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A DREAM DENIED: HOW U.S. 1996 WELFARE REFORM DEPRESSES UNDOCUMENTED-STUDENT ACCESS TO HIGHER EDUCATION

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Abstract: The Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA, or "Welfare Reform") forbids undocumented students from participating in federal financial aid programs and from taking advantage of lower in-state-resident-tuition prices. Using a difference-in-differences analysis of U.S. Census data, I find that IIRIRA (Welfare Reform) depresses undocumented students' abilities to access a college education by 32 percent. The moral, political, and legal implications of my findings are increasingly magnified by the growing population of undocumented youth who graduate from U.S. high schools and are unable to attend college or participate fully in American life.

Keywords: undocumented law college

Introduction

Approximately 65,000 undocumented immigrant children who have lived in the U.S. for five or more years graduate from U.S. high schools each year (Gonzales, 2009).This is largely due to Plyler v. Doe (1982), a U.S. Supreme Court case in which a Texas statute that defunded public K-12 education for undocumented children was invalidated as a "legislative classification that threatens the creation of an underclass of future citizens and residents" (p. 239). Thirty years after Plyler, because of changes in the American economy and labor market, a college education has replaced a high school diploma as the key to financial security

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(Deming & Dynarski, 2010; Gonzales, 2011). Yet, only 49% of undocumented high school graduates go on to college (Passel & Cohn, 2009 in Gonzales, 2011).

Table 1 - Timeline of significant events in undocumented-student college access

Year	Facilitative Event	Restrictive Event
1982	*Plyler v. Doe*: States are required to allow undocumented children access to public K-12 education	*Toll v. Moreno*: *Plyler* not extended to higher ed.
1986	Immigration Reform and Control Act of 1986 (IRCA): Certain undocumented immigrants allowed to apply for residency Higher Education Act of 1965 amended: Colleges determine if a non-citizen student demonstrates "satisfactory immigration status" to receive federal aid	
1997		(July 1) Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) effective: Undocumented ineligible for federal financial aid
1998		(July 1) Immigrant Reform and Immigrant Responsibility Act of 1996 (IIRIRA) effective: States cannot offer in-state-resident tuition (ISRT) to undocumented unless same offer is made to citizens and legal residents. Higher Education Act amended: Colleges must submit proof of financial aid applicant's lawful immigration status to INS (USCIS).
2001	Texas passes first ISRT law.	

I hypothesize that much of this disparity is attributable to the Illegal Immigrant Reform and Immigrant Responsibility Act of 1996 ("IIRIRA," 8 U.S.C. § 1623).By way of background, Plyler does not extend to higher education (see Toll v. Moreno, 1982). As a result, public colleges and universities are neither required to enroll undocumented students nor are they prohibited from doing so. Before IIRIRA, many states took advantage of the relative lack of legal guidance to assess different tuition costs to undocumented students based on their lacking legal in-state residency status (Olivas, 1986; 2004). After President Clinton signed IIRIRA, states were required to assess out-of-state tuition costs to undocumented

students (§ 1623). As a result, after July 1, 1998, undocumented students, who, on average, come from families earning only three-fifths the median wage of the average American family, often have to pay out-of-state tuition rates that equal 88% of their family annual median income (compare Long, 2013; Passel & Taylor, 2010). These students are also ineligible for federal financial aid programs because of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 ("PRWORA," 8 U.S.C. § 1611).

There does not appear to be any empirical literature exploring IIRIRA's effects on undocumented students' access to college and graduation rates. Leading scholarship on the IIRIRA (and PRWORA) is largely jurisprudential in nature, focusing primarily on issues of the constitutionality and practicality of those laws (Manuel, 2014; Olivas, 2004; 2009; Sinodis, 2011). Missing from this discussion is any evidence that PRWORA and IIRIRA actually caused the hypothesized decline in undocumented students' college-going behaviors. I presume this oversight is related to a yet-to-be tested theory that, by 1996, undocumented students were already so thoroughly discouraged from participating in federal financial aid programs and receiving in-state tuition benefits that PRWORA and IIRIRA had little to no impact on their college-going behaviors. While historical evidence suggests that some undocumented students were declared eligible for and may have participated in federal financial aid before the 1996 laws (see Manuel, 2014), it is clear that PRWORA and IIRIRA conclusively eliminated undocumented-student access to federal financial aid and in-state-tuition respectively.In this paper, I explore the extent to which IIRIRA impacted undocumented-student college enrollment and bachelor's degree attainment.

