Does Expanding Access to Education Increase Student Achievement?
Examining the Effects of In-State Tuition on Undocumented Immigrants' College GPA

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Introduction

One of the most important institutions for enabling mobility is the educational system (Breen and Jonsson 2005; Fischer and Hout 2006; Hout and Janus 2011). Because education is a key indicator of mobility, it also represents an important domain of immigrant integration (Jackson, Pebley, and Goldman 2009). Indeed, an immigrant's educational attainment does not just predict his or her own socioeconomic integration (White and Glick 2007); it also influences the educational mobility of future immigrant generations (Warner and Srole 1945; Alba and Nee 2003; Waters and Jimenez 2005).

Although growing evidence indicates the utility of education for immigrant integration, very little evidence weighs in on the educational progression of undocumented immigrant *youth*. This is an important shortcoming given undocumented students' experiences may be fundamentally different than their documented immigrants' or U.S. citizen peers. Because immigrant youth migrate into an open K-12 public educational system, undocumented students can learn the English language faster than their working-aged parents and adopt U.S. cultural norms that make them indistinguishable from U.S. born peers—potentially allowing them to "pass" as documented or a citizen (Abrego 2006, 2011; Fernandez-Kelly and Curran 2001; Olivas 1997). Unlike their documented or native-born peers, however, many undocumented youth realize they are undocumented when they try to attend college or get a job (Gonzales 2011). Without access to federally funded financial aid, undocumented students are less likely than documented students to enroll in college, and those who do tend to be first-generation, low-

income students who enter community college and graduate at lower rates (Abrego 2006; Greenman and Hall 2013; Suarez-Orozco et al. 2015; Terriquez 2015).

While higher education has been historically blocked for undocumented students, since the year 2001, access to higher education for undocumented students has begun to expand. Twenty-one states now offer in-state tuition for undocumented immigrants, and an estimated 250,000 undocumented youth now attend college (Passel and Cohn 2008). Due to the recency of these state policies and longitudinal data limitations on legal status, however, we know very little about the educational trajectories of undocumented immigrants who enroll in colleges relative to their documented and U.S. citizen peers over time. Moreover, we know even less about whether expanded access to education via enacting in-state tuition within a state improves educational achievement for new cohorts of undocumented students exposed to the policy. I therefore ask the following questions: (1) What is the educational achievement of undocumented students relative to documented and U.S. citizen peers over time? and (2) What is the effect of enacting in-state tuition in one state on student achievement?

To answer these questions, I turn to immigrants attending or graduating one of the largest public university systems in the United States from 1999 to 2004. Two cohorts of students (1999-2000 and 2002-2004) are followed for ten years to understand educational trajectories over time, as well as how achievement changed for the cohort who entered immediately following the state's enactment of in-state tuition. I estimate educational achievement because it is a key indicator of subsequent attainment, which helps mediate occupational prestige and status over the life course (Hout and Janus 2011). I model achievement by estimating longitudinal growth curve models of GPA by semester. Then I use a difference-in-difference approach to estimate the group effects of enacting in-state tuition in one state on student achievement.

This paper offers two main contributions to the existing literature on undocumented students in higher education. First, it uses longitudinal techniques, which can help us better understand whether and to what extent undocumented status is associated with divergent educational trajectories over time. Second, it uses administrative data that can accurately identify legal status, which can help us isolate the causal effect of an important policy change for undocumented students across the U.S.

Literature on Higher Education

An individual's life chances—including their occupations, wages, and status attainment—are highly dependent on their secondary and post-secondary education. For this reason, scholarship on students in higher education tends to focus on three key student decisions: *whether to go, where to attend, and whether to finish a degree* (Goldrick-Rab and Pfeffer 2009; Manski and Wise 1983). The key factors explaining variation in these decisions from the education literature include individual aspirations and human capital, high school achievement and attainment, status-based dimensions of inequality like race and gender, and parental socioeconomic status and family characteristics more broadly (Ellwood and Kane 2000; Haveman and Wilson 2007; Hearn 1984; Lareau and Weininger 2008).

This evidence notwithstanding, among undocumented students, there is far more evidence on the first key student decision—whether to go—than any other in the educational life course. This is in part because most students realistically have had little choice in whether to go at all (Greenman and Hall 2013; Terriquez 2015). Prior to 2001, undocumented youth could not afford college because they had to pay the same rates as an international student. This barrier made it all but impossible to go to college, as a large share of undocumented students in high schools are low-income (Suarez-Orozco et al. 2015; Terriquez 2015). After 2001, however, in-

state tuition became available, increasing student enrollment and decreasing the propensity among enrolled students to drop out (Amuedo–Dorantes and Sparber 2014; Grosz and Hines 2018; Potochnick 2014). Now that 250,000 undocumented students are enrolled in colleges, it is important to understand these other key student decisions among undocumented students. However, without many administrative data sources accurately identifying legal status and longitudinal data or techniques, we know very little about the educational achievement of undocumented students *over time,* and even less about whether expanding access to education through enacting in-state tuition in a state increases achievement.

In this paper, I take advantage of unique, longitudinal, administrative data that collects information on legal status, as well as panel data techniques, to explore the educational achievement of undocumented students relative to their documented and native-born peers over time. Then I estimate the causal effects of enacting in-state tuition on undocumented student achievement.

