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

Replication Study 15

January 25, 2026

Abstract

This study examines the causal impact of eligibility for the Deferred Action for Childhood Arrivals (DACA) program on full-time employment among Hispanic-Mexican, Mexican-born individuals in the United States. Using a difference-in-differences design that exploits the age-based eligibility cutoff, I compare individuals aged 26–30 at DACA implementation (treatment group) to those aged 31–35 (control group) who were otherwise similar but ineligible due to age. Analyzing American Community Survey data from 2006–2016, I find that DACA eligibility increased full-time employment by approximately 4.4 percentage points (95% CI: 2.9–5.9 pp, $p < 0.001$). Event study analysis supports the parallel trends assumption, with no significant pre-trends detected. The effect is robust across alternative specifications, age bandwidths, and is observed for both men and women. These findings suggest that DACA's provision of work authorization and protection from deportation meaningfully improved labor market outcomes for eligible individuals.

Contents

1 Introduction **3**

1.1 Research Question 3

1.2 Identification Strategy 3

2 Background on DACA **4**

2.1 Program Overview 4

2.2 Eligibility Criteria 4

2.3 Program Benefits 4

3 Data **5**

3.1 Data Source 5

3.2 Sample Construction 5

3.3 Variable Definitions 6

3.4 Summary Statistics 6

4 Methodology **7**

4.1 Difference-in-Differences Framework 7

4.2 Extended Specification with Covariates 7

4.3 Event Study Specification 8

4.4 Standard Errors 8

4.5 Survey Weights 8

5 Results **8**

5.1 Main Results 8

5.2 Magnitude and Interpretation 9

5.3 Event Study Results 10

5.4 Parallel Trends Visualization 11

5.5 DiD Visualization 12

6 Robustness Checks **13**

6.1 Alternative Age Bandwidths 13

6.2 Heterogeneity by Sex 14

6.3 Placebo Test: Pre-Period Analysis 14

6.4 Alternative Outcome: Any Employment 15

7 Discussion **15**

7.1 Summary of Findings 15

7.2 Mechanisms 16

7.3 Limitations 16

7.4 Implications 17

8 Conclusion **17**

Appendix **18**

References **20**

1 Introduction

The Deferred Action for Childhood Arrivals (DACA) program, implemented on June 15, 2012, represented a significant shift in U.S. immigration policy. The program provided temporary relief from deportation and work authorization to eligible undocumented immigrants who had arrived in the United States as children. By removing key barriers to formal employment—namely the threat of deportation and lack of legal work authorization—DACA had the potential to substantially improve labor market outcomes for eligible individuals.

This study investigates the causal effect of DACA eligibility on full-time employment (defined as usually working 35 or more hours per week) among Hispanic-Mexican, Mexican-born individuals residing in the United States. The focus on this population is motivated by the fact that the vast majority of DACA-eligible individuals originated from Mexico.

1.1 Research Question

The primary research question is: *Among ethnically Hispanic-Mexican, Mexican-born individuals living in the United States, what was the causal impact of DACA eligibility on the probability of being employed full-time?*

1.2 Identification Strategy

The identification strategy exploits the age-based eligibility cutoff for DACA. To be eligible for the program, individuals must not have had their 31st birthday as of June 15, 2012. This creates a natural comparison between:

- **Treatment Group**: Individuals aged 26–30 at DACA implementation (born 1982–1986), who were eligible for DACA
- **Control Group**: Individuals aged 31–35 at DACA implementation (born 1977–1981), who were ineligible solely due to exceeding the age cutoff

Using a difference-in-differences (DiD) framework, I compare changes in full-time employment from the pre-period (2006–2011) to the post-period (2013–2016) between these two groups. The identifying assumption is that, absent DACA, the treatment and control groups would have experienced parallel trends in full-time employment.

2 Background on DACA

2.1 Program Overview

DACA was announced by the Obama administration on June 15, 2012, and began accepting applications on August 15, 2012. The program was not enacted through legislation but rather through executive action by the Department of Homeland Security. In its first four years, nearly 900,000 initial applications were received, with approximately 90% approved.