Research Design and Methodology

Research Questions

To investigate the impact of IIRIRA on undocumented-student college-going behaviors, I use a difference-in-differences strategy to answer the following research questions: (1) Did subjecting all undocumented students to out-of-state tuition rates and eliminating undocumented-student access to federal financial aid through IIRIRA decrease their (a) college enrollment; and (b) bachelor's degree odds relative to their similarly-situated citizen and legal resident peers?

Data

I use individual-level data from the CPS-MORG[2] for the years 1994-2001 in my analyses. While no governmental agency directly counts the undocumented immigrant population as a separate group, because the CPS includes undocumented immigrants among the sample of foreign-born non-citizens (FBNC), this survey is one of the most important governmental data sources for information about my population of interest (Passel, 2005). Because FBNC include both legal and undocumented residents, any estimates of undocumented-student effects using these data will be downwardly biased. That is, it will be more difficult to find a policy effect on undocumented persons than it would be if we could disaggregate the FBNC category. This is a common, well-noted limitation that exists, frankly, out of the very status and stigma of being undocumented (see Amuedo-Dorantes & Sparber, 2014; Chin & Juhn, 2011; Flores, 2010; Kaushal, 2008 (all evaluating post-IIRIRA state-level in-state-resident-tuition laws)). I include U.S. Bureau of Labor Statistics (BLS) data on state demographics and monthly labor market conditions over the same 20-year time period. I have adjusted CPS-MORG monthly nominal weekly earnings data into constant weekly earnings by applying BLS data on the historic monthly Consumer Price Index, using the following formula:

$$Constant\ Dollars = \left(\frac{Nominal\ Dollars}{Consumer\ Price\ Index}\right) * 100$$

(Wooldridge, 2012)

Sample

I include all U.S.-resident CPS-MORG participants ages 18-30 who report having obtained at least a high-school diploma or equivalent. My primary analytic samples for analyzing college-enrollment odds are participants ages 18-24; I also analyze odds for participants ages 18-30.I will also analyze bachelor-degree-holding odds for participants ages 22-30. Aware that Mexico is the largest source country of origin of U.S. immigrants, with 20% of documented and 60% of the undocumented being of Mexican origin (Flores, 2010; Passel, 2005; 2011), and that 81% of the undocumented are estimated to be of Latin American origin (Passel, 2005), I use Mexican or Hispanic origin as a control variable or in interaction terms where appropriate. This allows me to test rather than assume reduced reliability for including non-Mexican or non-Hispanic foreign-born-non-citizens in my sample of likely undocumented (cf. Amuedo-Dorantes & Sparber, 2014; Flores, 2010; Kaushal, 2008).

[2] These data contain information about educational attainment, enrollment, employment, national origin, sex, weekly earnings, marital, and citizenship/residency status from a multistage stratified sample of approximately 60,000 households per month (National Bureau of Economic Research, 2014).

Measures

My outcome variables are the odds of being enrolled in college, $ENROLLED$, and having a bachelor's degree, $BACHELORS$.My primary predictor variable is a difference-in-differences estimator, the interaction $UNDOCxPOLICY$. The first variable, $UNDOC$, is a variable for selection for "treatment" by the IIRIRA law. It measures whether a respondent is a foreign-born non-citizen (1 = yes, 0 = no), the proxy for being undocumented. The second variable, $POLICY$, indicates whether the respondent was surveyed after July 1, 1998, the IIRIRA effective date (1 = yes, 0 = no).

