The Effect of DACA Eligibility on Full-Time Employment: A Difference-in-Differences Analysis

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Abstract

This study estimates the causal effect of eligibility for the Deferred Action for Childhood Arrivals (DACA) program on full-time employment among Hispanic-Mexican, Mexican-born non-citizens in the United States. Using American Community Survey (ACS) data from 2006–2016 and a difference-in-differences identification strategy, I find that DACA eligibility increased the probability of full-time employment by approximately 3.0–9.6 percentage points, depending on model specification. The preferred estimate with year and state fixed effects suggests a 3.05 percentage point increase (SE = 0.0042, $p < 0.001$). Event study analysis supports the parallel trends assumption, with no evidence of differential pre-trends between eligible and ineligible groups. These results are consistent with the hypothesis that legal work authorization and deportation relief enable undocumented immigrants to secure full-time employment.

Contents

1 Introduction

The Deferred Action for Childhood Arrivals (DACA) program, implemented on June 15, 2012, represented one of the most significant expansions of rights for undocumented immigrants in recent U.S. history. The program provided qualifying individuals—those who arrived in the United States as children and met specific age, residency, and educational requirements—with temporary protection from deportation and authorization to work legally for renewable two-year periods.

This study addresses the following research question: *Among ethnically Hispanic-Mexican Mexican-born people living in the United States, what was the causal impact of eligibility for the Deferred Action for Childhood Arrivals (DACA) program on the probability that the eligible person is employed full-time?* Full-time employment is defined as usually working 35 hours per week or more, consistent with standard labor economics definitions.

Understanding the employment effects of DACA is important for several reasons. First, employment is a fundamental measure of economic integration and well-being for immigrant populations. Second, the policy debate surrounding DACA has often centered on the economic contributions of recipients, making empirical evidence on employment outcomes particularly relevant. Third, understanding how legal status and work authorization affect labor market outcomes can inform broader immigration policy discussions.

The theoretical expectation is that DACA eligibility should increase employment rates, particularly full-time employment, through several channels. Work authorization removes the legal barriers that previously confined undocumented workers to informal labor markets. Protection from deportation reduces the risk premium associated with formal employment and allows workers to invest in job-specific human capital. Additionally, the ability to obtain driver's licenses and other identification in many states facilitates job search and commuting.

I employ a difference-in-differences (DiD) research design, comparing changes in full-time employment before and after DACA implementation between eligible and ineligible Mexican-born Hispanic non-citizens. This approach controls for both time-invariant differ-

ences between groups and common temporal trends affecting all Mexican-born immigrants.

The analysis uses American Community Survey (ACS) data from 2006 through 2016, providing a rich source of individual-level information on demographics, immigration characteristics, and labor market outcomes. The final analytical sample includes 561,470 observations representing working-age (16–64) Mexican-born Hispanic non-citizens.

Results indicate a statistically significant positive effect of DACA eligibility on full-time employment. The basic DiD estimate is 9.56 percentage points, while specifications with demographic controls, education, and fixed effects yield estimates in the range of 3.0–4.1 percentage points. The preferred specification including year and state fixed effects estimates a 3.05 percentage point increase in full-time employment probability (SE = 0.0042, $p < 0.001$).

The remainder of this paper is organized as follows. Section 2 provides background on the DACA program and eligibility requirements. Section 3 describes the data and sample construction. Section 4 details the empirical methodology. Section 5 presents the main results. Section 6 provides robustness checks and additional analyses. Section 7 discusses the findings and their implications. Section 8 concludes.

2 Background: The DACA Program

2.1 Program Overview

DACA was announced by the Obama administration on June 15, 2012, through an executive memorandum from the Department of Homeland Security. The program was not created through legislation but rather through the exercise of prosecutorial discretion in immigration enforcement. Applications began being accepted on August 15, 2012.

The program offered eligible individuals two key benefits: (1) deferred action, meaning protection from deportation for a renewable two-year period, and (2) employment authorization documents (EADs), providing legal work authorization. Recipients could also apply

for Social Security numbers and, in many states, driver's licenses.

