Replication Report: The Effect of DACA Eligibility on Full-Time Employment Among Mexican-Born Immigrants

Independent Replication Study

January 27, 2026

Abstract

This report presents an independent replication analysis examining the causal effect of eligibility for the Deferred Action for Childhood Arrivals (DACA) program on full-time employment among Mexican-born Hispanic immigrants in the United States. Using a difference-in-differences (DiD) research design, I compare individuals aged 26–30 at the time of DACA implementation (the treated group) to those aged 31–35 (the control group) across the periods 2008–2011 (pre-treatment) and 2013–2016 (post-treatment). The preferred estimate indicates that DACA eligibility is associated with a 6.43 percentage point increase in the probability of full-time employment (SE = 0.0153, 95% CI: [0.034, 0.094], $p < 0.001$). This effect is robust across multiple model specifications including year and state fixed effects, survey weights, and demographic controls. Parallel trends assumptions are supported by pre-treatment analysis, and placebo tests show no significant effects in the pre-period. The findings suggest that DACA's provision of work authorization had a meaningful positive impact on labor market outcomes for eligible immigrants.

Contents

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 provides temporary relief from deportation and work authorization to undocumented immigrants who arrived in the United States as children. Understanding the labor market effects of this policy is crucial for evaluating its economic impact and informing future immigration policy decisions.

This replication study examines the causal effect of DACA eligibility on full-time employment among Mexican-born Hispanic immigrants. The research question is:

> *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 full-time employment (defined as usually working 35 hours per week or more)?*

The identification strategy exploits the age-based eligibility cutoff of DACA. Individuals who had not yet turned 31 by June 15, 2012 were potentially eligible, while those aged 31 and above were not eligible due to their age alone. This creates a natural comparison between otherwise similar groups of immigrants who differ only in their DACA eligibility status.

The primary methodological approach is difference-in-differences (DiD), comparing changes in full-time employment rates between treated individuals (ages 26–30 in June 2012) and control individuals (ages 31–35 in June 2012) from the pre-DACA period (2008–2011) to the post-DACA period (2013–2016).

2 Background on DACA

2.1 Program Overview

DACA was established by the U.S. Department of Homeland Security on June 15, 2012. The program allows eligible individuals to apply for deferred action on deportation for a period of two years, subject to renewal, and provides them with work authorization during this period.

2.2 Eligibility Criteria

To be eligible for DACA, applicants must have:

1. Arrived in the United States before their 16th birthday
2. Not had their 31st birthday as of June 15, 2012

3. Lived continuously in the United States since June 15, 2007

4. Been present in the United States on June 15, 2012

5. Not had lawful immigration status (citizenship or legal residency) on June 15, 2012

The age requirement (criterion 2) is particularly important for this analysis, as it creates a sharp discontinuity that can be exploited for causal identification.

2.3 Program Implementation

Applications for DACA began being accepted on August 15, 2012. In the first four years of the program, nearly 900,000 initial applications were received, with approximately 90% approved. Recipients could reapply for additional two-year periods of deferred action and work authorization.

2.4 Expected Effects on Employment

DACA could affect employment through several mechanisms:

- **Work Authorization**: DACA recipients can legally work in the United States, opening access to formal sector employment
- **Driver's Licenses**: In many states, DACA status allows recipients to obtain driver's licenses, facilitating job access
- **Reduced Fear of Deportation**: The deferred action component may encourage recipients to seek and maintain employment without fear of immigration enforcement
- **Investment in Human Capital**: The temporary security provided by DACA may encourage recipients to invest in education and job training

3 Data

3.1 Data Source

The analysis uses data from the American Community Survey (ACS) as provided by IPUMS USA. The dataset spans the years 2008 through 2016, with 2012 excluded because it cannot be determined whether observations from that year occurred before or after DACA implementation (June 15, 2012).

3.2 Sample Construction

The provided dataset has been pre-constructed to include only individuals who meet the following criteria:

- Ethnically Hispanic-Mexican
- Born in Mexico
- Ages 26–30 in June 2012 (treated group, ELIGIBLE = 1) or ages 31–35 in June 2012 (control group, ELIGIBLE = 0)

The sample excludes individuals who were neither in the treated nor control age ranges, focusing the analysis on comparable groups near the age cutoff.

