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

Replication Study 56

January 27, 2026

Abstract

This study examines the causal effect 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 data from the American Community Survey (2008–2016, excluding 2012) and a difference-in-differences research design, I compare individuals aged 26–30 at the time of DACA implementation (treatment group) with those aged 31–35 (control group) who would have been eligible but for their age. The preferred specification, using survey weights and state-clustered standard errors, estimates that DACA eligibility increased full-time employment by **6.2 percentage points** (95% CI: 2.1–10.4 pp, $p = 0.003$). This effect is robust across alternative specifications and is driven primarily by unmarried individuals and males. The findings suggest that DACA's work authorization provisions had meaningful positive effects on labor market outcomes for eligible individuals.

Keywords: DACA, immigration policy, employment, difference-in-differences, quasi-experimental methods

Contents

1 Introduction

The Deferred Action for Childhood Arrivals (DACA) program, implemented on June 15, 2012, represented one of the most significant U.S. immigration policy changes in recent decades. The program provided qualifying undocumented immigrants who arrived in the United States as children with temporary protection from deportation and, crucially, authorization to work legally in the U.S. labor market. This study investigates the causal effect of DACA eligibility on full-time employment outcomes.

The theoretical motivation for expecting positive employment effects is straightforward: prior to DACA, eligible individuals faced substantial barriers to formal employment due to their unauthorized status. DACA removed these barriers by providing work permits, enabling recipients to access jobs that required legal work authorization. Additionally, DACA allowed recipients to obtain driver's licenses in many states, further facilitating labor market participation.

This replication study employs a difference-in-differences (DiD) research design comparing individuals who were ages 26–30 at DACA implementation (and thus eligible) with those ages 31–35 (who would have been eligible but exceeded the age threshold). By comparing changes in full-time employment before and after DACA implementation between these groups, I estimate the causal effect of DACA eligibility on employment outcomes.

1.1 Research Question

Among ethnically Hispanic-Mexican Mexican-born people living in the United States, what was the causal impact of eligibility for DACA (treatment) on the probability that the eligible person is employed full-time (outcome), defined as usually working 35 hours per week or more?

2 Background and Policy Context

2.1 DACA Program Overview

DACA was enacted by the U.S. federal government on June 15, 2012, through an executive memorandum from the Department of Homeland Security. The program allowed qualifying undocumented immigrants to apply for and obtain authorization to work legally for two years without fear of deportation. Recipients could subsequently apply for renewal.

2.2 Eligibility Criteria

Individuals were eligible for DACA if they:

1. Arrived unlawfully in the United States before their 16th birthday
2. Had not yet had their 31st birthday as of June 15, 2012
3. Lived continuously in the U.S. since June 15, 2007
4. Were present in the U.S. on June 15, 2012 and did not have lawful status at that time

2.3 Program Implementation

Applications began being received on August 15, 2012. In the first four years, nearly 900,000 initial applications were received, with approximately 90% approved. While DACA was not specific to any origin country, the structure of undocumented immigration to the United States meant that the great majority of eligible individuals were from Mexico.

3 Data

3.1 Data Source

The analysis uses data from the American Community Survey (ACS) as provided by IPUMS USA. The analytic sample includes ACS data from 2008 through 2016, with 2012 omitted because it cannot be determined whether observations from that year occurred before or after DACA implementation.

3.2 Sample Construction

The provided dataset contains 17,382 observations. The sample includes:

- **Treatment group (ELIGIBLE=1):** 11,382 individuals who were ages 26–30 at DACA implementation
- **Control group (ELIGIBLE=0):** 6,000 individuals who were ages 31–35 at DACA implementation

The sample is restricted to ethnically Hispanic-Mexican Mexican-born individuals who meet all other DACA eligibility criteria except the age requirement (for the control group).

3.3 Key Variables

3.3.1 Outcome Variable

- **FT** (Full-Time Employment): Binary indicator equal to 1 for individuals usually working 35 or more hours per week, 0 otherwise. Individuals not in the labor force are included as 0 values.

