(0.1080)
Female	1.1370	1.1315	1.1315	0.7406	0.7130	1.5818	1.6382
	(0.2633)	(0.2651)	(0.3369)	(0.2280)	(0.2288)	(0.4983)	(0.5278)
Ever Married	0.2592***	0.2613***	0.2613***	0.5448	0.5431	0.1573***	0.1683***
	(0.0831)	(0.0833)	(0.0749)	(0.2685)	(0.2663)	(0.0629)	(0.0671)
Metro Area	1.2135	1.3417	1.3417	1.3250	1.5064	0.9819	0.9244
	(0.3920)	(0.4538)	(0.8021)	(0.5834)	(0.6874)	(0.4358)	(0.4498)
State Unemp. Rate	0.8894	0.6653	0.6653	1.0371	0.4863	0.7532	1.3041
	(0.2142)	(0.2293)	(0.2564)	(0.3503)	(0.2308)	(0.2475)	(0.7620)
Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Fixed Effects	No	Yes	Yes	No	Yes	No	Yes
Pseudo R^2	0.1166	0.1291	0.1291	0.0794	0.1133	0.1871	0.1974
Observations	1,007	1,007	1,007	372	372	635	603

Source: U.S. Current Population Survey, Merged Outgoing Rotation Groups.
Note: Policy intervention in July 2001. Southwest states include AZ, CO, NM, and NV. The coefficient for "Live in Texas" in the State Fixed Effects model columns is omitted, since it is not relative to an arbitrary baseline state rather than the whole control group. Robust standard errors were calculated to account for clustering within person over time and so that standard error estimates would reflect the structure of the data. Robust standard errors are calculated at the state level for column 3 only.
*Robust standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%*

Table 4: Impact of Texas Tuition Policy on College Enrollment (Average), Gender by High School Diploma/GED Completion, 1998-2004
Sample: Latino Foreign-Born Non-Citizens, by Age Group: 18-20, 21-24
Outcome: Enrolled in College; Control Group: Southwestern States—Arizona, Colorado, New Mexico, Nevada

	FEMALES				***MALES***			
	Ages 18-20		**Ages 21-24**		**Ages 18-20**		**Ages 21-24**	
	Main Model	**Add State Fixed Effects**	**Main Model**	**Add State Fixed Effects**	**Main Model**	**Add State Fixed Effects**	**Main Model**	**Add State Fixed Effects**
HS-GED Completers	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
*Policy Impact (TX*AFTER)*	0.8698	0.8891	17.9740***	18.2073***	1.5517	2.5411	0.7715	0.8033
	(0.8388)	(0.8810)	(20.1129)	(20.1053)	(1.2779)	(2.1213)	(0.7232)	(0.8163)
Live in Texas	1.7527		0.7228		0.7421		0.9684	
	(1.1648)		(0.4694)		(0.4563)		(0.6361)	
After Policy Change	6.8481	10.3290*	0.2928	0.2601	0.4184	0.4021	3.9835	3.6773
	(8.5372)	(13.4594)	(0.4545)	(0.4052)	(0.4188)	(0.3879)	(4.5636)	(4.6195)
Age	0.9837	1.0566	0.7576	0.7511	0.7226	0.7095	0.6296*	0.5772**
	(0.2532)	(0.3083)	(0.1431)	(0.1434)	(0.1806)	(0.1904)	(0.1573)	(0.1545)
Ever Married	0.3184*	0.2484**	0.1383***	0.1426***	1.2897	1.6500	0.1006***	0.1124***
	(0.2081)	(0.1758)	(0.0655)	(0.0700)	(1.0139)	(1.3571)	(0.0867)	(0.0911)
Metro Area	1.8864	2.0423	0.8044	0.8480	1.0055	2.1000	3.7600	3.1981
	(1.0813)	(1.3654)	(0.4787)	(0.5360)	(0.7419)	(1.6183)	(4.0522)	(3.8588)
State Unemp. Rate	0.5690	0.2245**	0.5494	0.8098	1.8217	1.8495	0.8689	2.4171
	(0.2861)	(0.1456)	(0.3034)	(0.5485)	(0.9585)	(1.2677)	(0.5020)	(2.4007)
Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Fixed Effects	No	Yes	No	Yes	No	Yes	No	Yes
Pseudo R^2	0.1649	0.2146	0.2454	0.2398	0.0884	0.1432	0.2242	0.2659
Observations	187	187	267	253	161	161	279	266