Evaluating the Three Decisions among Undocumented Students

Among undocumented students, there is more evidence on the first key student decision—*whether to go*—than any other in the student's life course. This is in part because most students realistically have had little choice in whether to go at all (Greenman and Hall 2013; Terriquez 2014). Even though three million minors living in the U.S. are considered undocumented, only half a million are enrolled in high schools, and 65,000 will graduate each year (Barato 2013). Several studies have demonstrated that undocumented students are less likely than native-born peers to enroll in college, as well as identified what factors are important for either finishing or dropping out of high school: mentors, access to information about options after high school, financial support, and family responsibility (Abrego 2006; Gonzales 2007,

2011; Patler 2017). These factors are not necessarily distinct from those of other students. However, they are of greater significance for undocumented students as they realize the barriers of their own "illegality"—or lived exclusion from the state. Among those who graduate high school, many undocumented youth cannot afford college because they must pay the same rates as an international student. This barrier makes it difficult to go, as a large share of undocumented students in high schools are low-income (Suarez-Orozco et al. 2015; Terriquez 2015). Since 2001, however, this barrier has for the first time begun to lift. Twenty-one states offer in-state tuition to undocumented students, and 250,000 undocumented students are now enrolled in U.S. colleges (Passel and Cohn 2008).

As growing numbers of undocumented students enroll, scholarship on the second key student decision—*where to attend*—demonstrates that most undocumented students start in community college; were brought to the U.S. as children; speak English well; and have low socioeconomic status (Barato 2013; Abrego 2006). Community colleges have historically been immigrant-friendly and provide easier to completely open access to education for low-income students (Rangel 2001; Dozier 2001). Additionally, undocumented students are highly selected, particularly at the community college level (Hsin and Reed 2017).

Beyond descriptive information on student enrollment characteristics, however, there is less information on the third key decision—*whether students finish degrees*. This is unfortunate because a college degree is pivotal for explaining individuals' own status attainment and even their children's educational prospects (Sewell and Hauser 1972). It is well established that an important predictor of whether a student will finish a degree timely or drop out is their academic achievement, otherwise known as their grades while enrolled (DesJardins, Ahlburg, and McCall 1999, 2002). Yet we know almost nothing about undocumented student achievement in U.S.

colleges. What we do know largely derives from survey-based and administrative data using descriptive techniques. This growing body of evidence suggests that undocumented students far outperform their documented and native-born peers (Hsin and Reed 2017). However, once accounting for selection, there is a disadvantage associated with undocumented status at four-year colleges, though not community colleges (Hsin and Reed 2017).

While these aforementioned studies are informative for contending that undocumented status poses a significant barrier to ultimate educational attainment, very few use longitudinal techniques to understand legal status variation in the educational trajectories of students over time. I fill this gap by using panel techniques to estimate whether legal status explains variation in student academic achievement over time. Given the high selectivity of undocumented students in colleges, but their simultaneous legal and socioeconomic vulnerabilities, I hypothesize that:

> *H1. Undocumented students will have higher achievement than documented and citizen students at community colleges. However, their advantage will be less pronounced at four-year colleges.*

There are several factors from the education literature that may help explain the relationship between undocumented status and student achievement. Briefly, *student human capital*, such as high school achievement, could help explain the relationship between legal status and higher education achievement. Additional factors include individual *status-based dimensions of inequality*, like country of birth and gender (Muñoz and Maldonado 2012). Evidence from secondary educational transitions demonstrates that *family financial capital*, as well as support and information from non-familial relationships, might help explain the relationship (Enriquez 2011); while evidence from single-case studies demonstrate that the *institutional supports* that vary between and within community and four-year institutions can

also help explain the relationship (Abrego 2008; Gonzales 2011; Muñoz and Maldonado 2012). I hypothesize that:

> *H2. Human capital and other dimensions of inequality at the individual level, financial capital at the family level, and institutional supports will all help to mediate the relationship between undocumented status and educational performance and attainment.*

Achievement Pre- and Post In-State Tuition

Policy analyses suggest that granting in-state tuition significantly increases enrollment, decreases students' financial barriers, decreases the likelihood that students will drop out, and helps students to feel legally included in U.S. institutions (Abrego 2008; Ameudo-Dorantes and Sparber 2014; Darolia and Potochnick 2015; Dickson, Gindling, and Kitchin 2017; Grosz and Hines 2018; Nunez and Hothaus 2017; Potochnick 2014).

However, these studies often rely on proxy measures for undocumented status, such as non-citizen status and Mexican origin. Such measures conflate country of origin with legal status, which is imprecise given the large heterogeneity among higher educated undocumented students (Hsin and Ortega 2017). What studies exist using administrative data that can accurately identify legal status have found that tuition hikes, or a temporary retraction of in-state tuition for undocumented students, reduces reenrollment and decreases attainment for newer students, though it only poses temporary setbacks for students already enrolled (Conger and Turner 2017).

This evidence notwithstanding, no study to my knowledge has tested the effects of enacting in-state tuition on student achievement using longitudinal data which accurately identify undocumented status. I expect that in-state tuition will help lift financial considerations for students, decrease the pressure that they have to work, and decrease legal barriers to participate in other schooling activities (Abrego 2008; Ameudo-Dorantes and Sparber 2014). With a lower financial burden, I hypothesize that:

H3. In-state tuition will have a positive effect on undocumented students' achievement relative to documented and native-born students.

Research Methods

Data. I test these hypotheses using unique, longitudinal, administrative records of students who entered a public university system in the Northeast from 1999 to 2000 and from 2002 to 2004. Due to confidentiality agreements with the university, the system will be called Urban College System (UCS). UCS is appropriate for evaluating the educational achievement of undocumented youth in higher education because most of what we know about the relationship between legal status and educational outcomes more broadly comes from qualitative studies on highly selective, four-year institutions (Abrego 2006; Contreras 2009; Garcia and Tierney 2011; Gonzales 2011). UCS, on the other hand, provides an opportunity to study a diverse and heterogeneous student body because, as one of the largest public university systems in the country, it educates over 260,000 degree seekers a year across 18 undergraduate campuses, of which 7 are community colleges. Moreover, the metropolitan area in which UCS is situated is both a historical and contemporary gateway of immigrants from all over the world.