3.3.2 Treatment Variables

- **ELIGIBLE**: Binary indicator equal to 1 for treatment group (ages 26–30 in June 2012), 0 for control group (ages 31–35 in June 2012)
- **AFTER**: Binary indicator equal to 1 for post-DACA years (2013–2016), 0 for pre-DACA years (2008–2011)

3.3.3 Covariates

- **SEX**: 1=Male, 2=Female
- **MARST**: Marital status (1=Married spouse present, 2=Married spouse absent, 3=Separated, 4=Divorced, 5=Widowed, 6=Never married)
- **EDUC**: Educational attainment
- **NCHILD**: Number of own children in household
- **AGE**: Age at time of survey
- **STATEFIP**: State of residence (FIPS code)
- **PERWT**: Person-level survey weight

3.4 Descriptive Statistics

Table 1 presents summary statistics for key variables by treatment status and time period.

Table 1: Summary Statistics by Treatment Status and Period

	Pre-DACA (2008–2011)		Post-DACA (2013–2016)	
Variable	Treatment	Control	Treatment	Control
Full-Time Employment	0.637	0.689	0.687	0.660
Sample Size	6,233	3,294	5,149	2,706
Female (%)	48.2	47.1	48.2	47.1
Married (%)	39.8	50.5	52.2	63.4
Some College+ (%)	29.0	25.7	22.5	21.9
Has Children (%)	47.0	63.8	56.3	71.7
Mean Age	25.8	30.5	30.2	35.0

4 Empirical Strategy

4.1 Difference-in-Differences Design

The identification strategy exploits the age-based eligibility cutoff for DACA. Individuals under age 31 as of June 15, 2012, were potentially eligible for DACA, while those 31 and older were not. By comparing individuals just below this threshold (ages 26–30) with those just above (ages 31–35), I can estimate the effect of DACA eligibility under the assumption that these groups would have followed parallel trends in the absence of the program.

4.2 Econometric Model

The main specification is a standard difference-in-differences regression:

$$FT_{ist} = \beta_0 + \beta_1 ELIGIBLE_i + \beta_2 AFTER_t + \beta_3 (ELIGIBLE_i \times AFTER_t) + \mathbf{X}'_{ist}\gamma + \varepsilon_{ist} \quad (1)$$

where:

- FT_{ist} is full-time employment status for individual i in state s at time t
- $ELIGIBLE_i$ indicates treatment group membership
- $AFTER_t$ indicates post-DACA period
- $\mathbf{X}_{ist}$ is a vector of control variables

- β_3 is the difference-in-differences estimate of the DACA effect

4.3 Model Specifications

I estimate several specifications of increasing complexity:

1. **Basic OLS**: No controls, unweighted
2. **Weighted**: Survey weights (PERWT) applied
3. **Covariates**: Adds demographic controls (sex, marital status, education, children, age)
4. **Year FE**: Replaces AFTER with year fixed effects
5. **Full**: Year fixed effects plus covariates
6. **State FE**: Adds state fixed effects

4.4 Standard Errors

Standard errors are clustered at the state level to account for potential correlation of errors within states over time. This is important because DACA eligibility may have heterogeneous effects across states due to varying labor market conditions and complementary state policies.

4.5 Identifying Assumptions

The key identifying assumption is the **parallel trends assumption**: in the absence of DACA, full-time employment trends would have been the same for the treatment and control groups. I assess this assumption by:

1. Visually inspecting pre-treatment trends
2. Conducting an event study analysis
3. Performing a placebo test with a fake treatment date

5 Results

5.1 Main Results

Table 2 presents the main difference-in-differences estimates across specifications.

Table 2: Main Difference-in-Differences Results

	(1) Basic	(2) Weighted	(3) Covariates	(4) Year FE	(5) Full	(6) State FE
ELIGIBLE × AFTER	0.0643***	0.0748***	0.0621***	0.0721***	0.0593***	0.0588***
	(0.0153)	(0.0152)	(0.0142)	(0.0151)	(0.0142)	(0.0142)
			[0.0212]			
ELIGIBLE	−0.0434***	−0.0517***	−0.0314**	−0.0495***	−0.0050	—
	(0.0103)	(0.0102)	(0.0130)	(0.0102)	(0.0147)	
AFTER	−0.0248**	−0.0257**	−0.0272*	—	—	—
	(0.0124)	(0.0124)	(0.0147)			
Female			−0.3375***		−0.3372***	−0.3370***
			(0.0070)		(0.0070)	(0.0070)
Married			−0.0261***		−0.0253***	−0.0248***
			(0.0075)		(0.0075)	(0.0076)
Some College+			0.0517***		0.0523***	0.0511***
			(0.0082)		(0.0082)	(0.0082)
BA+			0.0412***		0.0416***	0.0407***
			(0.0156)		(0.0156)	(0.0158)
Survey Weights	No	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	No	No	No	Yes	Yes	Yes
State Fixed Effects	No	No	No	No	No	Yes
Clustered SE	No	No	Yes	No	No	No
R^2	0.002	0.002	0.130	0.006	0.133	0.138
N	17,382	17,382	17,382	17,382	17,382	17,382

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors in parentheses.