Source: U.S. Current Population Survey, Merged Outgoing Rotation Groups
Note: Policy intervention in July 2001. Southwest states include AZ, CO, NM, and NV. The coefficient for "Live in Texas" in the State Fixed Effects model columns is omitted, since it is not relative to an arbitrary baseline state rather than the whole control group. Robust standard errors were calculated to account for clustering within person over time and so that standard error estimates would reflect the structure of the data. Robust standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%

Table 5: Robustness Checks for Impact of Texas Tuition Policy on College Enrollment (Average), High School Diploma/GED Completion, 1998-2004
Sample: Latinos by Citizenship Status, All Race and Ethnicities: Ages 18-24
Outcome: Enrolled in College; Control Group: Southwestern States—Arizona, Colorado, New Mexico, Nevada

	HS-GED COMPLETERS						
	All Latinos	**U.S. Citizen Latinos**	**U.S.-Born Latinos**	**All Foreign Born**	**All Texas U.S. Citizens**	**Black U.S. Citizens**	**Asian U.S. Citizens**
HS-GED Completers	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
*Policy Impact (TX*AFTER)*	1.1332 (0.1845)	0.9772 (0.1713)	0.8985 (0.1613)	0.88025 (0.1441)	0.8947 (0.0757)	2.0173* (0.7314)	1.0286 (0.5169)
After Policy Change	1.2795 (0.2573)	1.2580 (0.2763)	1.2889 (0.2883)	1.1164 (0.117475)	1.1586 (0.1272)	0.2991** (0.1479)	1.6057 (1.1060)
Age	0.8649*** (0.0169)	0.8681*** (0.0178)	0.8669*** (0.0179)	0.8787*** (0.00886)	0.8788*** (0.0088)	0.8882*** (0.0340)	.7344*** (0. 0599)
Female	1.3436*** (0.0987)	1.3398*** (0.1038)	1.3490*** (0.1069)	1.295953*** (0.048977)	1.2956*** (0.0488)	0.9448 (0.1340)	1.0402 (0. 2800)
Ever Married	0.2685*** (0.0318)	0.2794*** (0.0345)	0.2764*** (0.0351)	0.2798*** (0.0189)	0.2778*** (0.0187)	0.3660*** (0.0915)	0.2822** (0. 2821)
Metro Area	1.8339*** (0.2026)	1.9323*** (0.2257)	1.8937*** (0.2278)	1.6443*** (0.1094)	1.6415*** (0.1094)	2.4673** (0.8806)	2.4673** (0.8806)
State Unemp. Rate	0.9643 (0.0984)	1.0419 (0.1142)	1.0618 (0.1185)	1.055504 (0.0515)	1.0747 (0.0540)	1.2489 (0.3493)	1.5471 (0. 4576)
Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.0884	0.0848	0.0843	0.0739	0.0726	0.0690	0.1605
Observations	5,708	4,701	4,516	18,032	18,251	1,255	376

Source: U.S. Current Population Survey, Merged Outgoing Rotation Groups
Note: Policy intervention in July 2001. Southwestern states include Arizona, Colorado, New Mexico, and Nevada. The coefficient for "Live in Texas" in the State Fixed Effects model columns is omitted, since it is not relative to an arbitrary baseline state, rather than the whole control group. Robust standard errors were calculated to account for clustering within person over time and so that