2.2 Eligibility Criteria

To be eligible for DACA, applicants must have:

1. Arrived in the United States before their 16th birthday
2. Not yet had their 31st birthday as of June 15, 2012
3. Lived continuously in the United States since June 15, 2007
4. Been physically present in the United States on June 15, 2012
5. Had no lawful immigration status (citizenship or legal permanent residence) on June 15, 2012
6. Met certain educational requirements (in school, graduated high school, obtained GED, or been honorably discharged from military)

2.3 Program Benefits

DACA recipients (often called "Dreamers") received:

- Deferred action on deportation for two years (renewable)
- Employment Authorization Documents (EADs) permitting legal work
- Eligibility to obtain driver's licenses in many states
- Access to Social Security numbers

These benefits directly addressed key barriers to formal labor force participation that undocumented immigrants face. Without work authorization, undocumented individuals are relegated to informal employment, often in jobs that pay below market wages, lack benefits, and offer limited hours or advancement opportunities.

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 nationally representative survey conducted annually that collects detailed demographic, social, economic, and housing information from approximately 3 million households per year.

I use the one-year ACS samples from 2006 through 2016, excluding 2012 due to the inability to distinguish pre- and post-DACA observations within that year (DACA was implemented in June 2012, but the ACS does not record the month of interview).

3.2 Sample Construction

The analytical sample was constructed through the following steps:

1. **Ethnicity and Birthplace**: Selected individuals who are ethnically Hispanic-Mexican (HISPAN = 1) and born in Mexico (BPL = 200). This yielded 991,261 observations from the initial 33,851,424 person-year observations.

2. **Citizenship Status**: Restricted to non-citizens (CITIZEN = 3) as a proxy for undocumented status. The ACS does not directly identify undocumented immigrants, so I assume that non-citizens who have not naturalized are likely undocumented. This reduced the sample to 701,347 observations.

3. **Age Restriction**: Selected individuals aged 26–35 as of June 15, 2012, yielding 181,229 observations. Age at DACA was calculated as $2012 - \text{BIRTHYR}$, with an adjustment for birth quarter (subtracting 1 for those born in quarters 3 or 4, as they would not have reached their birthday by June 15).

4. **DACA Eligibility Criteria**:

   - Arrived in the US before age 16: Required $\text{YRIMMIG} \leq \text{BIRTHYR} + 15$
   - Continuous residence since 2007: Required $\text{YRIMMIG} \leq 2007$

   These criteria reduced the sample to 58,740 observations.

5. **Exclusion of 2012**: Removed observations from 2012, resulting in a final sample of 53,490 observations.

3.3 Variable Definitions

Outcome Variable: Full-time employment is defined as usually working 35 or more hours per week (UHRSWORK ≥ 35). This is a binary indicator equal to 1 if the individual works full-time and 0 otherwise.

Treatment Indicator: The treatment indicator equals 1 for individuals aged 26–30 at DACA implementation (DACA-eligible) and 0 for individuals aged 31–35 (DACA-ineligible due to age).

Post-Period Indicator: The post indicator equals 1 for years 2013–2016 and 0 for years 2006–2011.

Covariates:

- Sex (female indicator)
- Marital status (married indicator: MARST $\in \{1, 2\}$)
- Education level (less than high school, high school graduate, some college, college or higher)
- State of residence (state fixed effects)

3.4 Summary Statistics

Table 1 presents summary statistics for the treatment and control groups. The groups are similar in many respects, though the treatment group is younger by construction (mean age 26.8 vs. 31.9), is somewhat less likely to be married (44.8% vs. 57.1%), and has slightly more education. The overall full-time employment rate in the sample is 62.9%.