2.2 Eligibility Requirements

To qualify for DACA, individuals had to meet the following criteria as of June 15, 2012:

1. Were under the age of 31 (born on or after June 16, 1981)
2. Came to the United States before reaching their 16th birthday
3. Had continuously resided in the United States since June 15, 2007
4. Were physically present in the United States on June 15, 2012
5. Had no lawful immigration status on June 15, 2012
6. Were currently in school, had graduated or obtained a certificate of completion from high school, had obtained a GED certificate, or were honorably discharged veterans
7. Had not been convicted of a felony, significant misdemeanor, or three or more other misdemeanors

2.3 Program Take-Up

In the first four years of the program (2012–2016), approximately 900,000 initial applications were received, with approximately 90% approved. Because the structure of undocumented immigration to the United States is heavily concentrated among Mexican nationals, the great majority of DACA recipients were born in Mexico.

2.4 Theoretical Mechanisms

DACA eligibility could affect full-time employment through several mechanisms:

Work Authorization: Prior to DACA, undocumented workers could only work informally or using fraudulent documents. DACA recipients can work legally, expanding their

employment opportunities to formal sector jobs that typically offer more hours and better conditions.

Reduced Fear of Deportation: Deferred action reduces the risk of detection and deportation, which may have previously discouraged workers from seeking formal employment or negotiating for better working conditions.

Human Capital Investment: With a more stable legal status, DACA-eligible individuals may be more willing to invest in job-specific skills and seek advancement opportunities that lead to full-time positions.

Complementary Benefits: Access to driver's licenses and identification documents facilitates job search, commuting, and workplace verification processes.

3 Data

3.1 Data Source

The analysis uses data from the American Community Survey (ACS) as provided by IPUMS USA. The ACS is a large-scale, nationally representative survey conducted annually by the U.S. Census Bureau. I use one-year ACS files from 2006 through 2016.

3.2 Sample Construction

The sample construction proceeds in several steps, as summarized in Table 1.

Table 1: Sample Construction

Sample Restriction	Observations
Total ACS observations (2006–2016)	33,851,424
Hispanic-Mexican ethnicity (HISPAN = 1)	2,945,521
Born in Mexico (BPL = 200)	991,261
Non-citizen (CITIZEN = 3)	701,347
Excluding 2012[a]	636,722
Working age (16–64)	561,470

[a] Year 2012 is excluded because DACA was implemented on June 15, 2012, and the ACS does not indicate month of interview, making it impossible to distinguish pre- and post-implementation observations within that year.

The restriction to Hispanic-Mexican ethnicity and Mexican birthplace follows directly from the research question. The restriction to non-citizens proxies for undocumented status; as noted in the research instructions, citizens and naturalized persons are not eligible for DACA, and I assume that non-citizens who have not received immigration papers are undocumented for DACA purposes. The working-age restriction (16–64) focuses on the population for whom labor force participation is most relevant.

3.3 Key Variables

3.3.1 Outcome Variable

The primary outcome is **full-time employment**, defined as usually working 35 or more hours per week. This is constructed from the UHRSWORK variable:

$$\text{FullTime}_i = \mathbf{1}[\text{UHRSWORK}_i \geq 35] \tag{1}$$

3.3.2 DACA Eligibility

DACA eligibility is constructed using several IPUMS variables:

- **Age at arrival**: Calculated as YRIMMIG − BIRTHYR. Eligibility requires arrival before age 16.
- **Birth date cutoff**: Eligibility requires being born after June 15, 1981. I operationalize this as BIRTHYR $\geq$ 1982, or BIRTHYR = 1981 and BIRTHQTR $\geq$ 3 (July–December).
- **Continuous presence**: Eligibility requires residing in the U.S. since June 15, 2007. I operationalize this as YRIMMIG $\leq$ 2007.

An individual is classified as DACA-eligible if all three conditions are met.

Note that the educational and criminal history requirements cannot be observed in the ACS data, so I estimate eligibility based on observable demographic criteria only. This may introduce some measurement error, but the direction of bias is likely toward attenuation of the true effect.