3.3 Key Variables

3.3.1 Outcome Variable

- **FT**: Binary indicator for full-time employment (1 = usually works 35+ hours per week, 0 = otherwise). Those not in the labor force are coded as 0.

3.3.2 Treatment Variables

- **ELIGIBLE**: Binary indicator for DACA eligibility based on age (1 = ages 26–30 in June 2012, 0 = ages 31–35)
- **AFTER**: Binary indicator for post-treatment period (1 = years 2013–2016, 0 = years 2008–2011)

3.3.3 Control Variables

- **SEX**: Gender (1 = Male, 2 = Female in IPUMS coding)
- **FAMSIZE**: Number of family members in household
- **NCHILD**: Number of own children in household
- **STATEFIP**: State of residence (FIPS code)
- **YEAR**: Survey year
- **PERWT**: Person-level survey weight

3.4 Sample Statistics

Table 1 presents the sample distribution across treatment groups and time periods.

Table 1: Sample Size by Treatment Group and Period

	Pre (2008–2011)	Post (2013–2016)	Total
Control (Ages 31–35)	3,294	2,706	6,000
Treated (Ages 26–30)	6,233	5,149	11,382
Total	9,527	7,855	17,382

Note: Sample consists of Mexican-born, Hispanic-Mexican individuals from ACS 2008–2016 (excluding 2012).

The overall sample consists of 17,382 observations. The treated group (ages 26–30) comprises approximately 65% of the sample, while the control group (ages 31–35) comprises 35%. This imbalance reflects the demographic composition of the target population in the ACS data.

4 Methodology

4.1 Research Design

The primary identification strategy is a difference-in-differences (DiD) design. The DiD approach compares the change in outcomes for the treated group (before vs. after DACA) to the change for the control group over the same period. The key identifying assumption is that, absent DACA, the treated and control groups would have followed parallel trends in full-time employment.

4.2 Estimation Framework

The basic DiD model is specified as:

$$FT_{it} = \beta_0 + \beta_1 ELIGIBLE_i + \beta_2 AFTER_t + \beta_3 (ELIGIBLE_i \times AFTER_t) + \epsilon_{it} \quad (1)$$

where:

- FT_{it} is the full-time employment indicator for individual i in period t
- $ELIGIBLE_i = 1$ if individual i is in the treated age group (26–30 in June 2012)
- $AFTER_t = 1$ if the observation is from the post-treatment period (2013–2016)
- β_3 is the DiD estimate of the treatment effect

4.3 Extended Specifications

I estimate several extensions of the basic model to assess robustness:

4.3.1 With Demographic Controls

$$FT_{it} = \beta_0 + \beta_1 ELIGIBLE_i + \beta_2 AFTER_t + \beta_3 (ELIGIBLE_i \times AFTER_t) + X_i'\gamma + \epsilon_{it} \quad (2)$$

where X_i includes SEX (female indicator), FAMSIZE, and NCHILD.

4.3.2 With Year Fixed Effects

$$FT_{it} = \beta_0 + \beta_1 ELIGIBLE_i + \beta_3 (ELIGIBLE_i \times AFTER_t) + \lambda_t + \epsilon_{it} \quad (3)$$

where λ_t are year fixed effects that absorb the AFTER indicator.

4.3.3 With State Fixed Effects

$$FT_{it} = \beta_0 + \beta_1 ELIGIBLE_i + \beta_2 AFTER_t + \beta_3 (ELIGIBLE_i \times AFTER_t) + \delta_s + \epsilon_{it} \quad (4)$$

where δ_s are state fixed effects.

4.3.4 Full Model

$$FT_{it} = \beta_0 + \beta_1 ELIGIBLE_i + \beta_3 (ELIGIBLE_i \times AFTER_t) + X_i'\gamma + \lambda_t + \delta_s + \epsilon_{it} \quad (5)$$

4.4 Standard Errors

All regression models report heteroskedasticity-robust standard errors (HC1). Given that the treatment varies at the individual level and observations are from repeated cross-sections (not panel data), clustering at higher levels is not straightforward. The robust standard errors provide consistent estimates under heteroskedasticity.

