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 data from the American Community Survey (2006–2016), I employ a difference-in-differences design comparing individuals aged 26–30 at DACA implementation (the treatment group, who were eligible) to those aged 31–35 (the control group, who were too old to qualify). The results indicate that DACA eligibility increased the probability of full-time employment by approximately 4.6 percentage points (95% CI: 2.5 to 6.6 pp), a statistically significant effect. This finding is robust to the inclusion of demographic controls, year fixed effects, and state fixed effects. Placebo tests using pre-treatment data show no significant differential trends, supporting the validity of the parallel trends assumption.

Keywords: DACA, immigration policy, employment, difference-in-differences, causal inference

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1 Introduction

The Deferred Action for Childhood Arrivals (DACA) program, implemented on June 15, 2012, represents one of the most significant immigration policy changes in recent U.S. history. The program provided temporary protection from deportation and work authorization to undocumented immigrants who arrived in the United States as children. Given that DACA explicitly grants work authorization, understanding its effects on labor market outcomes is of considerable policy importance.

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 DACA on the probability of being employed full-time (defined as usually working 35 hours per week or more)?*

To answer this question, I employ a difference-in-differences (DiD) identification strategy. The key insight is that DACA had an age-based eligibility cutoff: applicants could not have reached their 31st birthday as of June 15, 2012. This creates a natural comparison between individuals who were barely eligible (treatment group) and those who were barely too old (control group). Specifically, I compare individuals who were ages 26–30 on June 15, 2012 (born 1982–1986) to those who were ages 31–35 (born 1977–1981). Both groups would have met all other DACA eligibility criteria, but only the younger group was eligible due to the age requirement.

The main finding is that DACA eligibility increased the probability of full-time employment by approximately 4.6 percentage points. This effect is statistically significant at conventional levels and robust across multiple specifications.

2 Background

2.1 The DACA Program

DACA was announced by President Obama on June 15, 2012, and applications began to be accepted on August 15, 2012. The program offered eligible individuals a two-year renewable period of deferred action (protection from deportation) along with eligibility for work authorization.

To qualify for DACA, applicants had to meet the following criteria:

- Were under the age of 31 as of June 15, 2012

- Came to the United States before reaching their 16th birthday

- Have continuously resided in the United States since June 15, 2007

- Were physically present in the United States on June 15, 2012

- Had no lawful status on June 15, 2012

- Were currently in school, had graduated from high school, obtained a GED, or were honorably discharged veterans

- Had not been convicted of a felony, significant misdemeanor, or three or more other misdemeanors

In the first four years of the program, nearly 900,000 initial applications were received, with approximately 90% approved. Because of the structure of undocumented immigration to the United States, the vast majority of DACA recipients were from Mexico.

2.2 Theoretical Framework

DACA could affect employment through several channels:

Work authorization: The most direct mechanism is that DACA provides legal work authorization. Prior to DACA, eligible individuals could only work in the informal economy or with fraudulent documents, limiting their employment opportunities.

Reduced fear of deportation: Deferred action reduces the risk of deportation, potentially encouraging recipients to seek more visible employment and invest in job search.

Access to identification: DACA recipients can obtain Social Security numbers and, in many states, driver's licenses. This facilitates employment verification and commuting to work.

Human capital investment: With a more secure legal status, individuals may invest more in education and job-specific skills, though this channel would likely manifest over a longer time horizon.

Given these mechanisms, we would expect DACA to increase employment rates among eligible individuals, particularly in the formal sector and in full-time positions that typically require work authorization.

3 Data

3.1 Data Source

The data for this analysis come from the American Community Survey (ACS) as provided by IPUMS USA. I use the one-year ACS files from 2006 to 2016, excluding 2012 (the year of

DACA implementation, when pre- and post-treatment observations cannot be distinguished).

3.2 Sample Construction

The analytic sample is constructed to approximate individuals who would have been eligible for DACA (except potentially for the age requirement). The sample restrictions are:

1. **Hispanic-Mexican ethnicity** (HISPAN = 1): Individuals who identify as Mexican-origin Hispanic.

2. **Born in Mexico** (BPL = 200): Birthplace is Mexico, ensuring foreign-born status.

3. **Non-citizen** (CITIZEN = 3): Not a U.S. citizen. This serves as a proxy for undocumented status, as we cannot directly identify documentation status in the ACS. As specified in the research instructions, we assume that non-citizens who have not received immigration papers are undocumented for DACA purposes.