3.3.3 Control Variables

The analysis includes the following control variables:

- **Age** and age squared (continuous)
- **Sex**: Male indicator
- **Marital status**: Married (spouse present or absent) indicator
- **Education**: High school completion (EDUC $\geq$ 6) and college attendance (EDUC $\geq$ 10) indicators
- **State of residence**: STATEFIP (51 categories)

- **Year**: Survey year indicators

All regressions use person weights (PERWT) provided by IPUMS.

3.4 Summary Statistics

Table 2 presents summary statistics for the analytical sample, separately by DACA eligibility status.

Table 2: Summary Statistics by DACA Eligibility

	Not Eligible	Eligible	Difference
N (observations)	477,859	83,611	–
Demographics			
Mean age	38.8	22.7	−16.1
Male (%)	56.2	54.1	−2.1
Married (%)	62.4	28.3	−34.1
Employment			
Full-time employed (%)	61.8	48.4	−13.4
Any employment (%)	68.1	61.2	−6.9

Note: All statistics are weighted using PERWT. Full-time employment is defined as UHRSWORK ≥ 35.

The DACA-eligible group is substantially younger (mean age 22.7 vs. 38.8), reflecting the age-based eligibility criteria. They are also less likely to be married, consistent with their younger age. Full-time employment rates are lower among the eligible group (48.4% vs. 61.8%), which partly reflects their younger age profile. These differences underscore the importance of controlling for demographic characteristics in the regression analysis.

4 Empirical Methodology

4.1 Identification Strategy

I employ a difference-in-differences (DiD) research design to estimate the causal effect of DACA eligibility on full-time employment. The key identifying assumption is that, in the absence of DACA, the full-time employment trends for eligible and ineligible individuals would have evolved similarly (parallel trends).

The treatment group consists of individuals who meet all observable DACA eligibility criteria. The comparison group consists of Mexican-born Hispanic non-citizens who do not meet one or more eligibility criteria, primarily due to arriving in the U.S. at age 16 or older, being born before June 1981, or arriving after 2007.

The pre-treatment period spans 2006–2011, and the post-treatment period spans 2013–2016. Year 2012 is excluded because DACA was implemented mid-year and the ACS does not identify month of interview.

4.2 Econometric Specification

The baseline DiD model is:

$$\text{FullTime}_{it} = \alpha + \beta_1 \text{Eligible}_i + \beta_2 \text{Post}_t + \beta_3 (\text{Eligible}_i \times \text{Post}_t) + \varepsilon_{it} \tag{2}$$

where:

- FullTime_{it} is an indicator for full-time employment for individual i in year t
- Eligible_i is an indicator for DACA eligibility
- Post_t is an indicator for the post-DACA period ($t \geq 2013$)
- β_3 is the DiD estimator, capturing the causal effect of DACA eligibility on full-time employment

I progressively add controls to assess the robustness of the basic estimate:

$$\text{FullTime}_{it} = \alpha + \beta_3(\text{Eligible}_i \times \text{Post}_t) + \mathbf{X}'_{it}\gamma + \delta_t + \theta_s + \varepsilon_{it} \tag{3}$$

where $\mathbf{X}_{it}$ is a vector of demographic controls, δ_t are year fixed effects, and θ_s are state fixed effects.

All standard errors are heteroskedasticity-robust (HC1).

4.3 Event Study Specification

To assess the parallel trends assumption and examine the dynamic effects of DACA, I estimate an event study specification:

$$\text{FullTime}_{it} = \alpha + \sum_{k \neq 2011} \gamma_k(\text{Eligible}_i \times \mathbf{1}[t = k]) + \mathbf{X}'_{it}\beta + \delta_t + \varepsilon_{it} \tag{4}$$

where 2011 serves as the reference year (the last pre-treatment year). The coefficients γ_k for pre-treatment years should be close to zero and statistically insignificant if the parallel trends assumption holds.

5 Results

5.1 Descriptive Evidence

Table 3 presents the 2×2 difference-in-differences table for full-time employment rates.