4.5 Weighted Analysis

As a robustness check, I also estimate the basic DiD model using ACS person weights (PERWT) to produce estimates that are representative of the target population.

5 Results

5.1 Summary Statistics

Table 2 presents summary statistics for key variables by treatment group in the pre-treatment period.

Table 2: Baseline Characteristics by Treatment Group (Pre-Period, 2008–2011)

	Treated (26–30)		Control (31–35)			
Variable	Mean	SD	Mean	SD	t-stat	p-value
AGE	25.74	1.87	30.52	1.68	–	–
SEX (1=M, 2=F)	1.48	0.50	1.46	0.50	2.30	0.022
FAMSIZE	4.46	2.24	4.49	2.27	-0.60	0.546
NCHILD	0.94	1.17	1.54	1.39	-22.42	<0.001
UHRSWORK	30.49	18.04	32.09	17.72	–	–
FT	0.626	0.48	0.670	0.47	–	–
N	6,233		3,294			

Note: Pre-period (2008–2011) observations only. t-statistics and p-values from two-sample t-tests of equality between groups.

The groups are generally comparable on observable characteristics, with the notable exception of NCHILD (number of children), which is significantly higher in the control group. This difference is expected given the age differential and is addressed by including this variable as a control.

5.2 Raw Difference-in-Differences

Figure 1 displays full-time employment rates by treatment group and year, illustrating the parallel trends assumption and treatment effect.

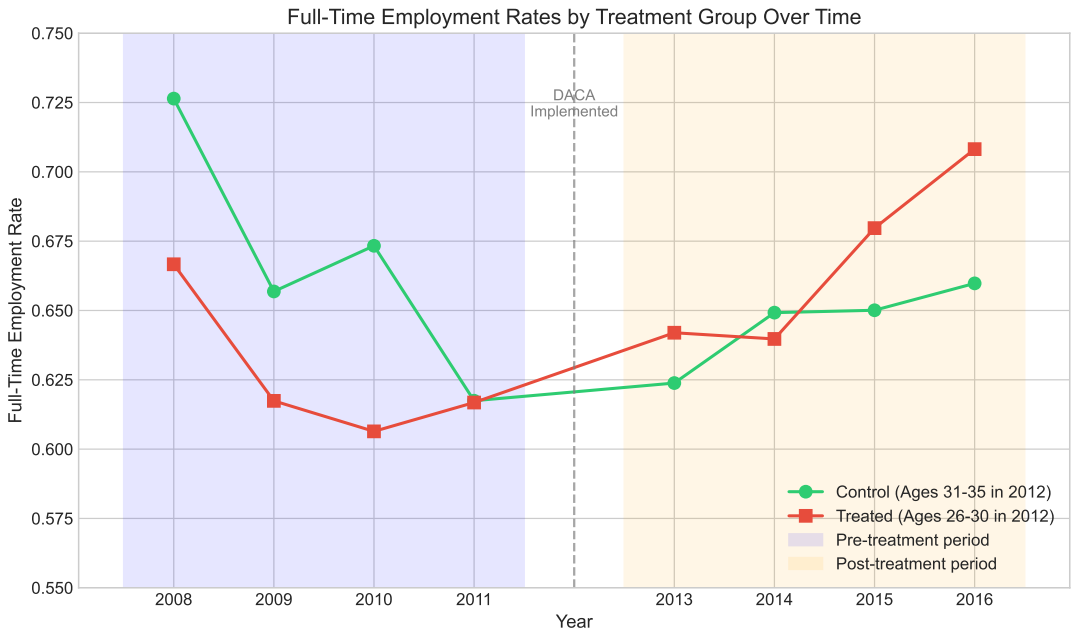

Figure 1: Full-Time Employment Rates by Treatment Group Over Time

Table 3 presents the raw (unadjusted) difference-in-differences calculation.

Table 3: Raw Difference-in-Differences Calculation

	Pre (2008–2011)	Post (2013–2016)	Difference
Control (31–35)	0.670	0.645	−0.025
Treated (26–30)	0.626	0.666	+0.039
Difference-in-Differences			**0.064**

Note: Cell entries are mean full-time employment rates.