4. **Arrived before age 16** (YRIMMIG - BIRTHYR < 16): This corresponds to the DACA requirement of arriving before one's 16th birthday.

5. **Arrived by 2007** (YRIMMIG ≤ 2007): This corresponds to the DACA requirement of continuous U.S. presence since June 15, 2007.

6. **Birth year 1977–1986**: This restricts the sample to the treatment group (born 1982–1986, ages 26–30 on June 15, 2012) and control group (born 1977–1981, ages 31–35 on June 15, 2012).

Table 1 shows how the sample size decreases with each restriction.

Table 1: Sample Construction

Sample Restriction	N	Change
Full ACS 2006–2016	33,851,424	—
Hispanic-Mexican ethnicity	2,945,521	−30,905,903
Born in Mexico	991,261	−1,954,260
Non-citizen	701,347	−289,914
Arrived before age 16	205,327	−496,020
Arrived by 2007	195,023	−10,304
Born 1977–1986 (age groups)	49,019	−145,004
Exclude 2012	44,725	−4,294

3.3   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, which measures usual hours worked per week. Specifically:

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

3.3.2   Treatment Variables

Treatment group indicator (Treat): Equal to 1 if the individual was born between 1982 and 1986 (ages 26–30 on June 15, 2012), and 0 if born between 1977 and 1981 (ages 31–35).

   Post-treatment indicator (Post): Equal to 1 for survey years 2013–2016 (after DACA implementation), and 0 for 2006–2011 (before DACA).

   Interaction term (Treat $\times$ Post): The difference-in-differences estimator, capturing the effect of DACA eligibility on full-time employment.

3.3.3   Control Variables

I include the following demographic controls:

- **Female**: Indicator for female sex (SEX = 2)

- **Married**: Indicator for currently married (MARST $\in \{1, 2\}$)

- **High school education**: Indicator for high school completion or higher (EDUC ≥ 6)

- **Has children**: Indicator for having children in household (NCHILD > 0)

- **Age**: Age at survey (YEAR - BIRTHYR)

3.4   Sample Characteristics

Table 2 presents descriptive statistics for the treatment and control groups in the pre- and post-DACA periods.

Table 2: Descriptive Statistics by Treatment Group and Period

	Control (Ages 31–35)		Treatment (Ages 26–30)	
	Pre-DACA	Post-DACA	Pre-DACA	Post-DACA
Full-time employment	0.643	0.611	0.611	0.634
Employed	0.684	0.688	0.659	0.707
Female	0.432	0.452	0.439	0.443
Married	0.531	0.577	0.373	0.506
High school or more	0.545	0.538	0.626	0.616
Mean age	29.3	35.3	24.2	30.2
N (unweighted)	11,916	6,218	17,410	9,181
N (weighted)	1,671,499	859,291	2,367,739	1,307,226

Several patterns are notable. The treatment group is somewhat younger on average (by construction), more likely to have completed high school, and less likely to be married in the pre-period. Full-time employment rates are lower in the treatment group in the pre-period but higher in the post-period, foreshadowing the positive DiD estimate.

4 Empirical Strategy

4.1 Difference-in-Differences Design

The identification strategy relies on comparing changes in full-time employment for the treatment group (ages 26–30 on June 15, 2012) to changes for the control group (ages 31–35). The control group serves as a counterfactual for what would have happened to the treatment group in the absence of DACA.

The basic DiD specification is:

$$Y_{it} = \alpha + \beta_1 \text{Treat}_i + \beta_2 \text{Post}_t + \beta_3 (\text{Treat}_i \times \text{Post}_t) + \epsilon_{it} \tag{1}$$

where Y_{it} is full-time employment for individual i in year t, Treat_i indicates treatment group membership, Post_t indicates the post-DACA period, and β_3 is the DiD estimate—the effect of DACA eligibility on full-time employment.

4.2 Extended Specifications

I estimate several specifications to assess robustness:

Model 1 (Simple DiD): Equation 1 without additional controls.

Model 2 (With demographic controls):

$$Y_{it} = \alpha + \beta_1 \text{Treat}_i + \beta_2 \text{Post}_t + \beta_3 (\text{Treat}_i \times \text{Post}_t) + X_i' \gamma + \epsilon_{it} \tag{2}$$

where X_i includes female, married, high school education, has children, and age.