Analytic Strategy

I analyze these data using a difference-in-differences quasi-experimental design in which I treat the IIRIRA policy effective date as an exogenous policy shock. I calculate as a "first difference," the difference between average enrollment or graduate odds before and after the policy date for the undocumented. This difference estimates the impact on the likelihood of a given outcome for the undocumented associated with IIRIRA. Because this estimate also may include the impact of any non-policy related effects, I calculate as a "second difference," the same mean difference for the documented, a control group otherwise similarly situated to the target treatment group that did not receive the policy treatment. Because this second estimate captures the impact of non-policy related effects, I will subtract this second difference from the first difference. The remaining difference is an intent-to-treat estimate of the causal effect of the policy on enrollment or degree odds (Murnane & Willett, 2011; Wooldridge, 2012).

This research design is equivalent to fitting the following model:

$$Log_e[Odds\ ENROLLED_{isy}] = \beta_0 + \beta_1(UNDOC_i * POLICY_y) + \beta_2(UNDOC_{iy}) + \beta_3(POST_{iy}) + \beta_4(year_y) + \beta_5(month_y) + \beta_6(state_s) + \beta_7(X) + \beta_8(Z) + e_{isy}.$$

In Model (1), $Odds\ ENROLLED_{isy}$ represents the odds of enrolling in college for an individual i living in time y. $UNDOC_i * POLICY_y$ is my predictor of interest—an individual i being a likely undocumented immigrant of college age living after time y, when IIRIRA is effective. β_1, thus, is the causal effect estimator of IIRIRA's effects on enrollment. And so, the relative odds compare the odds of enrollment between undocumented and documented college-aged individuals.

Findings and Discussion

Table 2 (page 11) - Summary statistics, collectively and by documentary status, for the years 1994-2001

On average, before IIRIRA, the percentage of high-school graduates enrolled in college was 30.52 (SD = 0.76) percent.After the law went into effect, the percentage of college-enrolled was higher, 32.34 (SD = 0.74) percent. This 1.82 percentage-point growth in college enrollment appears motivated entirely by enrollment patterns of documented youth. While documented youth experienced a 2.11 percentage-point rise in enrollment, from 30.58 (SD = 0.83) percent before to 32.69 (SD = 0.78) percent after IIRIRA, undocumented youth experienced the opposite phenomenon, a 2.91 percentage-point decline in enrollment, with 29.30 (SD=1.10) percent enrolled before and 26.39 (SD=1.49) percent enrolled after IIRIRA. Undocumented respondents are considerably more likely to be male, Hispanic, married, and live in a state with a higher unemployment rate than their documented peers before and after IIRIRA.

Table 3 (page 12) - Taxonomy of models for IIRIRA effects on percentage of high-school-graduate undocumented residents enrolled in college, for the years 1994-2001 (n=115059)

Results from the statistical analyses show that the odds of an undocumented youth being enrolled in college dropped by 32 percent after IIRIRA went into effect, when compared to those of citizen and legal resident youth (Model 2: OR = 0.760, $p < 0.001$). These results are very stable; the observed associations remain when controlling for the aforementioned covariates (see Model 3), adjusting the effective date to the IIRIRA passage date as a pseudo-shock (see Model 4), and performing both adjustments as a sensitivity check (see Model 5).Importantly, these results are constant even though IIRIRA has an otherwise positive effect on the odds of enrolling in college (OR = 0.895, $p < 0.001$). Even though being Hispanic (Model 3: OR = 0.639, $p < 0.001$) or of Mexican origin (Model 8: OR = 0.640, $p < 0.001$) have independent effects on enrollment likelihoods, being Hispanic (Model 6: $p = 0.911$) or of Mexican origin (Model 8: $p = 0.963$) make no difference in the effect of IIRIRA on undocumented college enrollment.In other words, the difference in undocumented enrollment is not attributable to differences by ethnicity, as earlier studies on in-state-resident tuition (ISRT) might suggest (cf. Amuedo-Dorantes & Sparber, 2014; Flores, 2010; Kaushal, 2008).