Table 3: Difference-in-Differences: Full-Time Employment Rates

Group	Pre-DACA	Post-DACA	Difference
Not Eligible	0.6276	0.6013	−0.0263
Eligible	0.4522	0.5214	+0.0692
Difference-in-Differences			**+0.0956**

Note: All rates are weighted using PERWT. Pre-DACA period is 2006–2011; Post-DACA period is 2013–2016. Full-time employment defined as UHRSWORK ≥ 35.

The table reveals several important patterns. First, full-time employment rates actually *declined* among ineligible non-citizens between the pre- and post-periods (−2.63 percentage points), possibly reflecting broader economic conditions or demographic changes. Second, full-time employment rates *increased* substantially among eligible individuals (+6.92 percentage points). The raw DiD estimate is 0.0956, suggesting that DACA eligibility increased full-time employment by approximately 9.6 percentage points.

5.2 Regression Results

Table 4 presents the main regression results across five specifications.

Table 4: Effect of DACA Eligibility on Full-Time Employment

	(1) Basic	(2) Demographics	(3) Education	(4) Year FE	(5) State FE
Eligible × Post	0.0956***	0.0414***	0.0383***	0.0311***	0.0305***
	(0.0046)	(0.0042)	(0.0042)	(0.0042)	(0.0042)
Eligible	−0.1754***	−0.0394***	−0.0447***	–	–
	(0.0030)	(0.0034)	(0.0034)		
Post	−0.0263***	−0.0189***	−0.0205***	–	–
	(0.0018)	(0.0016)	(0.0016)		
Age		0.0437***	0.0426***	0.0420***	0.0420***
		(0.0005)	(0.0005)	(0.0005)	(0.0005)
Age^2		−0.0005***	−0.0005***	−0.0005***	−0.0005***
		(0.0000)	(0.0000)	(0.0000)	(0.0000)
Male		0.4308***	0.4311***	0.4305***	0.4302***
		(0.0014)	(0.0014)	(0.0014)	(0.0014)
Married		−0.0356***	−0.0347***	−0.0330***	−0.0328***
		(0.0015)	(0.0015)	(0.0015)	(0.0015)
High School+			0.0478***	0.0470***	0.0455***
			(0.0015)	(0.0015)	(0.0015)
Some College+			0.0248***	0.0241***	0.0227***
			(0.0037)	(0.0037)	(0.0037)
Year Fixed Effects	No	No	No	Yes	Yes
State Fixed Effects	No	No	No	No	Yes
Observations	561,470	561,470	561,470	561,470	561,470
R-squared	0.010	0.226	0.227	0.228	0.231

Note: Robust standard errors in parentheses. All regressions are weighted by PERWT. *** p<0.01, ** p<0.05, * p<0.1.

The basic DiD estimate (Column 1) is 0.0956, identical to the descriptive calculation. This estimate is highly statistically significant ($t = 20.81$, $p < 0.001$) and suggests that DACA eligibility increased full-time employment by about 9.6 percentage points.

However, this estimate may be biased by compositional differences between eligible and ineligible groups. Column 2 adds demographic controls (age, age squared, sex, and marital status). The coefficient drops substantially to 0.0414, suggesting that much of the raw DiD is explained by age-related differences in employment patterns. The effect remains highly significant.

Column 3 adds education controls, with minimal change in the estimate (0.0383). Columns 4 and 5 add year and state fixed effects, respectively, yielding a preferred estimate of 0.0305 (SE = 0.0042).

The control variables have expected signs: full-time employment follows a concave age profile, men are substantially more likely to work full-time than women, married individuals are slightly less likely to work full-time conditional on other characteristics, and education is positively associated with full-time employment.

5.3 Event Study Results

Table 5 presents the event study coefficients, with 2011 as the reference year.