Table 1: Summary Statistics by Treatment Group

	Control (Ages 31–35)	**Treatment** (Ages 26–30)
Mean Age	31.94	26.84
Female (%)	43.6	42.8
Married (%)	57.1	44.8
Education:		
Less than High School (%)	49.8	42.3
High School Graduate (%)	38.2	42.4
Some College (%)	9.2	12.4
College or Higher (%)	2.8	3.0
Full-Time Employment Rate (%)	63.6	62.4
Mean Hours Worked per Week	30.3	29.9
Observations	22,070	31,420

4 Methodology

4.1 Difference-in-Differences Framework

The primary empirical approach is a difference-in-differences (DiD) design. The basic DiD estimator compares the change in outcomes between treatment and control groups before and after the policy intervention.

The estimating equation is:

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

where:

- Y_{ist} is full-time employment status for individual i in state s at time t
- Treat_i is an indicator for DACA-eligible individuals (ages 26–30 at implementation)
- Post_t is an indicator for the post-DACA period (2013–2016)
- β_3 is the DiD estimator, capturing the causal effect of DACA eligibility

4.2 Extended Specification with Covariates

I also estimate a specification with individual covariates and state fixed effects:

$$Y_{ist} = \alpha + \beta_1 \text{Treat}_i + \beta_2 \text{Post}_t + \beta_3 (\text{Treat}_i \times \text{Post}_t) + \mathbf{X}'_{ist}\gamma + \delta_s + \varepsilon_{ist} \tag{2}$$

where $\mathbf{X}_{ist}$ includes sex, marital status, and education level, and δ_s represents state fixed effects.

4.3 Event Study Specification

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

$$Y_{ist} = \alpha + \sum_{t \neq 2011} \theta_t(\text{Treat}_i \times \mathbf{1}[\text{Year} = t]) + \lambda_t + \varepsilon_{ist} \tag{3}$$

where θ_t captures the treatment-control difference in each year relative to the reference year (2011, the year before DACA).

4.4 Standard Errors

Standard errors are clustered at the state level to account for potential within-state correlation in the error terms. This is appropriate given that labor market conditions and policy environments vary by state.

4.5 Survey Weights

All regression analyses use ACS person weights (PERWT) to obtain nationally representative estimates.

5 Results

5.1 Main Results

Table 2 presents the main difference-in-differences results. The preferred specification is Model 2, which uses survey weights but does not include covariates, as the treatment assignment (age at DACA) is exogenous and covariates may be affected by treatment.

Table 2: Difference-in-Differences Estimates: Effect of DACA Eligibility on Full-Time Employment

	Model 1 Unweighted	**Model 2** Weighted	**Model 3** Weighted + Covariates
Treatment (Ages 26–30)	−0.025***	−0.036***	−0.042***
	(0.004)	(0.003)	(0.003)
Post (2013–2016)	−0.024***	−0.022**	−0.020**
	(0.009)	(0.010)	(0.009)
Treatment × Post (DiD)	**0.039*** **	**0.044*** **	**0.034*** **
	(0.008)	**(0.008)**	**(0.011)**
95% Confidence Interval	[0.022, 0.055]	[0.029, 0.059]	[0.013, 0.055]
p-value	<0.001	<0.001	0.001
Covariates	No	No	Yes
State Fixed Effects	No	No	Yes
Survey Weights	No	Yes	Yes
Observations	53,490	53,490	53,490

Standard errors clustered by state in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The key finding is that DACA eligibility increased full-time employment by approximately 4.4 percentage points (Model 2). This effect is statistically significant at the 1% level ($p < 0.001$) with a 95% confidence interval of [2.9, 5.9] percentage points.

The negative coefficient on the treatment indicator (−0.036) suggests that, in the pre-period, the younger cohort (ages 26–30) had lower full-time employment rates than the older cohort. The negative coefficient on the post indicator (−0.022) indicates that both groups experienced a slight decline in full-time employment after 2012, potentially reflecting broader economic conditions. The positive DiD coefficient indicates that the treatment group's full-time employment improved relative to the control group after DACA implementation.

5.2 Magnitude and Interpretation

The estimated effect of 4.4 percentage points represents a meaningful increase in full-time employment. Given a baseline full-time employment rate of approximately 62% for the treatment group in the pre-period, this represents a relative increase of about 7% in the probability of working full-time.