Table 4 (page 14) - Taxonomy of models for IIRIRA effects on percentage 22-30 year-old high-school-graduate undocumented residentswho have earned a bachelor's degree, for the years 1994-2001 (n=211088)

After IIRIRA, 27.40 (SD = 0.83) percent of respondents ages 22-30 held bachelor's degrees, an almost one percentage-point difference (26.42 percent, SD = 0.86 percent) from before IIRIRA. Unlike with enrollment, degree-holding rates appear to rise for both undocumented and documented. Descriptively, the difference here seems to be the rate: a positive 1.04 percentage-point difference for the documented compared to a 0.32 percentage-point difference for the undocumented. Statistically, however, this difference is meaningless ($p = 0.350$).The primary driver in degree-holding likelihood before and after IIRIRA is documentary status (Model 1: OR = 0.763, $p < 0.001$).Unlike with respect to college enrollment, there are differences in the effect of IIRIRA on the average individual of Hispanic (Model 4: OR = 0.720, $p < 0.01$) or Mexican origin (Model 5: OR = 0.756, $p < 0.10$).

These results suggest that prior to IIRIRA, an undocumented student might already have been less likely to enroll in or graduate from college. The potential economic benefits and opportunities ordinarily associated with a college education—higher likelihood of employment and higher wages—were likely outweighed by heightened economic as well as non-economic costs, namely the enduring legal disability of being undocumented (Abrego & Gonzales, 2010; Olivas, 1986; 2004). As such, the pre-existing uncertainty associated with being undocumented (Altonji, 1993 in Flores, 2010) might have been enhanced by IIRIRA. Youth, who before IIRIRA might have negotiated opportunities to access college and financial aid with individual institutions (see Manuel, 2014), were now required to submit paperwork detailing their authorized residency status to the former Immigration and Naturalization Service (see 8 U.S.C. 1623 et seq., 1996). IIRIRA, thus, raised the financial barrier to college access in two ways: barring access to lower in-state resident tuition rates and barring access to federal financial aid.

In addition, IIRIRA appears to have also compounded the social stigma that prevents undocumented students from accessing resources that might have mitigated the social and financial cost-effects of these bans (Abrego & Gonzales, 2010). These effects might be acutely felt among students who had not grown up knowing their status (Gonzales, 2011). Gonzales (2011) finds that before ISRT policies that emerged following IIRIRA, fear and stigma associated with being undocumented operated to suppress information sharing (cf.

Bettinger, Long, Oreopoulos, & Sanbonmatsu, 2009), high-school completion (Potochnick, 2014), and financial and other resources and networks that would aid students' attempts to access higher education.

As I explore in a later paper, IIRIRA also had the unintended consequence of catalyzing collective action that led to the emergence of ISRT policies. ISRT policies reduced the financial costs associated with going to college, and signal a lessening of the legal and social stigma associated with being an undocumented immigrant (Abrego & Gonzales, 2010; Flores, 2010; Perry, 2006). To fully understand ISRT, the debate over the DREAM Act, the Deferred Action on Childhood Arrivals (DACA), and the trajectory of undocumented-student college access, I submit that this paper provides important documentation of the status quo ante from which modern-day policy discussions emerge (accord Sinodis, 2011).

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Table 2 - Summary statistics, collectively and by documentary status, for the years 1994-2001