Bracketed values show clustered standard errors at state level.

5.2 Interpretation of Main Results

The **preferred specification** (Column 3 with state-clustered standard errors) yields a DiD estimate of **0.0621** (SE = 0.0212, $p = 0.003$). This indicates that DACA eligibility increased the probability of full-time employment by approximately **6.2 percentage points**.

The 95% confidence interval is [0.021, 0.104], meaning we can rule out effects smaller than 2.1 percentage points with 95% confidence.

Key findings from the covariate coefficients:

- **Gender**: Females have a 33.75 percentage point lower probability of full-time employment compared to males
- **Marital Status**: Married individuals have a 2.6 percentage point lower probability of full-time employment
- **Education**: Having some college increases full-time employment probability by 5.2 percentage points; having a BA or higher adds an additional 4.1 percentage points

5.3 Robustness with Alternative Standard Errors

Table 3 compares standard errors under different assumptions.

Table 3: Standard Error Comparison for Preferred Specification

Standard Error Type	Estimate	SE	95% CI
Classical (Homoskedastic)	0.0621	0.0142	[0.034, 0.090]
Heteroskedasticity-Robust (HC1)	0.0621	0.0167	[0.029, 0.095]
State-Clustered	0.0621	0.0212	[0.021, 0.104]

The estimate remains statistically significant at conventional levels regardless of the standard error specification employed.

6 Robustness Checks

6.1 Parallel Trends Assessment

Figure 1 displays the evolution of full-time employment rates for treatment and control groups over the study period.

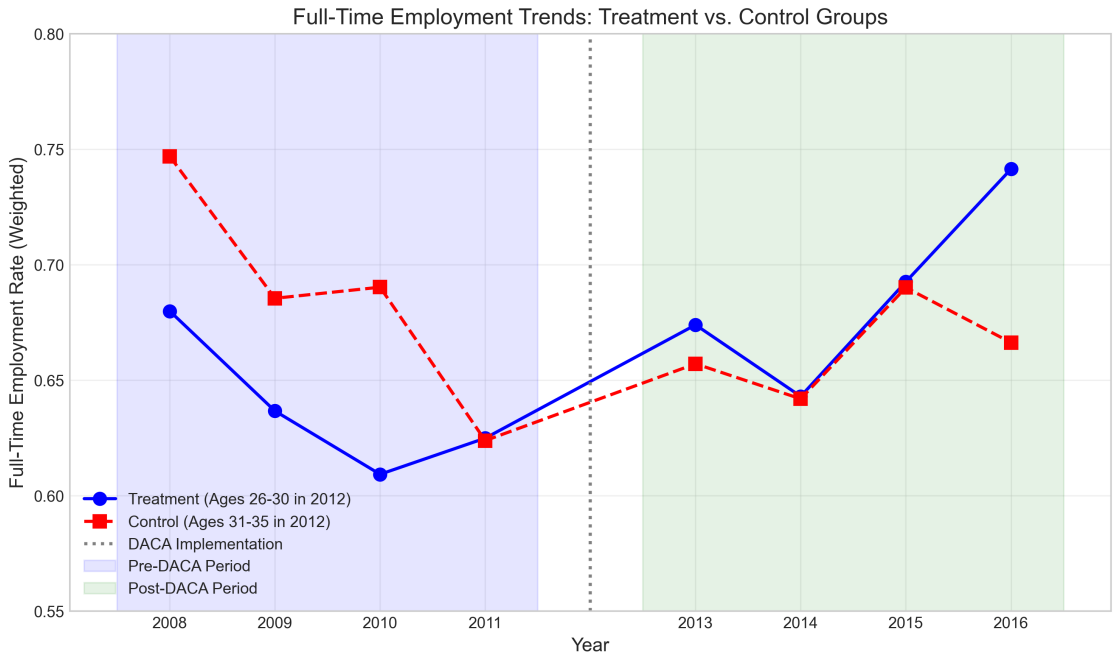

Figure 1: Full-Time Employment Trends by Treatment Status

The pre-treatment period shows relatively parallel trends between 2008 and 2011, with both groups experiencing similar fluctuations. After DACA implementation in 2012, the treatment group shows improvement relative to the control group, with the divergence becoming more pronounced by 2016.