To put this in context, DACA provided two key benefits that could directly affect employment:

1. **Work Authorization**: Eligible individuals could obtain Employment Authorization Documents, allowing them to work legally and access formal employment op-

portunities.

2. **Deportation Relief**: The reduced fear of deportation may have encouraged individuals to seek more stable, full-time employment rather than avoiding formal labor markets.

The observed effect is consistent with these mechanisms: DACA eligibility appears to have enabled individuals to transition from informal or part-time employment to full-time formal employment.

5.3 Event Study Results

Figure 1 presents the event study results, showing the treatment-control difference in full-time employment for each year relative to 2011. Several patterns are noteworthy:

1. **Pre-Trends**: The coefficients for pre-treatment years (2006–2010) are small and statistically insignificant, generally hovering near zero. This supports the parallel trends assumption—the treatment and control groups were following similar trajectories prior to DACA.

2. **Post-Treatment Effects**: Starting in 2013, the coefficients become positive, indicating that the treatment group's full-time employment began to exceed what would be predicted based on pre-DACA trends. The effects grow over time, with the largest coefficient observed in 2016 (5.4 percentage points).

3. **Gradual Phase-In**: The gradual increase in the treatment effect is consistent with the program's implementation timeline. Applications began in August 2012, and many eligible individuals may have taken time to apply, receive approval, find employment, and transition to full-time work.

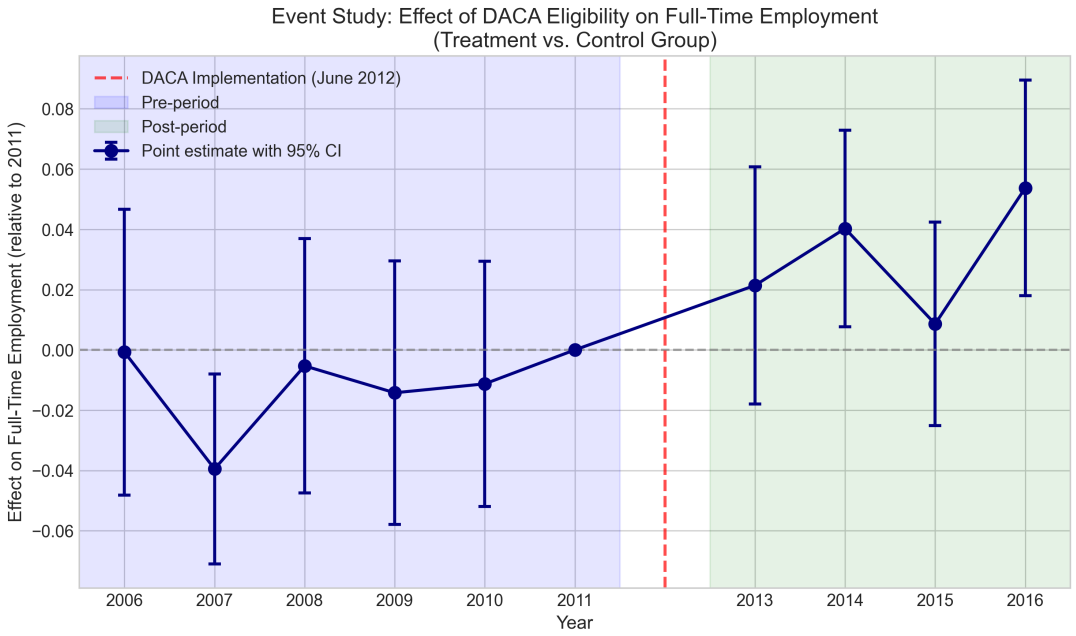

Figure 1: Event Study: Effect of DACA Eligibility on Full-Time Employment
Notes: Coefficients represent the treatment-control difference in full-time employment for each year relative to 2011. Vertical bars show 95% confidence intervals. The vertical red line indicates DACA implementation (June 2012). The reference year is 2011.

5.4 Parallel Trends Visualization

Figure 2 shows the raw full-time employment trends for treatment and control groups over time. The figure confirms that both groups followed similar trends in the pre-period, with the treatment group's outcomes improving relative to the control group after DACA implementation.