Model 3 (Year fixed effects):

$$Y_{it} = \alpha + \beta_1 \text{Treat}_i + \beta_3 (\text{Treat}_i \times \text{Post}_t) + X_i' \gamma + \mu_t + \epsilon_{it} \tag{3}$$

where μ_t are year fixed effects that absorb year-specific shocks common to both groups.

Model 4 (Year and state fixed effects):

$$Y_{it} = \alpha + \beta_1 \text{Treat}_i + \beta_3 (\text{Treat}_i \times \text{Post}_t) + X_i' \gamma + \mu_t + \delta_s + \epsilon_{it} \tag{4}$$

where δ_s are state fixed effects that control for time-invariant state-level differences.

All models are estimated using weighted least squares (WLS) with person weights (PERWT) and robust (heteroskedasticity-consistent) standard errors.

4.3 Identifying Assumptions

The key identifying assumption for the DiD design is **parallel trends**: in the absence of DACA, the treatment and control groups would have experienced the same trends in full-time employment. This assumption is inherently untestable but can be assessed by examining pre-treatment trends.

The comparison of individuals aged 26–30 versus 31–35 is appealing because these groups are relatively similar in terms of life-cycle stage, all being prime working-age adults. The main difference is that the treatment group is slightly younger and (by DACA rules) had to arrive in the U.S. at a younger age to satisfy the "arrived before age 16" requirement at the same year of immigration.

5 Results

5.1 Main Results

Table 3 presents the main difference-in-differences results across the four model specifications.

Table 3: Effect of DACA Eligibility on Full-Time Employment

	Model 1 Simple DiD	Model 2 Controls	Model 3 Year FE	Model 4 Year + State FE
Treat × Post	0.0620***	0.0477***	0.0464***	0.0458***
	(0.0116)	(0.0106)	(0.0106)	(0.0105)
	[0.039, 0.085]	[0.027, 0.068]	[0.026, 0.067]	[0.025, 0.066]
Treat	−0.0452***	−0.0465***	−0.0462***	−0.0447***
	(0.0067)	(0.0088)	(0.0088)	(0.0088)
Post	−0.0293***	−0.0090	—	—
	(0.0089)	(0.0111)		
Female		−0.3789***	−0.3785***	−0.3744***
		(0.0053)	(0.0053)	(0.0053)
Married		−0.0252***	−0.0239***	−0.0226***
		(0.0056)	(0.0056)	(0.0056)
High school or more		0.0581***	0.0582***	0.0615***
		(0.0050)	(0.0050)	(0.0050)
Has children		0.0292***	0.0301***	0.0301***
		(0.0060)	(0.0060)	(0.0060)
Year FE	No	No	Yes	Yes
State FE	No	No	No	Yes
N	44,725	44,725	44,725	44,725

Notes: Robust standard errors in parentheses. 95% confidence intervals in brackets.

*** p<0.01, ** p<0.05, * p<0.1. All models weighted by PERWT.

The key coefficient of interest is Treat × Post, which captures the differential change in full-time employment for the treatment group relative to the control group after DACA implementation.

In the simple DiD specification (Model 1), the estimated effect is 6.2 percentage points (p < 0.001). Adding demographic controls reduces the estimate to 4.8 percentage points (Model 2), suggesting some of the raw difference was due to compositional differences. The estimate is stable when adding year fixed effects (4.6 pp, Model 3) and remains at 4.6 pp when including both year and state fixed effects (Model 4).

The preferred specification is Model 4, which includes the full set of controls. The interpretation is:

DACA eligibility increased the probability of full-time employment by 4.58 percentage points (95% CI: 2.51 to 6.64 pp, p < 0.001).

To put this in perspective, the baseline full-time employment rate for the treatment group in the pre-period was 62.5% (weighted). The effect represents a 7.3% increase relative to this baseline.

5.2 Manual DiD Calculation

Table 4 presents the weighted mean full-time employment rates underlying the DiD estimate.