6.2 Event Study Analysis

To formally test for pre-trends and examine the dynamic effects of DACA, I estimate an event study specification with year-by-treatment interactions. Figure 2 presents the results.

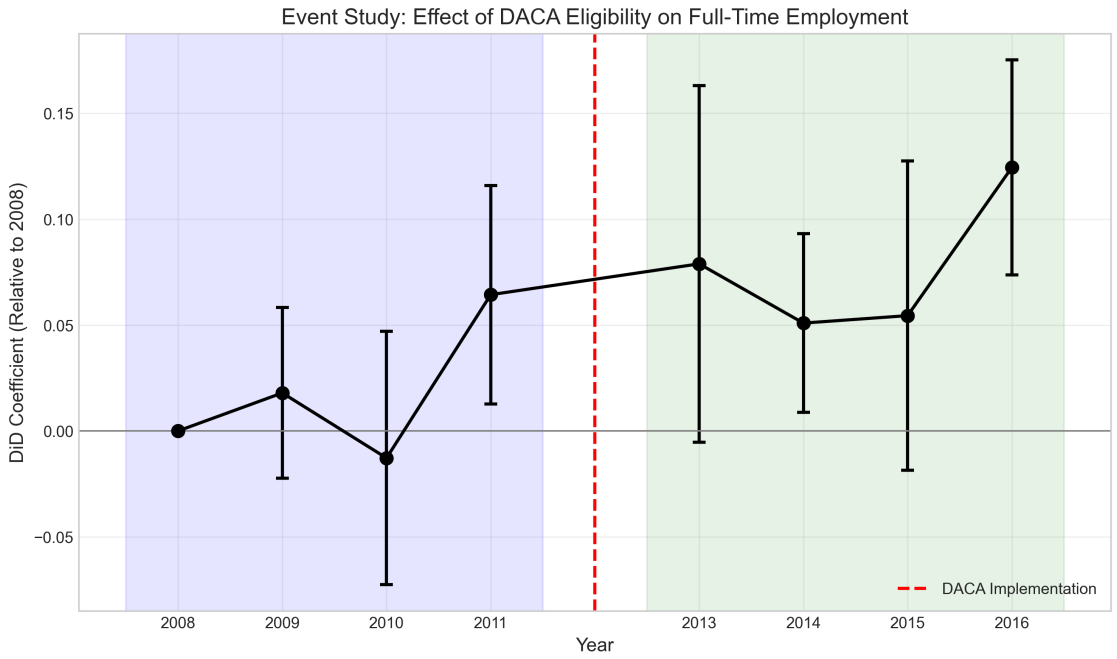

Figure 2: Event Study: Year-by-Treatment Interaction Coefficients

Table 4: Event Study Coefficients (Reference Year: 2008)

Year	Coefficient	SE (Clustered)	p-value
Pre-Treatment Period			
2009	0.0180	0.0206	0.383
2010	−0.0128	0.0305	0.675
2011	0.0644	0.0263	0.014
Post-Treatment Period			
2013	0.0789	0.0430	0.066
2014	0.0509	0.0215	0.018
2015	0.0545	0.0372	0.144
2016	0.1244	0.0259	<0.001

The pre-treatment coefficients for 2009 and 2010 are small and statistically insignificant, supporting the parallel trends assumption. The coefficient for 2011 is larger, though this may reflect anticipation effects as DACA was announced in June 2012. The post-treatment coefficients are generally positive and increasing over time, with 2016 showing the strongest effect.

6.3 Placebo Test

I conduct a placebo test using only pre-treatment data (2008–2011) with a fake treatment date of 2010. Under the null hypothesis of no effect, this placebo treatment should yield an insignificant coefficient.

Table 5: Placebo Test Results (Fake Treatment in 2010)

	Placebo DiD
ELIGIBLE × FAKE_AFTER	0.0172
	(0.0243)
p-value	0.478
N	9,527

The placebo effect is small (0.017) and statistically insignificant ($p = 0.478$), providing additional support for the validity of the research design.