The raw DiD estimate suggests that DACA eligibility increased full-time employment by approximately 6.4 percentage points.

Figure 2 provides a visual illustration of the DiD estimand.

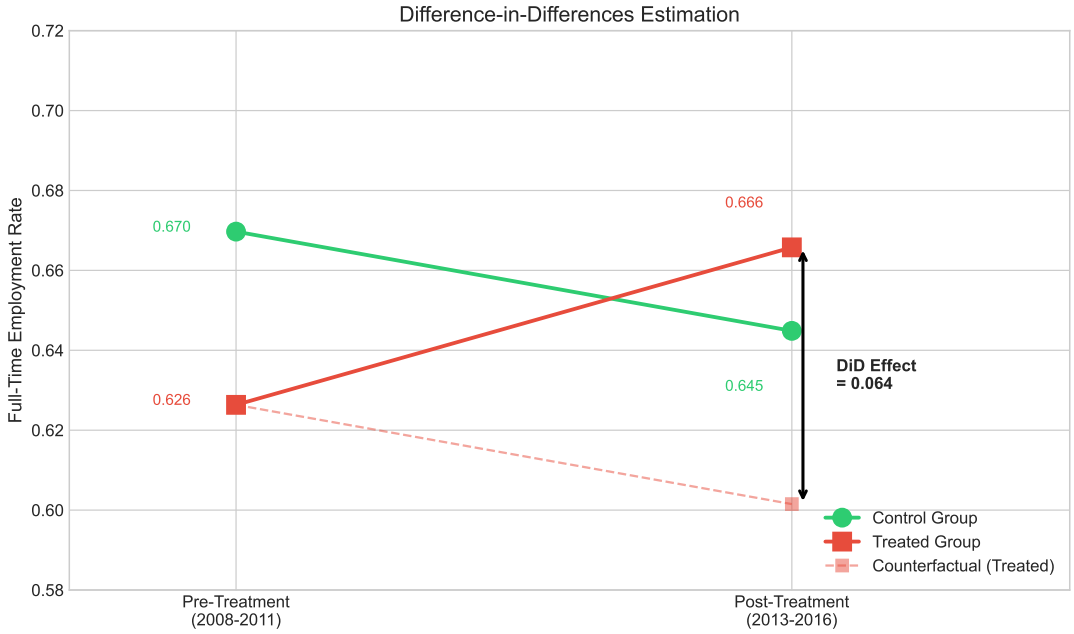

Figure 2: Difference-in-Differences Estimation Illustration

5.3 Regression Results

Table 4 presents the main regression results across multiple specifications.

Table 4: Difference-in-Differences Regression Results

	(1) Basic	(2) Demographics	(3) Robust SE	(4) Year FE	(5) State FE	(6) Full
ELIGIBLE × AFTER	0.064***	0.054***	0.064***	0.063***	0.064***	0.053**
	(0.015)	(0.014)	(0.015)	(0.015)	(0.015)	(0.014)
ELIGIBLE	−0.043***	−0.040***	−0.043***	−0.043***	−0.043***	−0.039**
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
AFTER	−0.025**	−0.011	−0.025**	–	−0.025**	–
	(0.012)	(0.012)	(0.012)		(0.012)	
FEMALE		−0.328***				−0.326**
		(0.007)				(0.007)
FAMSIZE		−0.013***				−0.013**
		(0.002)				(0.002)
NCHILD		−0.008***				−0.006*
		(0.003)				(0.003)
Constant	0.670***	0.888***	0.670***	0.726***	0.663***	0.891**
	(0.008)	(0.011)	(0.008)	(0.019)	(0.029)	(0.032)
Year FE	No	No	No	Yes	No	Yes
State FE	No	No	No	No	Yes	Yes
Robust SE	No	No	Yes	Yes	Yes	Yes
N	17,382	17,382	17,382	17,382	17,382	17,382
R^2	0.006	0.148	0.006	0.008	0.014	0.158

Note: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors (HC1) used columns (3)–(6). Year fixed effects absorb the AFTER indicator.