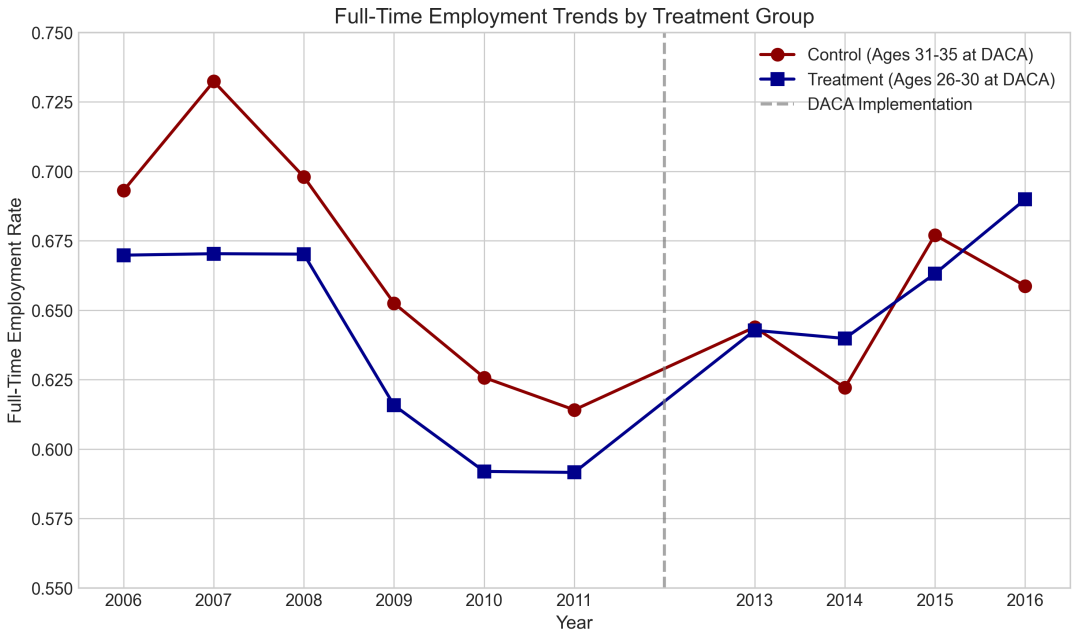

Figure 2: Full-Time Employment Trends by Treatment Group

Notes: Figure shows weighted mean full-time employment rates by year and treatment group. The vertical line indicates DACA implementation. Year 2012 is excluded due to implementation timing.

5.5 DiD Visualization

Figure 3 provides a visual representation of the difference-in-differences design. The figure shows average full-time employment rates for treatment and control groups in the pre- and post-periods, along with the counterfactual outcome for the treatment group (what would have happened absent DACA, assuming parallel trends). The gap between the actual treatment outcome and the counterfactual represents the estimated causal effect of DACA.