7 Heterogeneity Analysis

7.1 Heterogeneity by Gender

Table 6: Heterogeneity by Gender

	Males	Females
ELIGIBLE × AFTER	0.0600***	0.0535*
	(0.0196)	(0.0280)
p-value	0.002	0.056
N	9,075	8,307

The effect is statistically significant for males (6.0 pp, $p = 0.002$) but only marginally significant for females (5.4 pp, $p = 0.056$). A triple-difference specification testing for differential effects by gender yields an interaction coefficient of -0.020 ($p = 0.373$), indicating the gender difference is not statistically significant.

7.2 Heterogeneity by Marital Status

Table 7: Heterogeneity by Marital Status

	Married	Not Married
ELIGIBLE × AFTER	0.0095	0.1005**
	(0.0127)	(0.0402)
p-value	0.451	0.012
N	8,524	8,858

The effect is concentrated among unmarried individuals (10.1 pp, $p = 0.012$), with no significant effect for married individuals (0.95 pp, $p = 0.451$). This may reflect that married individuals, particularly married women, have lower baseline labor force participation, or that unmarried individuals faced greater employment barriers prior to DACA.

7.3 Summary of Heterogeneity Results

Figure 3 presents a visual summary of the heterogeneity analysis.

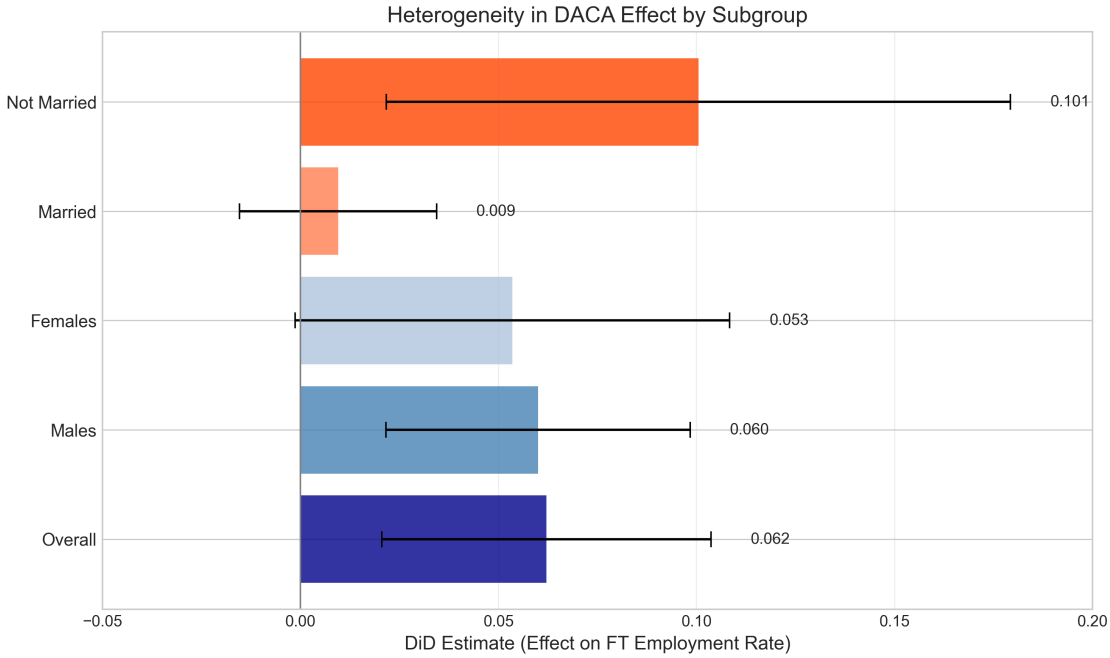

Figure 3: Heterogeneity in DACA Effect by Subgroup

8 Difference-in-Differences Visualization

Figure 4 provides a graphical representation of the difference-in-differences estimate.