Significantly, UCS was one of the first institutions in the country to offer in-state tuition in 1989. This policy continued until 2001, despite no state policy mandating that benefit. In 2001, following the 9/11 terror attacks, in-state tuition at UCS was rescinded for the Spring 2002 semester (Muñoz 2009). By August of 2002, the state in which UCS was housed enacted in-state tuition, which went into effect in the Fall of 2002 at UCS and all other schools in the state. This paper therefore uses the most recent policy change of 2002 to understand the effects of granting in-state tuition at the state level on the cohort completely exposed to the policy change.

Sample. This paper uses two UCS cohorts. The first is the cohort enrolling from 1999 to 2000, the cohort excluded from the most current in-state tuition benefits. The second cohort is

from 2002-2004, the first cohort with complete access to the newest in-state tuition benefits. The 2000-2002 cohort is excluded from analysis because the policy effects of in-state tuition typically have a lag (Ameudo-Dorantes and Sparber 2014). Additionally, this cohort is excluded because in-state tuition was temporarily retracted in the Spring of 2002 at UCS. Existing evidence on the effects of this temporary policy demonstrates that while there were significant reductions in enrollment following this temporary policy change, it did not deter longer-term behavior (Conger and Turner 2017). Each cohort is followed for ten years or 20 semesters at all 18 campuses. The data collected are at the semester-level, and the analytic sample is 50,869 students or 353,399 student-semesters.

Measures. The primary outcome variable is student achievement, which I measure with the student's Grade Point Average (GPA) every semester. The primary independent variable is legal status, measured with the following categories: citizen, documented (Lawful Permanent Resident), undocumented, and other (including refugee, student visa, other visa, and unknown). I account for several measures of *student human capital*, including: whether the student's high school was public or private (inside the city area), outside the city area but inside the state, outside the state, outside the country, or a GED; the student's standardized SAT score out of 1600; and a measure of the comfort with the English language relative to another language. I account for individual's *status-based dimensions of inequality* by measuring binary gender, age at entry into school, and ethno-racial identity. I account for *family financial capital* by measuring whether the student is part-time or full-time status (since part-time suggests they are working to support their families); as well as whether the student is on a Pell Grant, which is reserved for low-income students. Finally, I incorporate *institutional supports* with a dummy variable for each of the 18 institutions at which students enroll. This measure is time-varying, so if a student

transfers between schools, that move is captured in the data. (Questions about the experience and likelihood of transferring from community to four-year colleges are fully addressed in separate papers.)

RQ 1 Method: What is the achievement of undocumented students relative to documented and U.S. citizen peers over time? To answer this question, I estimate a growth curve model stratified by school type, or whether the student initially enrolled in a community or four-year college. Models are stratified because institutional supports often differ across school types (Hsin and Reed 2017). The growth curve technique is one type of multi-level random coefficients approach, wherein both starting levels and rates of change can vary within and across individuals over time (Gelman 2012). The first "level," within-individuals, represents changes in each individual's educational performance over time, while the second "level" represents differences *across* individuals over time. Specifically, I estimate the equation:

$$y_{ti} = \alpha_0 + \alpha_1 z_{ti} + \beta^T x_{ti} + u_{0i} + u_{1i} z_{ti} + e_{ti}$$

where y_{ti} is the student GPA each semester; x_{ti} is the vector of both time-varying (e.g. full- or part-time status) and time-invariant (e.g. gender) covariates, u_{0i} and u_{1i} are the individual-specific residuals (or random effects), and e_{ti} are residuals at the measurement occasion level. Z_{ti} is the time variable, where t takes place across 20 semesters. Legal status is interacted with the time variable, such that the coefficient on legal status can be estimated every semester. This allows for a rich description of how the relationship between legal status and GPA changes over the course of the student's tenure in school. I add the individual, family, and institutional covariates successively to determine how they help explain the relationship between legal status and GPA.

RQ2 Method: What is the effect of increased access to higher education on achievement? To answer this question, I rely on a quasi-experimental method called the difference-in-

difference technique, which exploits changes in an outcome for undocumented students before and after enacting in-state tuition, relative to changes in the same outcome for non-undocumented students (citizens, documented, and other legal statuses) during the same time-period. Taking the difference of the changes in outcomes for non-undocumented students controls for unobserved factors that affect all students equally between the two time-periods. To ensure there is balance by an important observable characteristic across undocumented and non-undocumented students, the difference-in-difference model will be limited only to students who identify as Hispanic. Specifically, I estimate two pooled difference-in-difference models, stratified by school type:

$$y_i = \alpha_0 + \beta_1 \text{Undoc} + \beta_2 \text{Policy} + \beta_3 (\text{Undoc} * \text{Policy}) + \beta_4 X + \text{sem} + \varepsilon$$

where each outcome, *y* (GPA), for each individual, *i*, is regressed on a dummy variable—1 for undocumented and 0 for not—the policy—1 for the cohort which enrolled after in-state tuition policy was enacted or 0 for the cohort preceding the policy—and an interaction between undocumented and policy. The interaction term, β_3, is the primary coefficient of interest for isolating the causal effects of in-state tuition among Hispanic undocumented students. I also include the individual, family, and institutional covariates, as well as semester fixed-effects control for achievement differences over time. One limitation is these results capture the average group treatment effect for the cohort exposed to the policy change, not the average individual treatment effect who was exposed to the treatment sometime *during* their tenure. Additional threats to internal validity include differential composition across cohorts and spillover effects to immigrants with other legal status categories not treated. For instance, it is likely the case that more undocumented students enroll following in-state tuition. Should these students be more highly selected than non-undocumented students, any effects of the policy will be biased upward.