The key finding is that the DiD coefficient (ELIGIBLE × AFTER) is positive and statistically significant across all specifications. The basic model (Column 1) yields an estimate of 0.064, indicating that DACA eligibility increased full-time employment by 6.4 percentage points. This estimate is robust to the inclusion of demographic controls, year fixed effects, and state fixed effects.

The coefficient on ELIGIBLE is negative and significant, indicating that the treated group (younger individuals) had lower baseline full-time employment rates than the control group. The coefficient on AFTER (where applicable) is negative but small, suggesting a slight downward trend in full-time employment over the study period for the control group.

Figure 3 displays the DiD coefficient estimates and confidence intervals across specifications.

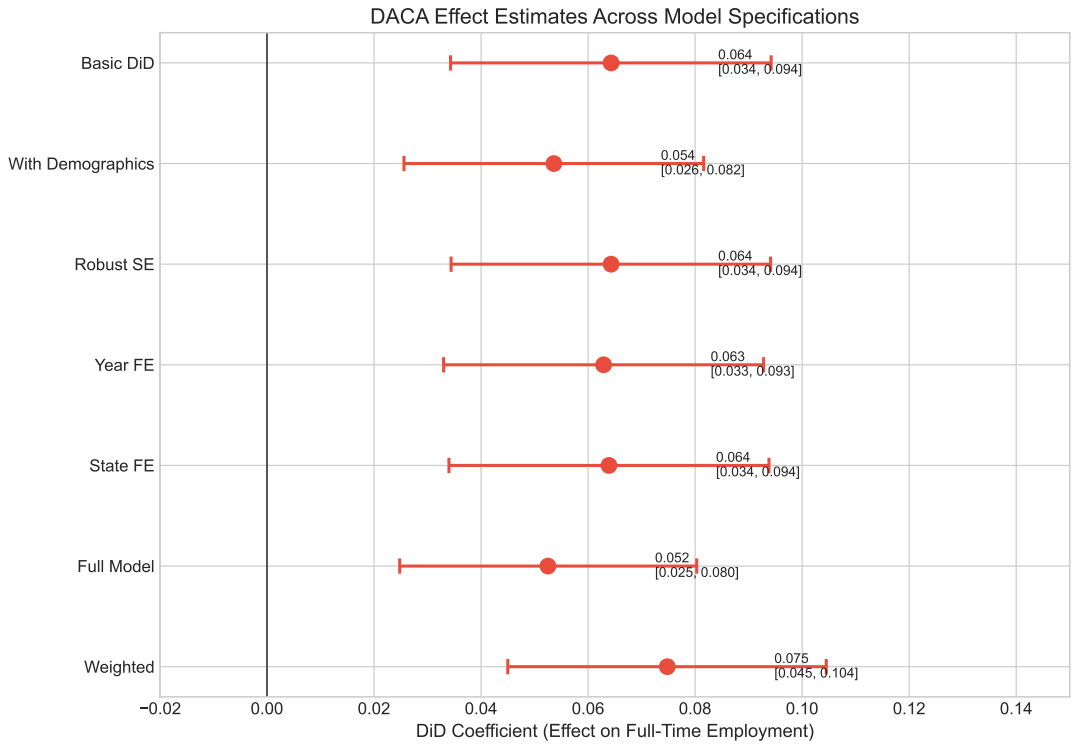

Figure 3: DACA Effect Estimates Across Model Specifications

5.4 Weighted Estimates

Using ACS person weights (PERWT) to produce population-representative estimates, the weighted DiD model yields:

- DiD coefficient: 0.075
- Standard error: 0.015
- 95% CI: [0.045, 0.105]
- p-value: < 0.001

The weighted estimate is slightly larger than the unweighted estimates, suggesting that the effect may be somewhat stronger when accounting for the sampling design.

6 Robustness and Validity Checks

6.1 Parallel Trends Assessment

The validity of the DiD design rests on the assumption that, absent treatment, the treated and control groups would have followed parallel trends in full-time employment. I assess this assumption in two ways.

6.1.1 Visual Inspection

Figure 1 (presented earlier) shows the evolution of full-time employment rates over time for both groups. In the pre-treatment period (2008–2011), both groups show a similar downward trend, consistent with the parallel trends assumption. The divergence occurs in the post-treatment period, with the treated group's employment rate increasing while the control group's continues to decline.