Table 5: Event Study: Year-by-Year Effects of DACA Eligibility

Year	Coefficient	Std. Error
Pre-DACA Period		
2006	−0.0182	(0.0097)
2007	−0.0163	(0.0094)
2008	−0.0036	(0.0095)
2009	0.0045	(0.0094)
2010	0.0065	(0.0091)
2011	0.0000	(reference)
Post-DACA Period		
2013	0.0133	(0.0091)
2014	0.0255	(0.0092)
2015	0.0410	(0.0091)
2016	0.0435	(0.0093)

Note: Coefficients are from a regression including demographic controls and year fixed effects. Standard errors are heteroskedasticity-robust.

The pre-treatment coefficients are small in magnitude and not statistically significantly different from zero, supporting the parallel trends assumption. There is no evidence of differential pre-trends between eligible and ineligible groups.

The post-treatment coefficients show a pattern of increasing effects over time, from 0.0133 in 2013 to 0.0435 in 2016. This pattern is consistent with gradual take-up of the program and accumulating benefits of legal work authorization. The effect appears to stabilize by 2015–2016.

6 Robustness Checks

6.1 Alternative Outcome: Any Employment

Table 6 presents the DiD estimate using any employment (EMPSTAT = 1) as an alternative outcome, rather than full-time employment.

Table 6: Robustness: Alternative Outcome

Outcome	DiD Estimate	Std. Error
Full-time employment (35+ hours)	0.0414***	(0.0042)
Any employment	0.0484***	(0.0042)

Note: Both specifications include demographic controls. *** p<0.01.

The effect on any employment (4.84 percentage points) is somewhat larger than the effect on full-time employment (4.14 percentage points), suggesting that DACA eligibility increased both the extensive margin (whether to work at all) and the intensive margin (whether to work full-time conditional on working).

6.2 Heterogeneity by Gender

Table 7: Heterogeneity: Effects by Gender

Group	DiD Estimate	Std. Error
Full sample	0.0414***	(0.0042)
Men only	0.0363***	(0.0055)
Women only	0.0381***	(0.0063)

Note: All specifications include demographic controls. *** p<0.01.

The effects are similar for men and women, with point estimates of 3.63 and 3.81 percentage points respectively. The difference is not statistically significant, suggesting that DACA's employment effects were not concentrated in one gender.

6.3 Sample by Year

Table 8 shows the sample sizes by year and eligibility status.

Table 8: Sample Sizes by Year and Eligibility

Year	Not Eligible	Eligible
2006	50,099	6,734
2007	50,483	7,350
2008	48,555	7,160
2009	49,434	7,821
2010	50,189	8,566
2011	50,218	9,183
2013	46,123	9,228
2014	45,430	9,371
2015	44,158	9,205
2016	43,170	8,993
Total	477,859	83,611

The sample sizes are relatively stable over time, with slight increases in the eligible group in the pre-period (reflecting population growth among this younger cohort) and slight decreases in both groups in the post-period (possibly reflecting changes in migration patterns or naturalization).

7 Discussion

7.1 Interpretation of Main Findings

The results indicate that DACA eligibility had a positive and statistically significant effect on full-time employment among Mexican-born Hispanic non-citizens. The magnitude of the effect depends on the specification:

- The simple DiD estimate is 9.56 percentage points, but this conflates the causal effect with compositional differences between groups.
- Controlling for demographics reduces the estimate to about 4.1 percentage points.
- The most conservative specification with year and state fixed effects yields an estimate of 3.05 percentage points.

These effect sizes are economically meaningful. A 3–4 percentage point increase in full-time employment represents a 6–8% increase relative to the baseline rate of about 48% among eligible individuals in the pre-period.

7.2 Mechanisms

While the data do not allow direct testing of mechanisms, the findings are consistent with several channels through which DACA may affect employment:

Work Authorization Effect: The most direct mechanism is the removal of legal barriers to formal employment. Prior to DACA, undocumented workers could only work informally or using fraudulent documents, limiting their access to jobs that required legal work authorization.

Reduced Fear Effect: Deferred action provides protection from deportation, reducing the risk associated with formal employment and potentially increasing workers' willingness to seek better jobs.

Complementary Benefits: Access to driver's licenses and other identification may facilitate job search and commuting, particularly in areas with limited public transportation.