To address these potential threats, sensitivity analyses will account for changes in exposure to the policy within a person in addition to across cohorts.

Preliminary Results

Achievement Trajectories for Undocumented Students over Time

Models estimating achievement of over time suggest that undocumented students perform better than other students upon first enrolling. At community colleges, undocumented students maintain their advantage; while at four-year colleges, the advantage dissipates.

[Figure 1 about here]

At community colleges, Figure 1 shows that undocumented students have higher achievement upon first enrolling than students in any other legal status. Although over time, citizen students catch up to undocumented students, they still maintain higher achievement relative to documented students and students with other legal status categories. Table 1 demonstrates that, to some extent, this high continuous achievement is mediated by *student human capital* as well as *status-based dimensions of inequality, including ethno-racial identity*.

[Table 1 about here]

At four-year colleges, on the other hand, undocumented students start with high achievement in the first semester. But Figure 2 demonstrates that they fall behind by semester 12. Among all students still enrolled after six years, citizen and LPR students outpace undocumented students.

[Figure 2 about here]

Similar to the community college models, Table 2 shows that *student human capital* and other *dimensions of inequality* again help to explain these relationships. *Family financial capital*

and *institutional supports*, on the other hand, do not help mediate the relationship between legal status and performance at either community or four-year colleges.

[Table 2 about here]

In both models, students drop out over the course of 10 years, increasing student attrition over time. When restricting growth curve models to the first 12 semesters, results are consistent with persistent advantage in community colleges but a converging advantage in four-year colleges.

Does Expanding Access to Higher Education Increase Achievement?

The difference-in-difference results demonstrate that expanding access to higher education significantly increases student achievement. To demonstrate this relationship descriptively, Figure 3 shows the average GPA among Hispanic students in each cohort by legal status. It highlights that undocumented Hispanic students in the cohort exposed to in-state tuition have notably higher GPA's than non-undocumented Hispanic students in the same exposed cohort.

[Figure 3 about here]

I find that this notable difference is significant when employment the difference-in-difference technique. Table 4 displays these difference-in-difference estimates. Accounting for the same individual, family, and institutional controls from the growth curve models, as well as semester fixed-effects, the estimates show that prior to in-state tuition, there is no statistically significant difference in Hispanic students whether they are undocumented or not (at either community or four-year colleges). While GPA increases for both groups after in-state tuition is enacted, the interaction between being undocumented and in the cohort exposed to the policy change is positive and significant. This suggests that there is a positive causal effect of in-state

tuition on Hispanic groups exposed to the treatment, or the cohort of undocumented students who enrolled from 2002 to 2004.

[Table 4 about here]

Conclusions

The results suggest that student achievement does vary by legal status. Undocumented students have high GPA's at both community and four-year colleges, although this advantage is higher upon first enrolling than later in their educational tenure. Key factors from the education literature, including human capital and other status-based dimensions of inequality, are important in explaining this legal status variation in student achievement. However, even accounting for this initial advantage, in-state tuition significantly increases GPA for cohorts exposed to the policy. This demonstrates that expanding access to education increases student achievement.

References

Abrego, Leisy Janet. "“I can’t go to college because I don’t have papers”: Incorporation patterns of Latino undocumented youth." *Latino Studies* 4, no. 3 (2006): 212-231.

Abrego, Leisy Janet. "Legal consciousness of undocumented Latinos: Fear and stigma as barriers To claims-making for first-and 1.5-generation immigrants." *Law & Society Review* 45, no. 2 (2011): 337-370.

Alba, Richard, and Victor Nee. "Remaking the American Mainstream: Assimilation and." (2003).

Amuedo-Dorantes, Catalina, and Chad Sparber. "In-state tuition for undocumented immigrants and its impact on college enrollment, tuition costs, student financial aid, and indebtedness." *Regional Science and Urban Economics* 49 (2014): 11-24.

Barato, Ruben. “Undocumented Students and Undocumented Students and Higher Education: History, Higher Education: History, Challenges and Advocacy.” Championing Hispanic Higher Education Success Conference. (2013).

Breen, Richard, and Jan O. Jonsson. "Inequality of opportunity in comparative perspective: Recent research on educational attainment and social mobility." *Annu. Rev. Sociol.* 31 (2005): 223-243.

Conger, Dylan, and Lesley J. Turner. "The effect of price shocks on undocumented students' college attainment and completion." *Journal of Public Economics* 148 (2017): 92-114.

Contreras, Frances. "Sin papeles y rompiendo barreras: Latino students and the challenges of persisting in college." *Harvard Educational Review* 79, no. 4 (2009): 610-632.

Darolia, Rajeev, and Stephanie Potochnick. "Educational" When,"" Where," and" How" Implications of In-State Resident Tuition Policies for Latino Undocumented Immigrants." *The Review of Higher Education* 38, no. 4 (2015): 507-535.

DesJardins, Stephen L., Dennis A. Ahlburg, and Brian P. McCall. “An event history model of Student departure.” *Economics of Education Review*. (1999).

DesJardins, Stephen L., Dennis A. Ahlburg, and Brian P. McCall. "A temporal investigation of factors related to timely degree completion." *The Journal of Higher Education* 73, no. 5 (2002): 555-581.