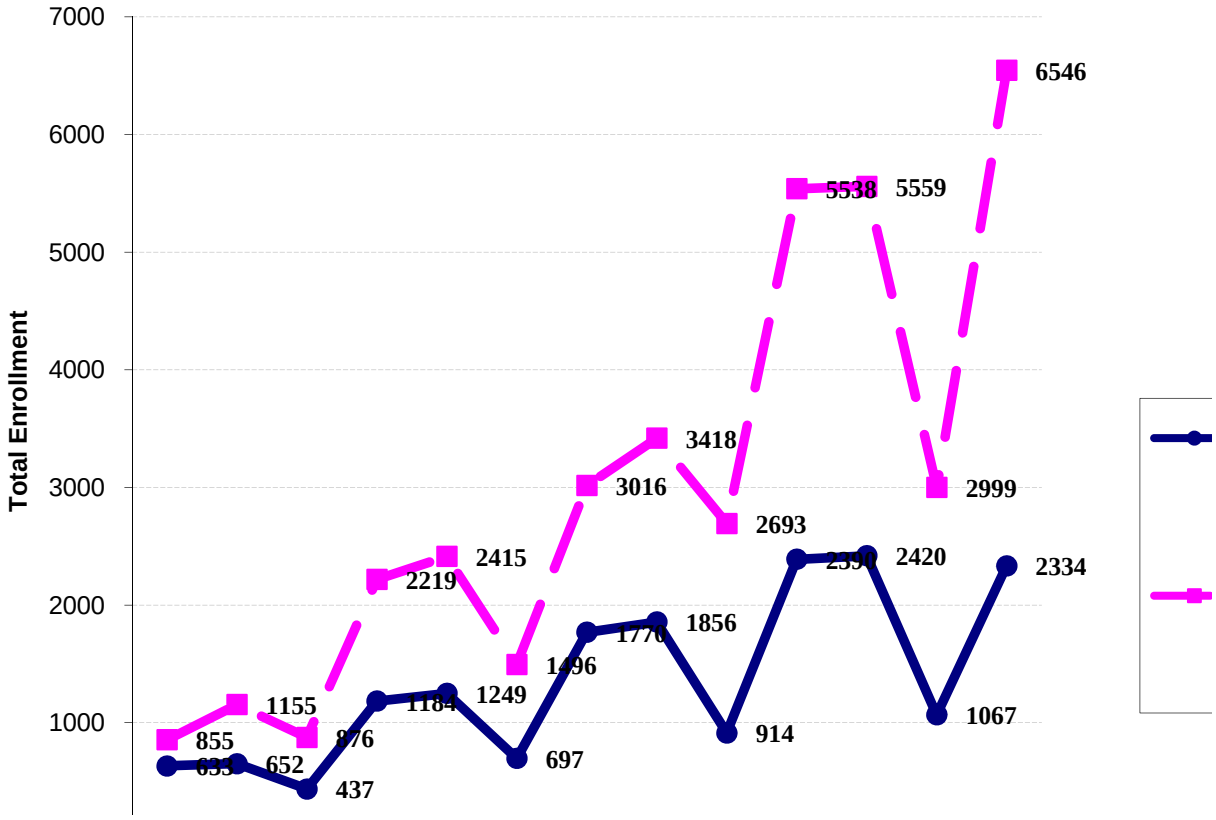
standard error estimates would reflect the structure of the data. I found no effect for any of the age groups examined (18-20, 21-24) for either of these categories (All Grades; HS-GED Completers). Tables available upon request. Robust standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%

Table 6: Within State Robustness Checks for Impact of Texas Tuition Policy on College Enrollment (Average), High School Diploma/GED Completion, 1998-2004
Sample: Latinos and Non-Latinos by Foreign-born and U.S. Born Status
Outcome: Enrolled in College

	HS-GED COMPLETERS WITHIN TEXAS				
	All FBNC	**All Non-Latino FBNC**	**All US Natives**	**All US Born Latinos**	**All Non-Latino US Natives**
HS-GED Completers	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
*Policy Impact (TX*AFTER)*	0.9165	0.6175	0.8847	0.6459	1.2751
	(0.2277)	(0.2395)	(0.1965)	(0.2018)	(0.4286)
After Policy Change	0.9042	0.7656	1.0014	1.9897	0.5956
	(0.1457)	(0.1554)	(0.2544)	(0.7292)	(0.2299)
Age	0.8963***	0.8933***	0.8966***	0.8953***	0.8924***
	(0.0137)	(0.0167)	(0.0137)	(0.0249)	(0.0167)
Female	1.3138***	1.3119***	1.3162***	1.3759**	1.3025***
	(0.0749)	(0.0910)	(0.0751)	(0.1407)	(0.0903)
Ever Married	0.2190***	0.2526***	0.2181***	0.1857***	0.2538***
	(0.0212)	(0.0298)	(0.0211)	(0.0316)	(0.0299)
Metro Area	1.3717**	1.1717	1.3692**	1.7737**	1.1682
	(0.1474)	(0.1492)	(0.1469)	(0.3423)	(0.1493)
State Unemp. Rate	1.0752	1.1017	1.0771	1.0713	1.1026
	(0.0781)	(0.0996)	(0.0782)	(0.1367)	(0.0995)
Month Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
County Fixed Effects	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.0868	0.08	0.0862	0.134	0.0803
Observations	7,749	4,837	7,749	2,903	4,837