Table 4: Weighted Full-Time Employment Rates

	Pre-DACA	Post-DACA	Difference
Treatment (Ages 26–30)	0.6253	0.6580	+0.0327
Control (Ages 31–35)	0.6705	0.6412	−0.0293
Difference (Treat − Control)	−0.0452	+0.0168	
DiD Estimate			**+0.0620**

The treatment group experienced an increase in full-time employment from 62.5% to 65.8% (+3.3 pp), while the control group experienced a decrease from 67.1% to 64.1% (−2.9 pp). The DiD estimate of 6.2 pp reflects both the improvement in the treatment group and the decline in the control group.

5.3 Yearly Trends

Figure ?? (described in Table 5) shows the year-by-year full-time employment rates for the treatment and control groups.

Table 5: Yearly Full-Time Employment Rates by Group

Year	Treatment	Control	Difference
2006	0.638	0.693	−0.055
2007	0.660	0.723	−0.063
2008	0.660	0.692	−0.031
2009	0.612	0.645	−0.033
2010	0.599	0.629	−0.031
2011	0.580	0.630	−0.050
2013	0.642	0.632	+0.010
2014	0.637	0.617	+0.020
2015	0.659	0.666	−0.007
2016	0.699	0.654	+0.046

Several patterns are evident:

1. Both groups experienced declining employment during the Great Recession (2008–2011).

2. The treatment group consistently had lower full-time employment than the control group in the pre-period (gap of 3–6 pp).

3. After DACA, the gap closes and even reverses in some years, with the treatment group having higher full-time employment in 2013, 2014, and 2016.

4. The parallel trends assumption appears reasonable: both groups follow similar trajectories in the pre-period.

6 Robustness Checks

6.1 Alternative Outcome: Any Employment

As a robustness check, I examine the effect of DACA on any employment (EMPSTAT = 1) rather than full-time employment specifically.

Table 6: Effect on Any Employment

	Any Employment
Treat × Post	0.0453***
	(0.0101)
N	44,725

Controls: female, married, education, has children

The effect on any employment (4.5 pp) is similar to the effect on full-time employment (4.8 pp), suggesting that DACA primarily operated through increasing employment rather than shifting workers from part-time to full-time.

6.2 Heterogeneity by Gender

I examine whether the effect differs between men and women.

Table 7: Effect by Gender

	Men	Women
Treat × Post	0.0472***	0.0437**
	(0.0123)	(0.0178)
N	25,058	19,667

Controls: married, education, has children

The effects are similar for men (4.7 pp) and women (4.4 pp), and both are statistically significant. This suggests that DACA benefited both genders approximately equally in terms of full-time employment.

6.3 Placebo Test

To assess the parallel trends assumption, I conduct a placebo test using only pre-treatment data (2006–2011). I create a "fake" post-treatment indicator for 2009–2011 (versus 2006–2008) and estimate the DiD model.

Table 8: Placebo Test (Pre-Period Only)

	Placebo DiD
Treat × Fake Post	0.0054
	(0.0125)
p-value	0.664
N (Pre-period only)	29,326

The placebo DiD estimate is small (0.5 pp) and not statistically significant (p = 0.66). This supports the parallel trends assumption: there is no evidence that the treatment and control groups were on differential trajectories before DACA.

7 Discussion

7.1 Interpretation of Results

The main finding is that DACA eligibility increased full-time employment by approximately 4.6 percentage points. This effect is economically meaningful, representing a 7.3% increase relative to the pre-period baseline.

The finding is consistent with the theoretical expectation that work authorization would increase formal employment. DACA allowed recipients to legally work, obtain Social Security numbers, and in many states, driver's licenses. These factors would facilitate both finding employment and maintaining full-time work.

7.2 Comparison to Existing Literature

This finding is broadly consistent with prior research on DACA's labor market effects. Studies have found positive effects of DACA on employment, earnings, and labor force participation using various identification strategies and data sources.

However, the specific magnitude of the effect (4.6 pp on full-time employment) is particular to this analysis and reflects the specific sample definition, comparison groups, and outcome measure used.

7.3 Limitations

Several limitations should be noted:

Proxy for undocumented status: The ACS does not identify documentation status directly. I use non-citizenship as a proxy, which may include some legal non-citizens (e.g., green card holders) who were not DACA-eligible. This would bias the estimates toward zero if these legal residents' employment was unaffected by DACA.

Age-based identification: The treatment and control groups differ in age, which could introduce confounds if age affects employment trends differently for the two groups. However, the placebo test suggests no differential pre-trends.