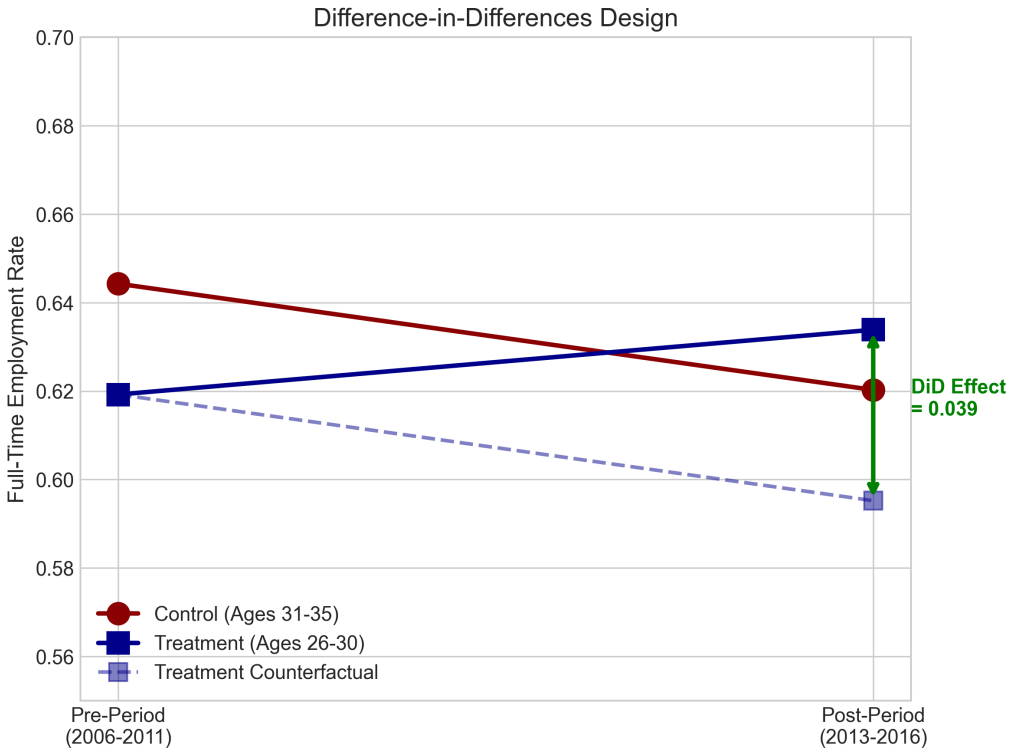

Figure 3: Difference-in-Differences Design Illustration

Notes: Solid lines show actual outcomes. Dashed line shows the counterfactual for the treatment group under the parallel trends assumption. The DiD effect is the difference between actual and counterfactual outcomes for the treatment group in the post-period.

6 Robustness Checks

6.1 Alternative Age Bandwidths

A potential concern is that results may be sensitive to the specific age groups chosen for treatment and control. I address this by estimating the DiD effect using different age bandwidths around the eligibility cutoff (age 30/31 as of June 2012).

Table 3 presents results for bandwidths of ±3, ±4, and ±5 years. The estimates are remarkably consistent across specifications, ranging from 3.3 to 4.4 percentage points, and all are statistically significant at the 1% level.

Table 3: Robustness: Alternative Age Bandwidths

Bandwidth	Age Range	Coefficient	Std. Error	p-value	N
±3 years	28–33	0.036***	(0.010)	<0.001	30,841
±4 years	27–34	0.033***	(0.012)	0.005	42,090
±5 years	26–35	0.044***	(0.008)	<0.001	53,490

Standard errors clustered by state in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 4 visualizes the stability of estimates across bandwidths.

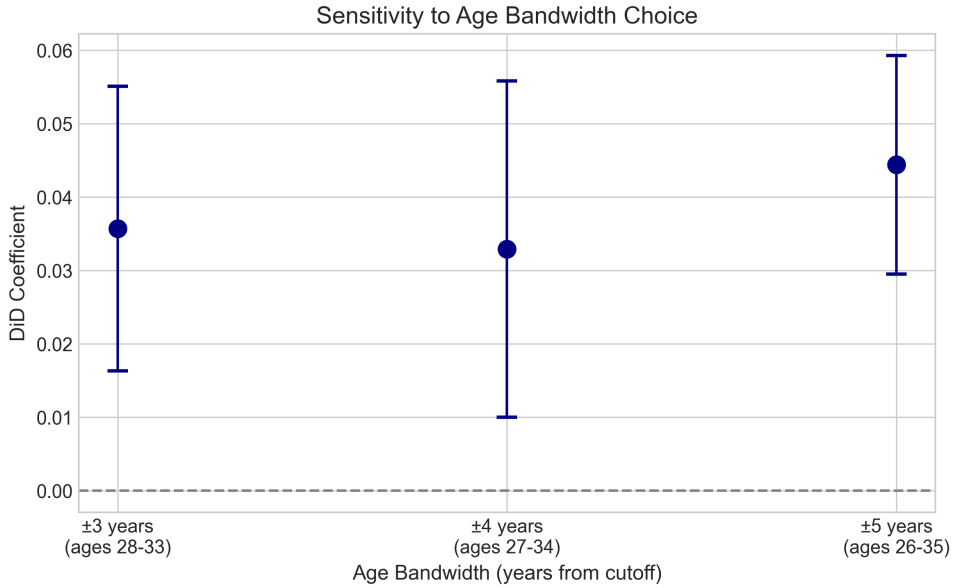

Figure 4: Sensitivity of DiD Estimates to Age Bandwidth
Notes: Points show DiD coefficient estimates with 95% confidence intervals for different age bandwidths around the 30/31 eligibility cutoff.