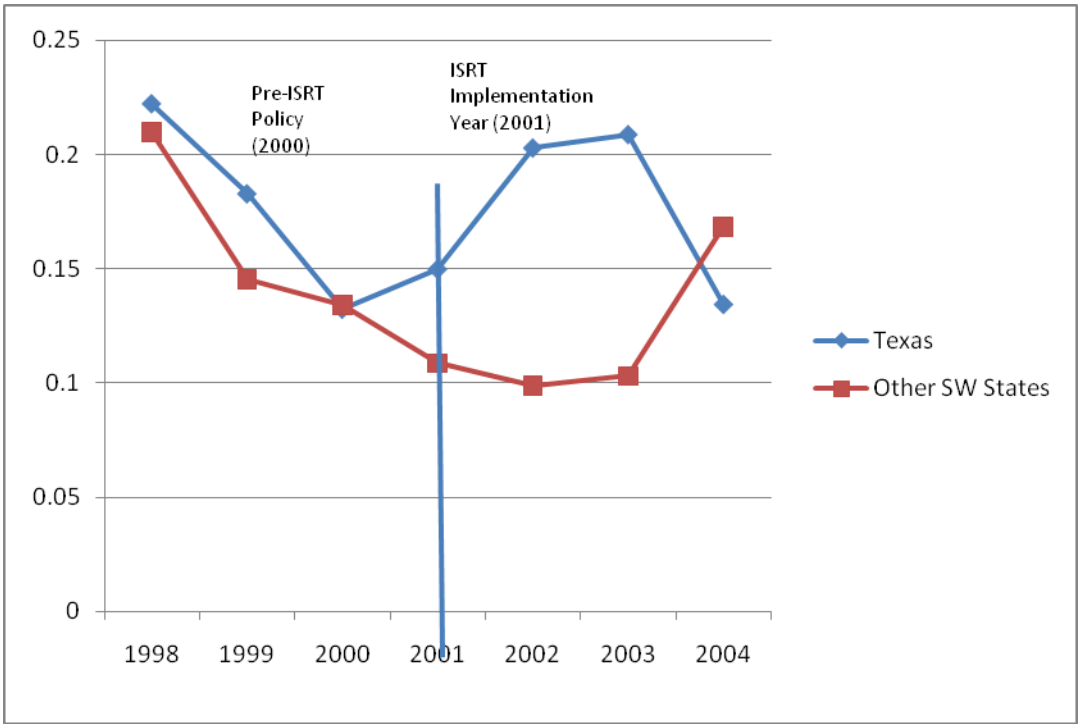
Source: U.S. Current Population Survey, Merged Outgoing Rotation Groups
Note: Policy intervention in July 2001. Southwestern states include Arizona, Colorado, New Mexico, and Nevada. Robust standard errors were calculated to account for clustering within person over time and so that standard error estimates would reflect the structure of the data. I found no effect for other age groups examined.
Robust standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%

Figure 1. Total Enrollment of HB Students in Texas Public Higher Education (Sections 2 and 4), Fall 2001 to Fall 2005



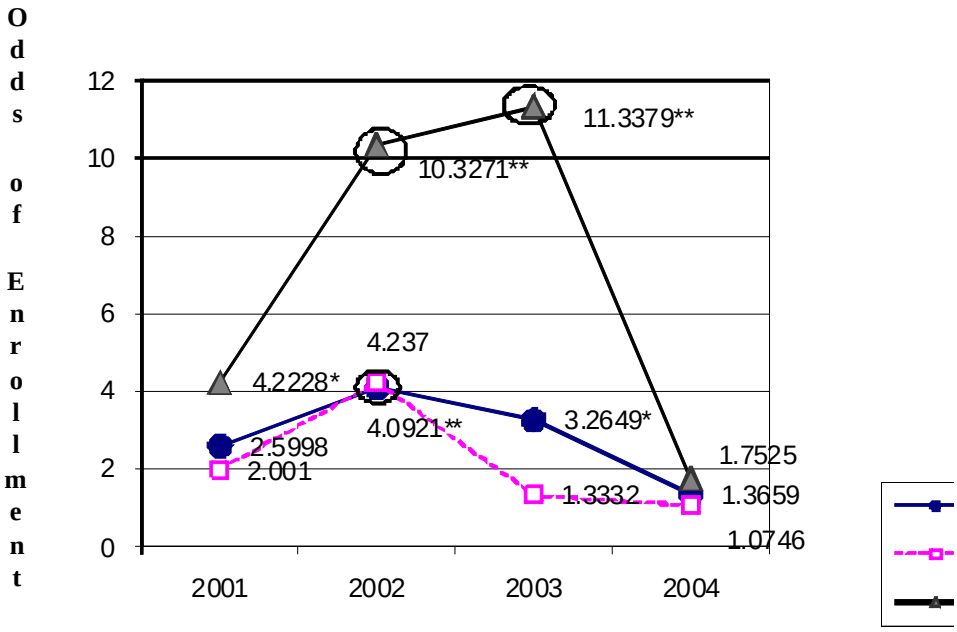
Source: Texas Higher Education Coordinating Board, House Bill 1403 Students by Section Status, 2005
Note: Section 2 students are individuals who have been classified as state residents. Section 4 students are individuals whose legal and state residency status is pending.