Dickson, Lisa, T. H. Gindling, and James Kitchin. "The Education and Employment Effects of DACA, In-State Tuition and Financial Aid for Undocumented Immigrants." (2017).

Dozier, Sandra Bygrave. "Undocumented and documented international students: A comparative study of their academic performance." *Community college review* 29, no. 2 (2001): 43-53.

Ellwood, David, and Thomas J. Kane. "Who is getting a college education? Family background and the growing gaps in enrollment." *Securing the future: Investing in children from birth to college* (2000): 283-324.

Enriquez, Laura. "" Because we feel the pressure and we also feel the support": Examining the educational success of undocumented immigrant Latina/o students." *Harvard Educational Review* 81, no. 3 (2011): 476-500.

Fernández-Kelly, M. Patricia, Sara Curran, Rubén G. Rumbaut, and Alejandro Portes. "Ethnicities: Children of immigrants in America." (2001).

Fischer, Claude S., and Michael Hout. *Century of difference: How America changed in the last one hundred years*. Russell Sage Foundation, 2006.

Garcia, Lisa D., and William G. Tierney. "Undocumented immigrants in higher education: A

preliminary analysis." *Teachers College Record* 113, no. 12 (2011): 2739-2776.
Gelman, Andrew. 2012. "Multilevel (Hierarchical) Modeling: What It Can and Cannot Do." Technometrics.
Goldrick-Rab, Sara, and Fabian T. Pfeffer. "Beyond access: Explaining socioeconomic differences in college transfer." *Sociology of Education* 82, no. 2 (2009): 101-125.
Gonzales, Roberto G. "Wasted talent and broken dreams: The lost potential of undocumented students." *Immigration policy in focus* 5, no. 13 (2007): 1-11.
Gonzales, Roberto G. "Learning to be illegal: Undocumented youth and shifting legal contexts in the transition to adulthood." *American sociological review* 76, no. 4 (2011): 602-619.
Gonzales, Roberto G. *Lives in limbo: Undocumented and coming of age in America*. Univ of California Press, 2016.
Greenman, Emily, and Matthew Hall. "Legal status and educational transitions for Mexican and Central American immigrant youth." *Social Forces* 91, no. 4 (2013): 1475-1498.
Grosz, Michel, and Annie Hines. "Tuition Policy Changes and Academic Outcomes: The Impact of the Colorado ASSET legislation." (2018). Presented to the Association for Education Finance Policy conference.
Haveman, Robert, and Kathryn Wilson. "Economic inequality in college access, matriculation, and graduation." *Economic inequality and higher education access, persistence, and success* (2007): 20-59.
Hearn, James C. "The relative roles of academic, ascribed, and socioeconomic characteristics in college destinations." *Sociology of Education* (1984): 22-30.
Hout, Michael, and Alexander Janus. "Educational Mobility in the United States since the 1930s." (2011).
Hsin, Amy, and Francesc Ortega. "The Effects of Deferred Action for Childhood Arrivals on the Educational Outcomes of Undocumented Students." *Demography* 55, no. 4 (2018): 1487-1506.
Hsin, Amy and Holly Reed. "The Effect of Legal Status on Educational Outcomes of College Students: Evidence on Undocumented Students From a Large Public University." Presentation to the Population Association of America Annual Meeting. (2017).
Jackson, Margot I., Anne R. Pebley, and Noreen Goldman. "Schooling location and economic, occupational and cognitive success among immigrants and their children: The case of Los Angeles." *Social science research* 39, no. 3 (2010): 432-443.
Lareau, Annette, and Elliot B. Weininger. "Class and the transition to adulthood." *Social class: How does it work* (2008): 118-151.
Manski, Charles F., David A. Wise, and David A. Wise. *College choice in America*. Harvard University Press, 1983.
Muñoz, Carolina Bank. "A dream deferred: Undocumented students at CUNY." *The Radical Teacher* 84 (2009): 8-17.
Muñoz, Susana María, and Marta María Maldonado. "Counterstories of college persistence by undocumented Mexicana students: Navigating race, class, gender, and legal status." *International Journal of Qualitative Studies in Education* 25, no. 3 (2012): 293-315.
Nunez, Amy, and Gretchen Holthaus. "In-State Tuition for Undocumented Students: A Policy Analysis." *Journal of the Student Personnel Association at Indiana University* (2017): 47-63.
Olivas, Michael A. "Research on Latino college students: A theoretical framework and

inquiry." *Latinos and education: A critical reader* (1997): 468-486.
Passel, Jeffrey and D'Vera Cohn. 2008. "Trends in Unauthorized Immigration: Undocumented Inflow Now Trails Legal Inflow." *Pew Hispanic Center (Washington, DC: Pew Research Center)*.
Patler, Caitlin. "Citizen Advantage, Undocumented Disadvantage, or Both? The Comparative Educational Outcomes of Second and 1.5-Generation Latino Young Adults." *International Migration Review* (2017).
Potochnick, Stephanie. "How states can reduce the dropout rate for undocumented immigrant youth: The effects of in-state resident tuition policies." *Social science research* 45 (2014): 18-32.
Rangel, Y. "College immigrant students: How undocumented female Mexican immigrants transition into higher education." PhD diss., Doctoral dissertation). Available from ProQuest Dissertation and Theses database.(UMI No. 3031717), 2001.
Suárez-Orozco, Carola, Dalal Katsiaficas, Olivia Birchall, Cynthia M. Alcantar, Edwin Hernandez, Yuliana Garcia, Minas Michikyan, Janet Cerda, and Robert T. Teranishi. "Undocumented undergraduates on college campuses: Understanding their challenges and assets and what it takes to make an undocufriendly campus." *Harvard Educational Review* 85, no. 3 (2015): 427-463.
Sewell, William H., and Robert M. Hauser. "Causes and consequences of higher education: Models of the status attainment process." American Journal of Agricultural Economics 54, no. 5 (1972): 851-861.
Terriquez, Veronica. "Dreams delayed: Barriers to degree completion among undocumented community college students." *Journal of Ethnic and Migration Studies* 41, no. 8 (2015): 1302-1323.
Warner, William Lloyd, and Leo Srole. "The social systems of American ethnic groups." (1945).
Waters, Mary C., and Tomás R. Jiménez. "Assessing immigrant assimilation: New empirical and theoretical challenges." *Annu. Rev. Sociol.* 31 (2005): 105-125.
White, Michael J., and Jennifer E. Glick. *Achieving anew: How new immigrants do in American schools, jobs, and neighborhoods*. Russell Sage Foundation, 2009.