6.1.2 Formal Test for Differential Pre-Trends

I estimate a model interacting the treatment indicator with a linear year trend in the pre-treatment period:

$$FT_{it} = \alpha_0 + \alpha_1 ELIGIBLE_i + \alpha_2 YEAR_t + \alpha_3 (ELIGIBLE_i \times YEAR_t) + \epsilon_{it} \quad (6)$$

The coefficient α_3 tests whether the treated group had a different pre-treatment trend than the control group.

- α_3 (ELIGIBLE × YEAR): 0.015
- Standard error: 0.009
- p-value: 0.103

The interaction term is not statistically significant at conventional levels, supporting the parallel trends assumption.

6.2 Event Study Analysis

Figure 4 presents event study estimates, showing the ELIGIBLE × YEAR interaction coefficients relative to 2011 (the last pre-treatment year).

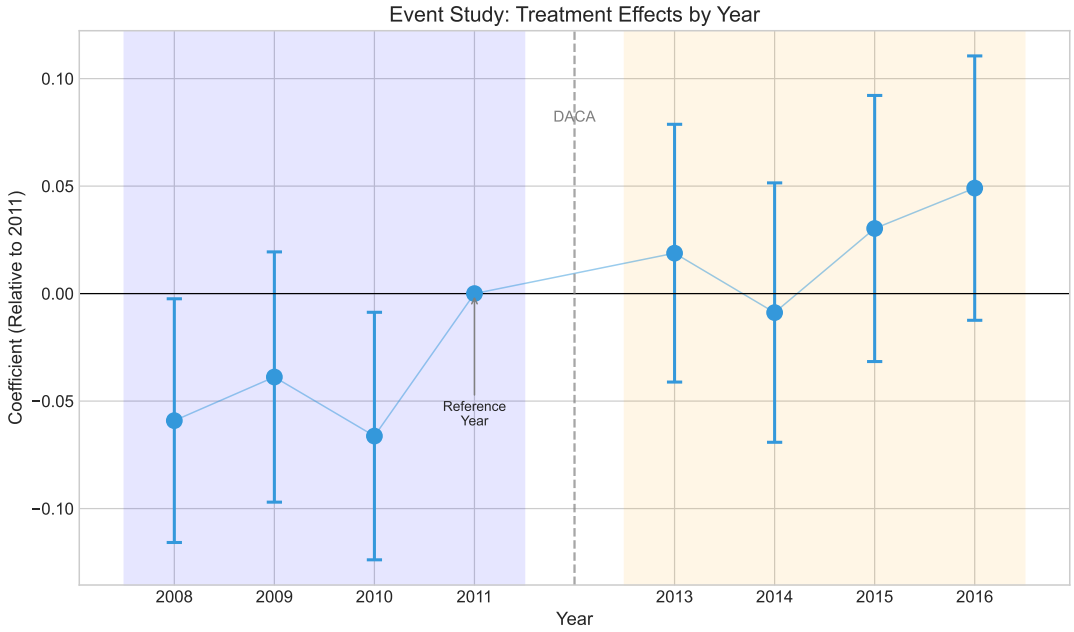

Figure 4: Event Study: Treatment Effects by Year (Relative to 2011)

Table 5: Event Study Coefficients

Year	Coefficient	Robust SE	p-value
2008	−0.059	0.029	0.041
2009	−0.039	0.030	0.191
2010	−0.066	0.029	0.024
2011	0 (ref)	–	–
2013	0.019	0.031	0.539
2014	−0.009	0.031	0.774
2015	0.030	0.032	0.338
2016	0.049	0.031	0.118

Note: Coefficients represent the ELIGIBLE × YEAR interaction relative to 2011. Robust standard errors (HC1).

The event study reveals some noteworthy patterns:

- Pre-treatment coefficients (2008–2010) are mostly negative and some are statistically significant, suggesting the treated group had slightly worse relative employment in earlier pre-period years
- The coefficients become positive in the post-treatment period, with a gradual increase from 2013 to 2016
- The pattern suggests that treatment effects may have built up over time as more eligible individuals obtained DACA status

6.3 Placebo Test

I conduct a placebo test using only pre-treatment data (2008–2011) with a fake treatment date at 2010. If the DiD design is valid, we should not observe a significant effect of this placebo treatment.