Figure 2. Mean College Enrollment of Latino FBNC High School Diploma/GED Completers, Ages 18-24, 1998-2004



Source: U.S. Current Population Survey, Merged Outgoing Rotation Groups

Figure 3. Impact of Texas Tuition Policy on College Enrollment of Latino FBNC High School Diploma/GED Completers by Year *after* Policy Implementation, 2001-2004*



Source: U.S. Current Population Survey, Merged Outgoing Rotation Groups
Note: Significant odds in ovals; only results clustered at individual level are shown
* Control Group: Southwestern States—Arizona, Colorado, New Mexico, Nevada

[1] "Undocumented" refers to a foreign-born person without proper authorization or legal basis of residence in the U.S. I use the terms "undocumented" and "unauthorized" interchangeably and in place of "illegal," due to data restrictions in the survey regarding people's exact reason for not having authorization to be in the U.S. For additional information on these terms, see Bean and Lowell (2007).

[2] The Texas legislature considered a bill in 1993 to address the issues of students with undocumented residency as it related to in-state tuition, which did not survive committee hearings (Olivas, 1995; Rincon, 2005).

[3]Two-year in-state tuition is $1,631 per year; out-of-state tuition is $3,405. Four-year in-state tuition is $4,847, compared to $12,927 out-of-state tuition.

[4] The voter referendum passed in Arizona was implemented in 2007. Colorado instituted a bill to ban such benefits in 2006. South Carolina passed a ban in 2008 (Lee et al, 2009).

[5] In this study, I refer to foreign-born non-citizen individuals from Latin America as foreign-born non-citizen Latinos.

[6] I use the terms "Latino" and "Hispanic" interchangeably. Similarly, Black and African-American are also used interchangeably unless specifically referring to African-origin immigrant individuals.

[7] The U.S. Census Bureau defines "minority" as all people except non-Hispanic single-race whites. Other "majority-minority" states include Hawaii, New Mexico, and California, and the District of Columbia (U.S. Census Bureau, 2005).

[8] Passel and colleagues estimate that of the foreign-born population, 29 percent are unauthorized, 29 percent are legal residents, and 32 percent are naturalized citizens. The CPS category of foreign-born non-citizens excludes naturalized citizens, increasing the percentage of the category that is comprised of unauthorized/undocumented individuals. In addition, it is estimated that 85 percent of all unauthorized immigrants are of Latin American origin (Passel, 2005a).

[9] Passel et al. (2004) use the term "unauthorized" in place of "undocumented" for technical accuracy. The Census Bureau defines asylees as people who " (1) are unable or unwilling to return to their country of nationality because of persecution or a well-founded fear of persecution, (2) applied for asylum while living in the United States or upon arriving at a port of entry, and have been granted asylum, or (3) applied for asylum during deportation and were granted asylum by the Executive Office of Immigration Review (EOIR)"

[10] The authors indicate that results should be interpreted cautiously because many immigrant youth classified as dropouts never actually attended school, and may in fact have stopped attending before entering high school in the U.S. (Passel, 2005b, p. 22).

[11] The U.S. Current Population Survey does not contain detailed enough data to account for all Texas counties. For example, these data have information on Dallas County but not on Harris County, where the Houston Community College District is located. While the CPS does have detailed data on metropolitan statistical areas (MSAs), the range of cities in each of these MSAs encompasses areas beyond the scope of the geographical eligibility for each of the district tuition policies. The Houston-area MSA serves approximately ten counties, a number of which have their own separate community college districts. The Dallas MSA serves approximately three counties.

[12] Before 2001, only graduates of feeder high schools to the Dallas and Houston community college systems were eligible for the subsidy.

[13] HB 1403 does not deny older students eligibility as long as they meet the criteria.

[14] I limit the analysis to 2004 and include New Mexico as a control group. New Mexico passed a tuition policy in 2005. In addition, HB 1403 was revised by SB 1528 in 2005.

[15] For example, while the CPS is designed to measure demographic and labor force characteristics of the civilian noninstitutionalized population 16 years of age and older, the number of immigrants in the sample compared to the U.S. Census (Passel et al., 2004) as well as the number of high school dropouts, most notably minority males, since the survey excludes military and institutionalized populations, are often undercounted (Orfield, 2004).

[16] Refugees, or humanitarian migrants, are counted in the percentage of the foreign-born population without U.S. citizenship (U.S. Census, 2009).

[17] Previous versions of this paper examine the effect of the policy on a sample without the high school/GED completion restriction. I found no results for this population in Texas compared to similar students in southwestern states without an ISRT policy suggesting the high school degree requirement is relatively stringent for the population that is likely to benefit from this policy. Results are available from the author upon request.