Tables and Figures

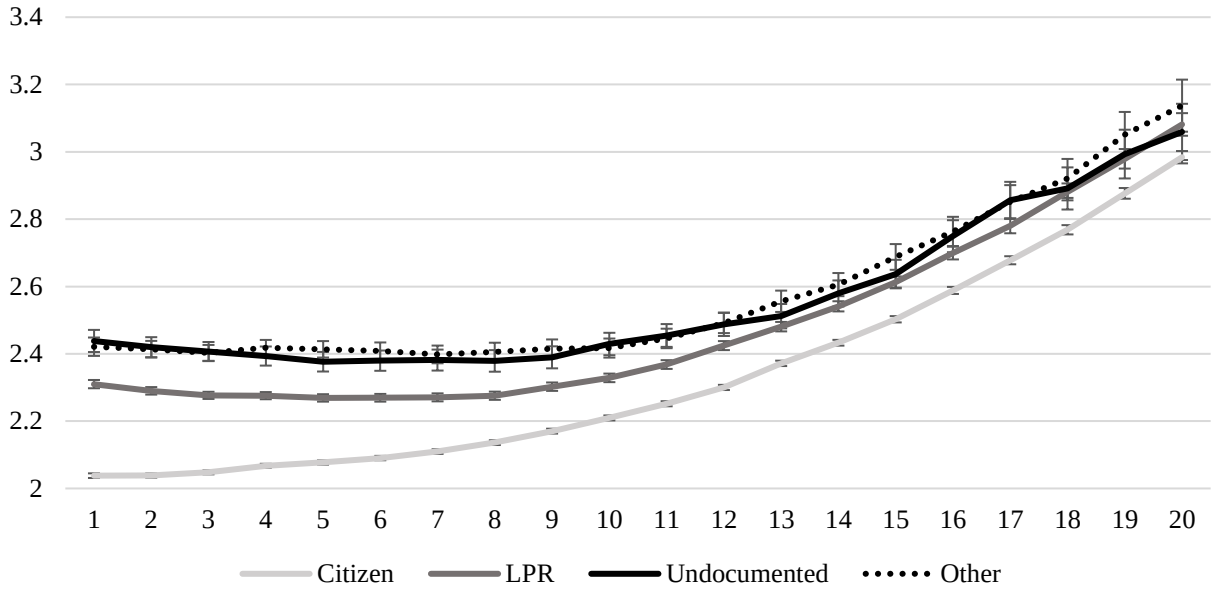

Figure 1. Predicted Achievement Trajectories (GPA) over 20 Semesters among Students who First Enroll in Community Colleges (N=156,910)

Notes. Predicted values are plus/minus the standard error. Results are generated from Table 1, Model 4, which accounts for legal status, semester, a cross-level interaction between legal status and semester as well as semester squared, cohort, student human capital characteristics, other status-based dimensions of inequality, family financial capital characteristics, and dummy variables for each institution or college. All other covariates are held at their means.

Table 1. Growth Curve Model Predicting GPA Among Students who First Enroll in Community College Programs (N=156,910)

	Model 1	Model 2	Model 3	Model 4
Legal Status (Undocumented Omitted)				
Citizen	-0.427***	-0.378***	-0.377***	-0.384***
	(0.040)	(0.039)	(0.040)	(0.040)
LPR	-0.106*	-0.113**	-0.112**	-0.125**
	(0.042)	(0.041)	(0.041)	(0.041)
Other Legal Status	0.013	-0.070	-0.070	-0.082+
	(0.051)	(0.050)	(0.050)	(0.050)
Semester	-0.040***	-0.038***	-0.038***	-0.031***
	(0.009)	(0.009)	(0.009)	(0.009)
Legal Status and Semester Interacted				
Citizen*Semester	0.023*	0.022*	0.022*	0.020*
	(0.010)	(0.009)	(0.009)	(0.009)
LPR*Semester	-0.003	-0.004	-0.004	-0.004
	(0.010)	(0.010)	(0.010)	(0.010)
Other Legal Status*Semester	0.004	0.002	0.002	0.010
	(0.012)	(0.012)	(0.012)	(0.012)
Semester Squared	0.003***	0.003***	0.003***	0.003***
	(0.001)	(0.001)	(0.001)	(0.001)
2002-2004 Cohort	0.122***	0.127***	0.127***	0.136***
	(0.011)	(0.011)	(0.011)	(0.011)
Individual-Level Characteristics				
SAT Score		0.001***	0.001***	0.001***
		(0.000)	(0.000)	(0.000)
Language Comfort (English Only Excluded)				
Equally Comfortable with Two Languages		0.003	0.003	0.007
		(0.017)	(0.017)	(0.017)
Comfortable with Language Other than English		0.109***	0.109***	0.107***
		(0.027)	(0.027)	(0.027)
Language Unknown		-0.017	-0.018	-0.016
		(0.015)	(0.015)	(0.015)
High School-Level Dummies	No	Yes	Yes	Yes
Race/Ethnicity (White Omitted)				
Hispanic		-0.240***	-0.239***	-0.245***
		(0.014)	(0.015)	(0.015)
Black		-0.287***	-0.287***	-0.297***
		(0.014)	(0.014)	(0.015)
Asian		-0.031+	-0.030+	-0.009
		(0.018)	(0.018)	(0.018)
Indian		-0.162	-0.161	-0.150
		(0.106)	(0.106)	(0.106)
Entry Age		0.024***	0.024***	0.023***
		(0.002)	(0.002)	(0.002)
Male		-0.251***	-0.251***	-0.246***