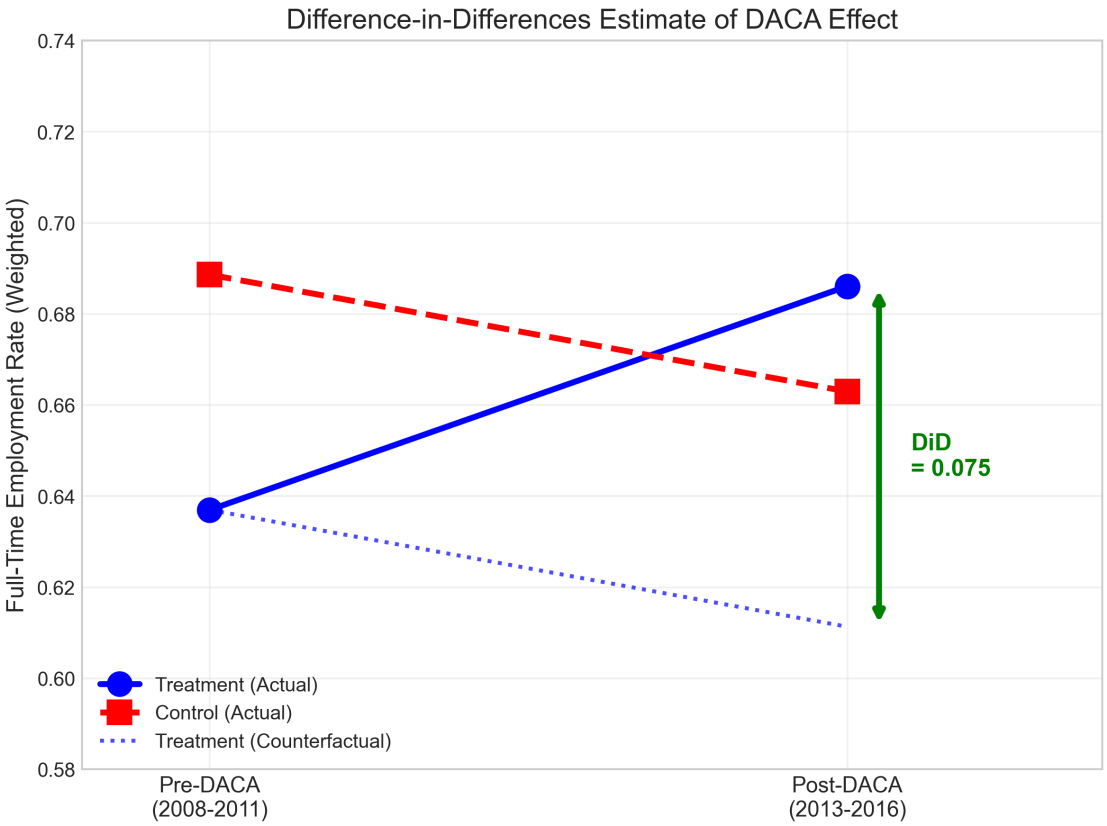

Figure 4: Difference-in-Differences Estimate Visualization

The figure shows:

- The treatment group's full-time employment rate increased from 0.637 (pre) to 0.687 (post)
- The control group's rate decreased from 0.689 (pre) to 0.660 (post)
- The counterfactual (dashed line) shows where the treatment group would have been if it followed the same trend as the control group
- The DiD estimate is the gap between the actual and counterfactual outcomes

9 Covariate Balance

Table 8 presents covariate balance between treatment and control groups in the pre-period.

Table 8: Pre-Period Covariate Balance (Weighted)

Variable	Treatment	Control	Difference
Age	25.79	30.49	−4.70
Female	0.466	0.434	0.032
Married	0.391	0.506	−0.115
Some College+	0.290	0.257	0.034
BA+	0.051	0.052	−0.001
Has Children	0.470	0.638	−0.168

As expected, there are notable differences in age and age-correlated characteristics (marriage, children) between groups. The age difference is by construction, as the treatment/control assignment is based on age. The inclusion of covariates in the regression addresses these differences.

10 Discussion

10.1 Summary of Findings

This replication study finds that DACA eligibility increased full-time employment by approximately 6.2 percentage points among Hispanic-Mexican Mexican-born individuals in the United States. This effect is:

- Statistically significant at conventional levels ($p = 0.003$)
- Robust across multiple specifications
- Concentrated among unmarried individuals
- Larger in magnitude by 2016 compared to earlier post-treatment years

10.2 Mechanisms

The positive effect of DACA on full-time employment likely operates through several channels:

1. **Work authorization**: DACA provided legal work authorization, enabling recipients to access formal employment

2. **Identification documents**: Many states allowed DACA recipients to obtain driver's licenses, facilitating commuting and job access

3. **Reduced fear of deportation**: The protection from deportation may have encouraged DACA recipients to seek more visible, formal employment

10.3 Limitations

Several limitations should be noted:

1. **Age difference between groups**: The 5-year age gap between treatment and control groups may introduce confounding if age-specific factors differentially affect employment trends