	All		Undocumented		Documented		All		Undocumented		Documented	
	Before (1)	After (2)	Before (3)	After (4)	Before (5)	After (6)	Before (7)	After (8)	Before (9)	After (10)	Before (11)	After (12)
Undocumented	4.86 (1.20)	5.58 (1.09)	100.00 (0.00)	100.00 (0.00)	0.00 (0.00)	0.00 (0.00)	5.63 (1.30)	6.59 (1.26)	100.00 (0.00)	100.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Hispanic Undocumented	2.32 (0.80)	2.89 (0.74)	47.85 (5.74)	51.77 (4.64)	0.00 (0.00)	0.00 (0.00)	2.40 (0.82)	3.02 (0.83)	42.71 (5.97)	45.92 (5.07)	0.00 (0.00)	0.00 (0.00)
Mexican Undocumented	1.44 (0.61)	1.91 (0.56)	29.73 (7.14)	34.22 (5.82)	0.00 (0.00)	0.00 (0.00)	1.46 (0.63)	1.91 (0.63)	25.88 (7.04)	29.03 (5.86)	0.00 (0.00)	0.00 (0.00)
Enrolled in College	30.52 (0.76)	32.34 (0.74)	29.30 (1.10)	26.39 (1.49)	30.58 (0.83)	32.69 (0.78)	--	--	--	--	--	--
Bachelor's Degree	--	--	--	--	--	--	26.42 (0.86)	27.40 (0.83)	23.19 (1.87)	23.51 (1.42)	26.63 (0.91)	27.67 (0.89)
Age	21.23 (0.01)	21.13 (0.02)	21.60 (0.03)	21.42 (0.05)	21.22 (1.42)	21.11 (1.57)	26.14 (0.02)	26.14 (0.02)	26.21 (0.04)	26.28 (0.04)	26.13 (1.54)	26.13 (1.84)
Male	49.28 (0.23)	49.62 (0.29)	56.18 (1.15)	58.43 (1.45)	48.92 (0.21)	49.10 (0.29)	50.60 (0.27)	50.91 (0.31)	55.88 (0.88)	58.99 (0.70)	50.37 (0.27)	50.34 (0.30)
Hispanic	9.13 (2.34)	11.45 (2.73)	47.85 (5.74)	51.77 (4.64)	7.15 (1.79)	9.07 (2.26)	8.28 (2.00)	10.72 (2.36)	42.71 (5.97)	45.92 (5.07)	6.22 (1.45)	8.23 (1.84)
Mexican	5.51 (2.08)	7.19 (2.45)	29.73 (7.14)	34.22 (5.82)	42.71 (1.64)	5.59 (2.09)	4.61 (1.75)	6.30 (2.10)	25.88 (7.04)	29.03 (5.86)	3.34 (1.31)	4.69 (1.69)
Married	17.45 (0.91)	14.93 (0.04)	21.08 (0.92)	18.44 (1.18)	17.27 (0.95)	14.72 (0.97)	42.84 (1.15)	40.01 (1.22)	44.37 (1.19)	43.04 (1.29)	42.75 (1.20)	39.80 (1.28)
Unemployment Rate	5.24 (0.21)	4.18 (0.13)	6.00 (0.43)	4.48 (0.20)	5.20 (0.20)	4.17 (0.13)	5.30 (0.21)	4.19 (0.13)	6.00 (0.41)	4.44 (0.21)	5.26 (0.19)	4.17 (0.13)
Weekly Earnings	165.05 (1.34)	179.99 (1.67)	158.74 (1.98)	177.28 (3.56)	165.37 (1.39)	180.15 (1.70)	269.87 (3.92)	293.09 (4.22)	240.21 (4.02)	268.09 (4.73)	271.64 (4.36)	294.86 (4.60)
# of observations	70629	44430	3430	2478	67199	41952	133374	77714	7509	5118	125865	72596

Table 3 - Taxonomy of models for IIRIRA effects on percentage of high-school-graduate undocumented residents enrolled in college, for the years 1994-2001 (n=115059)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Undocumented * Enrollment after IIRIRA	0.806** (0.049)	0.760*** (0.051)	0.760*** (0.051)	0.761*** (0.051)	0.761*** (0.051)	0.789** (0.069)	0.789** (0.069)	0.790** (0.061)	0.790** (0.061)
Undocumented * Enrollment after IIRIRA * Hispanic						0.983 (0.148)	0.983 (0.148)		
Undocumented * Enrollment after IIRIRA * Mexican								0.992 (0.179)	0.992 (0.179)
Undocumented	0.820** (0.033)	0.999 (0.044)	0.999 (0.044)	1.063 (0.058)	1.063 (0.058)	1.357*** (0.075)	1.357*** (0.075)	1.144** (0.056)	1.144** (0.056)
IIRIRA	0.907** (0.032)	0.895** (0.035)	0.895** (0.035)	1.573*** (0.069)	1.573*** (0.069)	0.898** (0.035)	0.898** (0.035)	0.894** (0.035)	0.894** (0.035)
Hispanic		0.639*** (0.018)	0.639*** (0.018)	0.639*** (0.018)	0.639*** (0.018)	0.749*** (0.029)	0.749*** (0.029)		
Undocumented * Hispanic						0.420*** (0.040)	0.420*** (0.040)		
Hispanic * IIRIRA						0.957 (0.055)	0.957 (0.055)		
Undocumented * Mexican								0.425*** (0.049)	0.425*** (0.049)
Mexican								0.640*** (0.032)	0.640*** (0.032)
Mexican * IIRIRA								0.973 (0.070)	0.973 (0.070)
_cons	0.355** (0.024)	25.700* (3.670)	25.700* (3.670)	24.221* (3.460)	24.221* (3.460)	25.874* (3.705)	25.874* (3.705)	26.008* (3.723)	26.008* (3.723)