Sample selection: The sample restrictions (Hispanic-Mexican, born in Mexico, non-citizen, arrived before age 16, arrived by 2007) identify a population that largely overlaps with but is not identical to actual DACA-eligible individuals. In particular, we cannot observe the education and criminal history requirements.

General equilibrium effects: The DiD design captures the effect on DACA-eligible individuals but may miss spillover effects on non-eligible individuals who compete in the same labor markets.

7.4   Policy Implications

The finding that DACA increased full-time employment suggests that providing work authorization to undocumented immigrants who arrived as children has positive labor market effects. This is relevant to ongoing debates about DACA's future and broader immigration reform.

The effect appears to operate primarily through increasing employment rather than shifting workers from part-time to full-time, and it benefits both men and women. This suggests that work authorization affects employment at the extensive margin—helping people enter the formal labor market—rather than just the intensive margin.

8   Conclusion

This study provides evidence that eligibility for the Deferred Action for Childhood Arrivals (DACA) program increased full-time employment among Hispanic-Mexican, Mexican-born non-citizens in the United States. Using a difference-in-differences design that compares individuals who were ages 26–30 at DACA implementation (eligible) to those ages 31–35 (ineligible due to age), I find that DACA eligibility increased full-time employment by approximately 4.6 percentage points.

This effect is statistically significant ($p < 0.001$), robust to the inclusion of demographic controls and fixed effects, and supported by placebo tests that show no differential pre-

trends. The effect is similar for men and women, suggesting broad-based benefits of work authorization.

These findings contribute to our understanding of how immigration policy affects labor market outcomes and inform ongoing policy debates about DACA and immigration reform more broadly.

9 Technical Appendix

9.1 Variable Definitions

Table 9: IPUMS Variable Definitions

Variable	IPUMS Name	Definition
Survey year	YEAR	Year of ACS survey
Birth year	BIRTHYR	Year of birth
Birth quarter	BIRTHQTR	Quarter of birth (1-4)
Hispanic origin	HISPAN	Hispanic origin (1 = Mexican)
Birthplace	BPL	Birthplace (200 = Mexico)
Citizenship	CITIZEN	Citizenship status (3 = Not a citizen)
Year of immigration	YRIMMIG	Year of immigration to U.S.
Usual hours worked	UHRSWORK	Usual hours worked per week
Employment status	EMPSTAT	Employment status (1 = Employed)
Sex	SEX	Sex (1 = Male, 2 = Female)
Marital status	MARST	Marital status
Education	EDUC	Educational attainment
Number of children	NCHILD	Number of own children in household
Person weight	PERWT	Person-level sampling weight
State	STATEFIP	State FIPS code

9.2 Sample Selection Criteria

The analytic sample includes individuals who meet all of the following criteria:

1. HISPAN = 1 (Mexican Hispanic origin)

2. BPL = 200 (Born in Mexico)

3. CITIZEN = 3 (Not a citizen)

4. YRIMMIG > 0 and YRIMMIG $-$ BIRTHYR < 16 (Arrived before age 16)

5. YRIMMIG ≤ 2007 (Continuous presence since 2007)

6. BIRTHYR $\in [1977, 1986]$ (Birth cohorts for treatment and control)

7. YEAR $\neq 2012$ (Exclude year of DACA implementation)

9.3   Estimation Details

All regressions are estimated using weighted least squares (WLS) with PERWT as weights. Standard errors are heteroskedasticity-robust (HC1). The software used is Python with the statsmodels package.

Summary of Key Results

Preferred Estimate:

- **Effect Size:** 0.0458 (4.58 percentage points)

- **Standard Error:** 0.0105

- **95% Confidence Interval:** $[0.0251, 0.0664]$

- **p-value:** < 0.001

- **Sample Size:** 44,725

Interpretation: DACA eligibility increased the probability of full-time employment by approximately 4.6 percentage points among Hispanic-Mexican, Mexican-born non-citizens who arrived in the U.S. before age 16 and by 2007.

References

Data for this analysis were obtained from:

IPUMS USA. Steven Ruggles, Sarah Flood, Matthew Sobek, Daniel Backman, Annie Chen, Grace Cooper, Stephanie Richards, Renae Rogers, and Megan Schouweiler. IPUMS USA: Version 15.0 [dataset]. Minneapolis, MN: IPUMS, 2024. https://doi.org/10.18128/D010.V15.0