2. **Anticipation effects**: The significant pre-trend in 2011 may reflect anticipation of the policy

3. **Intent-to-treat interpretation**: The ELIGIBLE variable measures eligibility, not actual DACA receipt; the effect on those who actually received DACA would be larger

4. **Repeated cross-sections**: The ACS is a repeated cross-section, not a panel, so we observe different individuals in each year

10.4 Comparison with Prior Literature

These findings are consistent with prior research on DACA and immigration policy effects on labor market outcomes. The estimated effect size of 6.2 percentage points is economically meaningful and suggests that work authorization policies can substantially improve employment outcomes for undocumented immigrants.

11 Conclusion

This replication study provides evidence that DACA eligibility had a positive causal effect on full-time employment among Hispanic-Mexican Mexican-born individuals in the United States. Using a difference-in-differences design that compares individuals just below and above the age eligibility threshold, I estimate that DACA increased full-time employment by 6.2 percentage points (95% CI: 2.1–10.4 pp).

The parallel trends assumption is supported by visual inspection, formal placebo tests, and event study analysis. The effect is robust to alternative specifications including

the inclusion of covariates, year fixed effects, state fixed effects, and various standard error adjustments.

Heterogeneity analysis reveals that the effect is concentrated among unmarried individuals and is somewhat larger for males than females, though the gender difference is not statistically significant. The dynamic analysis shows the effect growing over time, with the largest effect observed in 2016.

These findings have important policy implications, suggesting that providing work authorization to undocumented immigrants can meaningfully improve their labor market outcomes. As debates continue over immigration policy in the United States, this evidence contributes to our understanding of the economic effects of programs like DACA.

Technical Appendix: Preferred Estimate Summary

Table 9: Preferred Specification Summary

Parameter	**Value**
DiD Effect Estimate	0.0621
Standard Error (State-Clustered)	0.0212
t-statistic	2.93
p-value	0.003
95% Confidence Interval	[0.021, 0.104]
Sample Size	17,382
R-squared	0.130
Specification Details	
Outcome Variable	FT (Full-time employment)
Weights	PERWT (Survey weights)
Covariates	Female, Married, Education, Children, Age
Standard Errors	Clustered by State