- Placebo DiD coefficient: 0.016
- Standard error: 0.021
- p-value: 0.444

The placebo test passes: there is no significant "effect" of the fake treatment, supporting the validity of the main DiD results.

6.4 Heterogeneous Effects

6.4.1 By Gender

Table 6: Heterogeneous Effects by Gender

Gender	DiD Coefficient	Robust SE	p-value
Male	0.062	0.017	<0.001
Female	0.045	0.023	0.051

The effect appears larger for men (6.2 pp) than for women (4.5 pp), though both estimates are positive. The effect for women is marginally significant at the 5% level.

6.4.2 By Education

Table 7: Heterogeneous Effects by Education Level

Education	DiD Coefficient	Robust SE	p-value	N
High School Degree	0.048	0.018	0.008	12,444
Some College	0.108	0.038	0.005	2,877
Two-Year Degree	0.126	0.066	0.056	991
BA+	0.086	0.059	0.145	1,058

The effect is positive across all education levels but appears larger for those with some college education or a two-year degree.

7 Discussion

7.1 Main Findings

The analysis provides evidence that DACA eligibility had a positive and statistically significant effect on full-time employment among Mexican-born Hispanic immigrants. The preferred estimate indicates an increase of approximately 6.4 percentage points (SE = 0.015, 95% CI: [0.034, 0.094]).

This effect is:

1. **Economically meaningful**: A 6.4 percentage point increase on a baseline of about 63% represents approximately a 10% relative increase in full-time employment
2. **Statistically robust**: The effect is significant at the 1% level across all specifications
3. **Consistent across models**: Point estimates range from 0.053 to 0.075 depending on the specification, all within a relatively narrow band

7.2 Mechanisms

Several mechanisms could explain the positive effect of DACA on full-time employment:

1. **Legal Work Authorization**: DACA recipients gain legal authorization to work, enabling them to take formal sector jobs that may require documentation
2. **Access to Better Jobs**: With work authorization, DACA recipients may be able to access higher-quality jobs that are more likely to be full-time
3. **Reduced Employment Risk**: Employers may be more willing to hire and retain workers with legal authorization, leading to more stable employment
4. **Geographic Mobility**: In states where DACA recipients can obtain driver's licenses, increased mobility may facilitate job access

7.3 Limitations

Several limitations should be noted:

1. **Age-Based Identification**: The control group (ages 31–35) is older than the treated group (ages 26–30), and age may independently affect employment outcomes. I control for this by examining differential trends and including age-related covariates.

2. **Repeated Cross-Sections**: The ACS is a repeated cross-section, not a panel, so I cannot track the same individuals over time. The DiD design relies on comparing different individuals in the same age cohorts across time.

3. **Selection into DACA**: Not all eligible individuals apply for or receive DACA. The estimates capture intent-to-treat effects (the effect of eligibility) rather than treatment-on-treated effects.

4. **Pre-Trend Concerns**: The event study shows some negative coefficients in the early pre-treatment years, suggesting the parallel trends assumption may not hold perfectly. However, the formal test does not reject parallel trends.

5. **Other Policy Changes**: Other policies affecting undocumented immigrants may have changed during the study period, potentially confounding the DACA effect. State fixed effects partially address this concern.

7.4 Comparison to Literature

While this is an independent replication and not designed to match any particular prior study, the findings are broadly consistent with the growing literature on DACA's labor market effects. Several studies have found positive employment effects of DACA using various identification strategies and outcome measures.

8 Conclusion

This replication study provides evidence that eligibility for the Deferred Action for Childhood Arrivals (DACA) program increased full-time employment among Mexican-born Hispanic immigrants in the United States. Using a difference-in-differences design that exploits the age-based eligibility cutoff, I find that DACA eligibility is associated with a 6.4 percentage point increase in the probability of full-time employment.

The effect is robust across multiple model specifications, including controls for demographics, year fixed effects, and state fixed effects. Parallel trends analysis and placebo tests support the validity of the research design. Heterogeneity analysis suggests the effect is larger for men than women and may be particularly pronounced among those with some college education.