		(0.010)	(0.010)	(0.010)
Family-Level Financial Characteristics				
Pell Grant			-0.004	-0.006
			(0.011)	(0.011)
Full Time			0.008	0.011
			(0.019)	(0.019)
College-Level Dummies				
	No	No	No	Yes
Constant	2.401***	1.932***	1.924***	1.698***
	(0.040)	(0.075)	(0.078)	(0.082)

+ p<.10; * p<.05; ** p<.01; ***
p<.001
Note: All Models also include cross-level interaction between Semester Squared Term and Legal Status

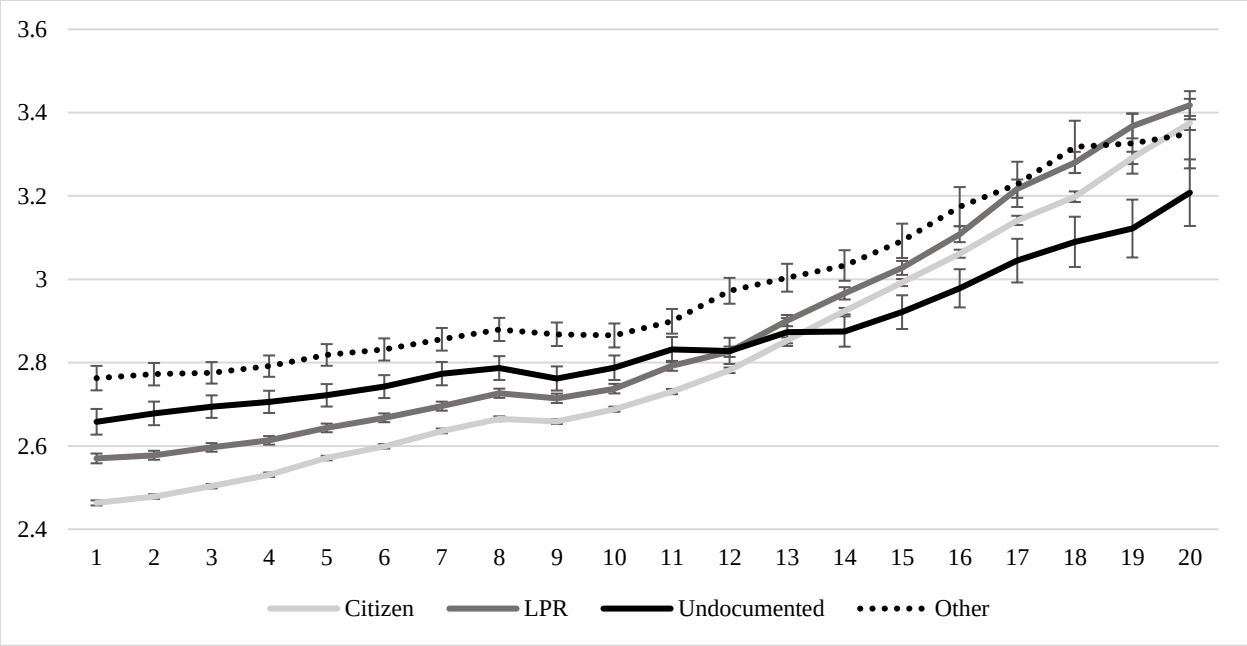

Figure 2. Predicted Achievement Trajectories (GPA) over 20 Semesters among Students who First Enroll in Four-Year Colleges (N=196,489)

Notes. Predicted values are plus/minus the standard error. Results are generated from Table 2, Model 4, which accounts for legal status, semester, a cross-level interaction between legal status and semester as well as semester squared, cohort, student human capital characteristics, other status-based dimensions of inequality, family financial capital characteristics, and dummy variables for each institution or college. All other covariates are held at their means.

Table 2. Growth Curve Model Predicting GPA Among Students who First Enroll in Four-Year Degree Programs (N=196,489)