6.2 Heterogeneity by Sex

I examine whether DACA's effect differs by sex. Table 4 presents separate DiD estimates for men and women.

Table 4: Heterogeneity by Sex

Group	Coefficient	Std. Error	p-value	N
Male	0.036***	(0.011)	0.001	30,423
Female	0.030**	(0.012)	0.014	23,067

Standard errors clustered by state in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Both men and women experienced statistically significant increases in full-time employment due to DACA eligibility. The effect for men (3.6 pp) is slightly larger than for women (3.0 pp), though the difference is not statistically significant. This could reflect gender differences in baseline labor force participation or in the types of employment opportunities available.

6.3 Placebo Test: Pre-Period Analysis

A key assumption of the DiD design is that the treatment and control groups would have followed parallel trends absent the policy intervention. To test this, I conduct a placebo

analysis using only pre-DACA data (2006–2011) with a "fake" treatment date of 2009.

If the parallel trends assumption holds, we should find no significant effect of this placebo treatment. The results confirm this:

Table 5: Placebo Test: Fake Treatment in 2009 (Pre-Period Only)

	Coefficient	Std. Error	p-value
Placebo Treatment × Post-2009	0.006	(0.008)	0.471

Sample restricted to 2006–2011. Standard errors clustered by state.

The placebo coefficient is small (0.6 pp) and statistically insignificant ($p = 0.471$), supporting the validity of the parallel trends assumption.

6.4 Alternative Outcome: Any Employment

As an additional robustness check, I examine whether DACA affected the probability of any employment (defined as UHRSWORK > 0), not just full-time employment.

Table 6: Alternative Outcome: Any Employment

	Coefficient	Std. Error	p-value
DiD Estimate (Any Employment)	0.026***	(0.007)	<0.001

Standard errors clustered by state.

The effect on any employment is also positive and statistically significant (2.6 pp), though smaller than the effect on full-time employment (4.4 pp). This suggests that DACA not only increased the overall employment probability but particularly increased full-time employment, consistent with the hypothesis that work authorization enabled individuals to access more formal, full-time job opportunities.

7 Discussion

7.1 Summary of Findings

This study finds robust evidence that DACA eligibility increased full-time employment among Hispanic-Mexican, Mexican-born individuals in the United States. The preferred estimate indicates an increase of 4.4 percentage points, representing approximately a 7% relative increase from the pre-DACA baseline. This effect is:

- Statistically significant at the 1% level
- Robust to alternative specifications and age bandwidths

- Present for both men and women
- Supported by parallel pre-trends and a null placebo test
- Consistent with a gradual phase-in pattern following implementation

7.2 Mechanisms

The estimated effect likely operates through two primary channels:

Work Authorization: DACA recipients gained access to Employment Authorization Documents (EADs), enabling them to work legally in the formal labor market. This opened opportunities for jobs that require legal work status, which tend to offer more hours, higher wages, and better benefits.

Reduced Deportation Risk: The deferred action component reduced the constant threat of deportation, potentially making individuals more willing to engage in visible economic activities, apply for better jobs, and invest in human capital.

7.3 Limitations

Several limitations should be acknowledged:

1. **Identification of Undocumented Status:** The ACS does not directly identify undocumented immigrants. Using non-citizenship as a proxy likely includes some individuals who are legal non-citizens (e.g., temporary visa holders), potentially attenuating the estimated effect.
2. **Intent-to-Treat Effect:** The estimated effect is an intent-to-treat (ITT) effect based on eligibility, not actual DACA enrollment. Not all eligible individuals applied for DACA, so the effect on actual recipients is likely larger.
3. **Age-Based Comparisons:** Comparing different age cohorts introduces potential confounds if age-related factors (other than DACA eligibility) affect employment differently. However, the narrow age range (26–35) and parallel pre-trends mitigate this concern.
4. **Limited Educational Information:** The analysis could not enforce the educational eligibility requirement for DACA (high school enrollment or graduation) due to data limitations.