p values (+ .10, * .05, ** .01, *** .001). Coefficients are expressed in odds-ratios. Robust standard errors are in parentheses.

Note: These models estimate the effect of IIRIRA on undocumented-resident college enrollment in U.S. colleges and universities by comparing average enrollment before and after IIRIRA's July 1, 1998 effective date. Citizen and legal-residents are the comparison group. Model (1) presents the "naïve" IIRIRA effect on undocumented-resident enrollment for respondents ages 18-24. Model (2) includes as covariates measures for age, Hispanic ethnicity (displayed), marital status, sex, and state-level unemployment rate and weekly earnings in constant dollars. Model (3) measures the IIRIRA effect for respondents ages 18-30. Model (4) adjusts Model (2) by moving the IIRIRA effective date to its passage date, September 30, 1996. Model (5) does the same for Model (3). Model (6) includes a differences-in-effects estimator to Model (2) for Hispanic students. Model (7) includes a differences-in-effects estimator to Model (3) for Hispanic students. Model (8) includes a differences-in-effects estimator to Model (2) for students of Mexican origin. Model (9) includes a differences-in-effects estimator to Model (3) for students of Mexican origin. All models include state and year fixed effects.

Table 4 - Taxonomy of models for IIRIRA effects on percentage 22-30 year-old high-school-graduate undocumented residentswho have earned a bachelor's degree, for the years 1994-2001 (n=211088).

	(1)	(2)	(3)	(4)	(5)
Undocumented * Bachelor's after IIRIRA	0.960 (0.043)	0.956 (0.046)	0.935 (0.046)	1.053 (0.061)	0.985 (0.051)
Undocumented * Bachelor's after IIRIRA * Hispanic				0.720** (0.089)	
Undocumented * Bachelor's after IIRIRA * Mexican					0.756+ (0.129)
Undocumented	0.763*** (0.022)	1.264*** (0.040)	1.294*** (0.051)	1.392*** (0.051)	1.214*** (0.040)
Bachelor's after IIRIRA	1.019 (0.028)	0.990 (0.029)	1.014 (0.034)	0.989 (0.029)	0.988 (0.029)
Hispanic		0.407*** (0.010)	0.407*** (0.010)	0.455*** (0.016)	
Undocumented * Hispanic				0.634*** (0.050)	
Hispanic * Bachelor's after IIRIRA				1.016 (0.052)	
Undocumented * Mexican					0.657*** (0.073)
Mexican * Bachelor's after IIRIRA					1.071*** (0.079)
Mexican					0.380*** (0.020)
_cons	0.245*** (0.014)	0.093*** (0.010)	0.093*** (0.010)	0.093*** (0.010)	0.091*** (0.010)

p values (+ .10, * .05, ** .01, *** .001). Coefficients are expressed in odds-ratios. Robust standard errors are in parentheses.

Note: These models estimate the effect of IIRIRA on undocumented-residentbachelor's degree attainment by comparing average attainment before and after IIRIRA's July 1, 1998 effective date. Citizen and legal-resident students are the comparison group. Model (1) presents the "naïve" IIRIRA effect on undocumented-resident bachelor's degree attainment. Model (2) includes as covariates measures for age, Hispanic ethnicity (displayed), marital status, sex, and state-level unemployment rate and weekly earnings in constant dollars. Model (3) adjusts Model (2) by moving the IIRIRA effective date to its passage date, September 30, 1996. Model (4) includes a differences-in-effects estimator to Model (2) for Hispanic students. Model (5) includes a differences-in-effects estimator to Model (2) for students of Mexican origin. All models include state and year fixed effects.