	Model 1	Model 2	Model 3	Model 4
Legal Status (Undocumented Omitted)				
Citizen	-0.197***	-0.236***	-0.253***	-0.263***
	(0.038)	(0.036)	(0.037)	(0.036)
LPR	-0.077+	-0.087*	-0.109**	-0.113**
	(0.040)	(0.038)	(0.038)	(0.038)
Other Legal Status	0.107*	-0.034	-0.036	-0.031
	(0.051)	(0.049)	(0.049)	(0.049)
Semester	0.008	0.008	0.008	0.006
	(0.008)	(0.008)	(0.008)	(0.008)
Legal Status and Semester Interacted				
Citizen*Semester	0.001	0.002	0.002	-0.003
	(0.008)	(0.008)	(0.008)	(0.008)
LPR*Semester	-0.008	-0.008	-0.008	-0.010
	(0.008)	(0.008)	(0.008)	(0.008)
Other Legal Status*Semester	-0.014	-0.015	-0.014	-0.016
	(0.011)	(0.011)	(0.011)	(0.011)
Semester Squared	0.001*	0.001*	0.001*	0.001*
	(0.000)	(0.000)	(0.000)	(0.000)
Legal Status and Semester Squared Interacted				
Citizen*Semester Squared	0.001+	0.001+	0.001+	0.001*
	(0.000)	(0.000)	(0.000)	(0.000)
LPR*Semester Squared	0.001*	0.001*	0.001*	0.001*
	(0.001)	(0.001)	(0.001)	(0.001)
Other Legal Status*Semester Squared	0.001+	0.001*	0.001*	0.002*
	(0.001)	(0.001)	(0.001)	(0.001)
2002-2004 Cohort	0.125***	0.080***	0.079***	0.064***
	(0.011)	(0.010)	(0.010)	(0.010)
Individual-Level Characteristics				
SAT Score		0.001***	0.001***	0.001***
		(0.000)	(0.000)	(0.000)
Language Comfort (English Only Excluded)				
Equally Comfortable with Two Languages		-0.002	-0.003	0.003
		(0.014)	(0.014)	(0.014)
Comfortable with Language Other than English		0.058*	0.056*	0.060*
		(0.028)	(0.028)	(0.028)
Language Unknown		-0.038**	-0.036**	-0.046***
		(0.013)	(0.013)	(0.013)
High School-Level Dummies	No	Yes	Yes	Yes
Race/Ethnicity (White Omitted)				
Hispanic		-0.315***	-0.320***	-0.340***
		(0.013)	(0.013)	(0.014)
Black		-0.358***	-0.361***	-0.373***
		(0.014)	(0.014)	(0.014)

Asian		-0.150***	-0.154***	-0.136***
		(0.014)	(0.014)	(0.014)
Indian		-0.326**	-0.328**	-0.317**
		(0.115)	(0.115)	(0.113)
Entry Age		0.001	0.002	0.000
		(0.003)	(0.003)	(0.003)
Male		-0.329***	-0.328***	-0.342***
		(0.009)	(0.009)	(0.009)
Family-Level Financial Characteristics				
Pell Grant			0.027*	0.032**
			(0.011)	(0.010)
Full Time			0.060*	0.055+
			(0.029)	(0.029)
College-Level Dummies				
	No	No	No	Yes
Constant	2.558***	2.061***	1.978***	1.822***
	(0.038)	(0.090)	(0.096)	(0.096)

+ p<.10; * p<.05; ** p<.01; *** p<.001

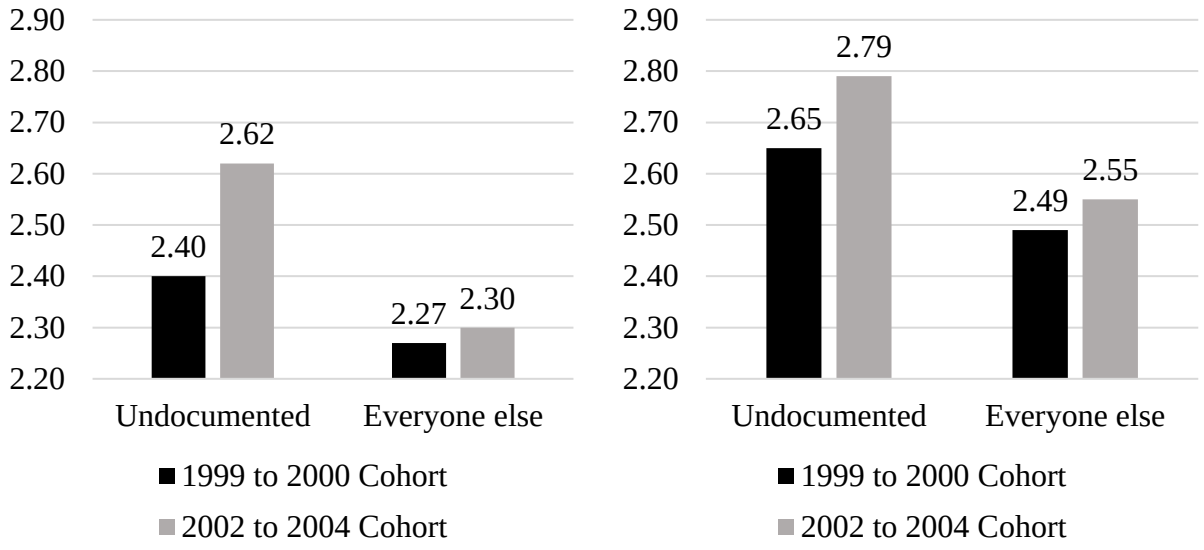

Figure 3. Average GPA for Cohorts Preceding and Following In-State Tuition at Community and Four-Year Colleges

Notes. Results limited to students who self-identify as Hispanic.

Table 3. Difference-in-Difference Estimates for Students First Enrolled in Community (N=48,710) and Four-Year (N=49,634) Degree Programs

	AA	BA
Undocumented	0.032	0.055
	(0.054)	(0.053)
Cohort Enrolled Post In-State Tuition	0.067***	0.034***
	(0.010)	(0.010)
Undocumented*Cohort Enrolled Post In-State Tuition	0.220***	0.117*
	(0.064)	(0.059)
Constant	1.670***	1.737***
	(0.080)	(0.104)
N	48710	49634

+ p<.10; * p<.05; ** p<.01; *** p<.001

Notes. Both models account for all controls in the growth curve models plus wave fixed-effects.