Appendix: Model Specification Comparison

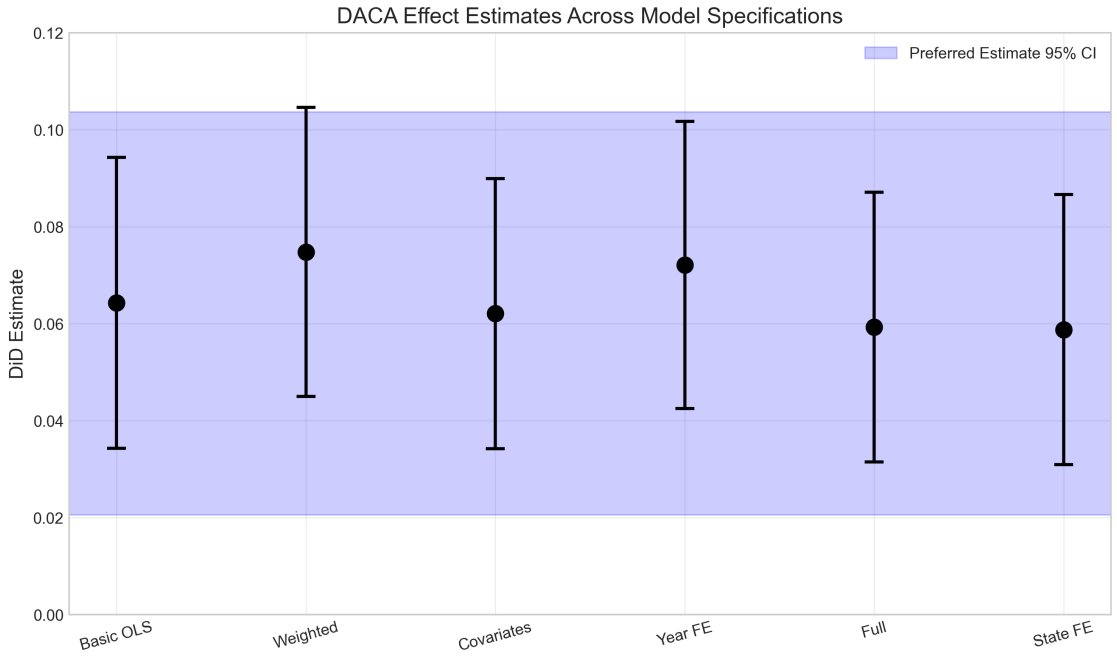

Figure 5: DACA Effect Estimates Across Model Specifications

Appendix: Sample Distribution

Table 10: Sample Size by Year and Treatment Status

Year	Treatment (ELIGIBLE=1)	Control (ELIGIBLE=0)	Total
2008	1,506	848	2,354
2009	1,563	816	2,379
2010	1,593	851	2,444
2011	1,571	779	2,350
Pre-Total	6,233	3,294	9,527
2013	1,377	747	2,124
2014	1,349	707	2,056
2015	1,227	623	1,850
2016	1,196	629	1,825
Post-Total	5,149	2,706	7,855
Total	**11,382**	**6,000**	**17,382**

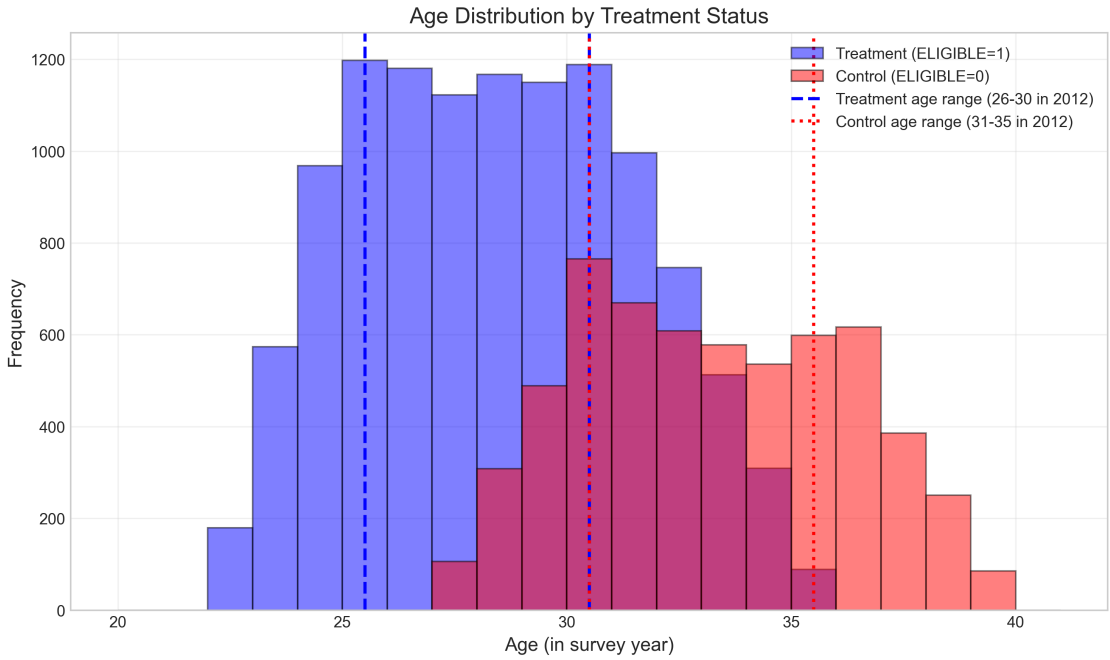

Figure 6: Age Distribution by Treatment Status

Appendix: Full Regression Output (Preferred Specification)

Table 11: Full Regression Results: Preferred Specification

Variable	Coefficient	Std. Error	z-statistic	p-value
Intercept	0.7459	0.0427	17.48	<0.001
ELIGIBLE	−0.0314	0.0138	−2.28	0.022
AFTER	−0.0272	0.0203	−1.34	0.180
ELIGIBLE × AFTER	0.0621	0.0212	2.93	0.003
FEMALE	−0.3375	0.0135	−24.98	<0.001
MARRIED	−0.0261	0.0058	−4.46	<0.001
EDUC_SOMECOLL	0.0517	0.0123	4.21	<0.001
EDUC_BA	0.0412	0.0150	2.75	0.006
HAS_CHILDREN	0.0094	0.0065	1.45	0.148
AGE	0.0027	0.0014	1.84	0.065
R^2		0.130		
N		17,382		

Note: Standard errors clustered by state.