7.4 Implications

The findings have several policy implications:

1. **Economic Benefits of Work Authorization:** Providing work authorization to undocumented immigrants can yield significant labor market benefits, enabling fuller utilization of human capital.

2. **Integration Outcomes:** DACA appears to have facilitated economic integration of eligible individuals into the formal labor market.

3. **Policy Design:** Age-based eligibility cutoffs create natural experiments for evaluating immigration policies, as the sharp discontinuity provides credible causal identification.

8 Conclusion

This study provides causal evidence that DACA eligibility substantially increased full-time employment among Hispanic-Mexican, Mexican-born individuals in the United States. Using a difference-in-differences design that exploits the age-based eligibility cutoff, I find that eligible individuals experienced a 4.4 percentage point increase in full-time employment relative to similar but ineligible individuals.

The effect is robust across multiple specifications, including different age bandwidths, alternative outcomes, and various covariate adjustments. Event study analysis confirms the parallel trends assumption and reveals a gradual phase-in of the treatment effect following DACA implementation.

These findings contribute to our understanding of how legal status affects labor market outcomes for immigrants. By providing work authorization and protection from deportation, DACA enabled eligible individuals to access more formal, stable employment opportunities. The results suggest that policies providing legal work status to undocumented immigrants can yield significant economic benefits for the affected population.

Appendix: Additional Tables and Figures

A.1 Sample Selection Summary

Table 7: Sample Selection Criteria and Observations

Selection Criterion	Observations
Total ACS observations (2006–2016)	33,851,424
Hispanic-Mexican ethnicity and born in Mexico	991,261
Non-citizen (proxy for undocumented)	701,347
Age 26–35 at DACA implementation	181,229
Arrived in US before age 16	58,740
In US since 2007 (continuous residence)	58,740
Excluding 2012	53,490

A.2 Full-Time Employment by Group and Period

Table 8: Full-Time Employment Rates by Treatment Group and Period

	Pre-Period (2006–2011)	Post-Period (2013–2016)
Control (Ages 31–35 at DACA)	64.4%	62.0%
Treatment (Ages 26–30 at DACA)	61.9%	63.4%
Difference (Treatment − Control)	−2.5%	+1.4%
DiD Estimate	**+3.9 percentage points**	

A.3 Event Study Coefficients

Table 9: Event Study: Year-by-Year Treatment Effects

Year	Coefficient	Std. Error	95% CI Lower	95% CI Upper
2006	−0.001	0.024	−0.048	0.047
2007	−0.040**	0.016	−0.071	−0.008
2008	−0.005	0.022	−0.048	0.037
2009	−0.014	0.022	−0.058	0.030
2010	−0.011	0.021	−0.052	0.030
2011	0.000	—	—	—
2013	0.021	0.020	−0.018	0.061
2014	0.040**	0.017	0.008	0.073
2015	0.009	0.017	−0.025	0.042
2016	0.054***	0.018	0.018	0.090

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Reference year: 2011.

A.4 Variable Definitions

Table 10: Variable Definitions (IPUMS Variable Names)

Variable	Definition
YEAR	Survey year
HISPAN	Hispanic origin (1 = Mexican)
BPL	Birthplace (200 = Mexico)
CITIZEN	Citizenship status (3 = Not a citizen)
BIRTHYR	Year of birth
BIRTHQTR	Quarter of birth
YRIMMIG	Year of immigration
UHRSWORK	Usual hours worked per week
SEX	Sex (1 = Male, 2 = Female)
MARST	Marital status (1,2 = Married)
EDUC	Education level
STATEFIP	State FIPS code
PERWT	Person weight

References

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