7.3 Comparison to Prior Literature

The estimated effects are broadly consistent with the existing literature on immigration policy and labor market outcomes. Studies of previous legalization programs, such as the Immigration Reform and Control Act of 1986, have generally found positive employment effects, though the magnitudes vary depending on the population and outcome studied.

7.4 Limitations

Several limitations should be noted:

Measurement of Eligibility: DACA eligibility is based on observable criteria in the ACS, but the educational and criminal history requirements cannot be observed. This likely leads to some misclassification, potentially attenuating the estimates.

Selection into Non-Citizenship: The sample is restricted to non-citizens, but naturalization is itself an outcome that may be affected by earlier immigration policies. However, naturalization is a multi-year process unlikely to be substantially affected by DACA during the study period.

Comparison Group: The comparison group includes individuals who arrived at older ages or more recently. If these groups experienced different economic shocks, the parallel trends assumption may be violated. The event study analysis provides some reassurance, but cannot rule out all potential confounds.

General Equilibrium Effects: The analysis captures partial equilibrium effects. If DACA affected labor market conditions for non-recipients (e.g., through increased competition), the estimates may not capture the full policy effect.

8 Conclusion

This study provides causal evidence that eligibility for the Deferred Action for Childhood Arrivals (DACA) program increased full-time employment among Mexican-born Hispanic non-citizens in the United States. Using a difference-in-differences design with American Community Survey data from 2006–2016, I find that DACA eligibility increased full-time employment by approximately 3.0–4.1 percentage points in specifications with demographic controls and fixed effects.

The findings have several policy implications. First, they suggest that providing legal work authorization to undocumented immigrants can have meaningful positive effects on their labor market outcomes. Second, the effects appear to grow over time, suggesting that the benefits of legal status accumulate. Third, the effects are similar for men and women, indicating broad-based benefits across the population.

The results contribute to our understanding of how immigration policy affects economic outcomes and may inform ongoing debates about the future of DACA and broader immigration reform.

References

1. IPUMS USA, University of Minnesota, www.ipums.org

2. U.S. Department of Homeland Security. (2012). Exercising Prosecutorial Discretion with Respect to Individuals Who Came to the United States as Children. Memorandum.

3. U.S. Citizenship and Immigration Services. DACA Statistics. Various years.

A Variable Definitions

Table 9: IPUMS Variable Definitions

Variable	IPUMS Name	Definition
Year	YEAR	Survey year (2006–2016)
Person weight	PERWT	Person-level sampling weight
Age	AGE	Age in years
Sex	SEX	1 = Male, 2 = Female
Marital status	MARST	1–2 = Married (spouse present/absent)
Hispanic origin	HISPAN	1 = Mexican
Birthplace	BPL	200 = Mexico
Citizenship	CITIZEN	3 = Not a citizen
Year of immigration	YRIMMIG	Year arrived in U.S.
Birth year	BIRTHYR	Year of birth
Birth quarter	BIRTHQTR	1 = Jan–Mar, 2 = Apr–Jun, 3 = Jul–Sep, 4 = Oct–Dec
Usual hours worked	UHRSWORK	Hours usually worked per week
Employment status	EMPSTAT	1 = Employed
Education	EDUC	Educational attainment
State	STATEFIP	State FIPS code

B Eligibility Criteria Implementation

DACA eligibility is constructed as follows:

```
age_at_arrival = YRIMMIG - BIRTHYR

arrived_before_16 = (age_at_arrival < 16)

born_after_cutoff = (BIRTHYR >= 1982) OR
```

```
                    (BIRTHYR == 1981 AND BIRTHQTR >= 3)
in_us_since_2007 = (YRIMMIG <= 2007)
daca_eligible = arrived_before_16 AND
                born_after_cutoff AND
                in_us_since_2007
```

C Sample Restrictions

```
HISPAN == 1           # Hispanic-Mexican
BPL == 200            # Born in Mexico
CITIZEN == 3          # Not a citizen
YEAR != 2012          # Exclude implementation year
AGE >= 16 AND AGE <= 64  # Working age
```