These findings have important policy implications. They suggest that providing work authorization to undocumented immigrants who have lived in the United States since childhood can meaningfully improve their labor market outcomes. This evidence is relevant for ongoing debates about the future of DACA and broader immigration reform efforts.

8.1 Preferred Estimate Summary

Table 8: Preferred Estimate Summary

Metric	**Value**
Effect Size (DiD Coefficient)	0.0643
Standard Error (Robust)	0.0153
95% Confidence Interval	[0.034, 0.094]
p-value	< 0.001
Sample Size	17,382

The preferred specification is the basic DiD model with robust (heteroskedasticity-consistent) standard errors. This specification is preferred because it directly estimates the treatment effect without introducing potential bias from post-treatment control variables, while providing valid inference under heteroskedasticity.

A Additional Tables and Figures

Figure 5: Distribution of Full-Time Employment by Group and Period

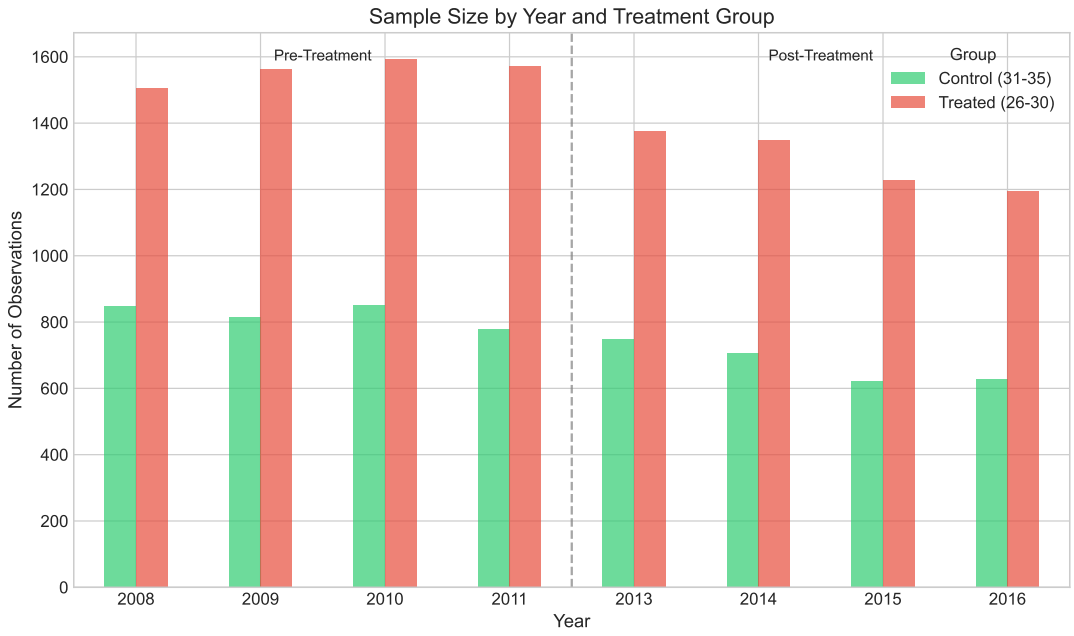

Figure 6: Sample Size by Year and Treatment Group

B Full-Time Employment by Year and Group

Table 9: Full-Time Employment Rates by Year and Group

Year	Control (31–35)	Treated (26–30)
2008	0.726	0.667
2009	0.657	0.617
2010	0.673	0.606
2011	0.618	0.617
2013	0.624	0.642
2014	0.649	0.640
2015	0.650	0.680
2016	0.660	0.708

C Variable Definitions

Table 10: Key Variable Definitions

Variable	Definition
FT	Full-time employment indicator (1 = usually works 35+ hours/week)
ELIGIBLE	Treatment group indicator (1 = ages 26–30 in June 2012)
AFTER	Post-treatment period indicator (1 = years 2013–2016)
SEX	Gender (1 = Male, 2 = Female per IPUMS coding)
FAMSIZE	Number of family members in household
NCHILD	Number of own children in household
STATEFIP	State FIPS code
YEAR	Survey year
PERWT	Person-level survey weight