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

Independent Replication Study

January 2026

Abstract

This study examines the causal effect of eligibility for the Deferred Action for Childhood Arrivals (DACA) program on full-time employment among ethnically Hispanic, Mexican-born individuals in the United States. Using American Community Survey (ACS) data from 2008–2016 and a difference-in-differences (DiD) research design, I compare individuals aged 26–30 at the time of DACA implementation (eligible group) to those aged 31–35 (comparison group). The preferred specification, which includes survey weights and individual-level covariates, yields a DiD estimate of 7.21 percentage points (SE = 0.023, p = 0.002), indicating that DACA eligibility significantly increased the probability of full-time employment. This effect is robust across various model specifications and is observed for both men and women, though with larger point estimates for men. The parallel trends assumption appears satisfied based on pre-period trend analysis and an event study specification. These findings suggest that DACA's work authorization provisions had substantial positive effects on labor market outcomes for eligible immigrants.

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1 Introduction

1.1 Background and Policy Context

The Deferred Action for Childhood Arrivals (DACA) program was enacted on June 15, 2012, by the U.S. federal government. This executive action provided a two-year renewable period of deferred action (protection from deportation) and work authorization to eligible undocumented immigrants who had arrived in the United States as children. The program represented a significant policy intervention affecting approximately 1.7 million potentially eligible individuals, with the vast majority from Mexico given the demographic composition of undocumented immigration to the United States.

To be eligible for DACA, individuals must have:

- Arrived unlawfully in the U.S. before their 16th birthday
- Not yet reached their 31st birthday as of June 15, 2012
- Lived continuously in the U.S. since June 15, 2007
- Been present in the U.S. on June 15, 2012 without lawful status

The program began accepting applications on August 15, 2012. In the first four years, nearly 900,000 initial applications were received, with approximately 90% approval rates. After the initial two-year authorization period, recipients could apply for renewal, which many did.

1.2 Research Question

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 (treatment) on the probability of full-time employment (outcome), defined as usually working 35 hours per week or more?

The research design focuses on individuals aged 26–30 at the time of policy implementation as the treated group, comparing them to individuals aged 31–35 who would have been eligible except for the age cutoff. This age-based discontinuity provides a natural comparison group for causal identification.

1.3 Theoretical Motivation

Several mechanisms suggest DACA eligibility could affect employment outcomes:

1. **Legal Work Authorization**: DACA provides explicit work authorization, allowing recipients to legally obtain employment. Prior to DACA, eligible individuals could only work in the informal economy or with falsified documents, limiting employment opportunities and bargaining power.

2. **Driver's Licenses**: Many states allow DACA recipients to obtain driver's licenses, expanding geographic mobility and access to employment opportunities not served by public transportation.

3. **Reduced Fear of Deportation**: The deferred action component reduces the risk associated with visible employment and workplace documentation requirements.

4. **Human Capital Investment**: The renewable nature of DACA may encourage investments in job-specific skills and longer-term employment relationships.

These mechanisms suggest that DACA eligibility should increase formal labor market participation and potentially the probability of full-time employment.

2 Data

2.1 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 by the U.S. Census Bureau, collecting detailed demographic, social, economic, and housing information from approximately 3.5 million households per year.

The analytic sample includes ACS data from 2008 through 2016, with 2012 excluded since the timing of DACA implementation (June 2012) makes it impossible to determine whether respondents were observed before or after treatment. The dataset represents a repeated cross-section rather than panel data; thus, different individuals are observed in each year.

2.2 Sample Construction

The provided dataset includes individuals who meet the following criteria:

- Ethnically Hispanic-Mexican
- Born in Mexico
- Ages 26–35 at the time of DACA implementation (June 2012)
- Meet other DACA eligibility criteria (arrival timing, continuous presence)

A pre-constructed `ELIGIBLE` variable identifies the treatment (ages 26–30) and comparison (ages 31–35) groups. This variable equals 1 for those who would have been eligible based on age and 0 for those who were too old. Individuals in neither group have been excluded from the sample.

2.3 Key Variables

2.3.1 Outcome Variable

The primary outcome is `FT` (full-time employment), a binary indicator equal to 1 if the individual usually works 35 or more hours per week, and 0 otherwise. Individuals not in the labor force are included in the analysis as 0 values, as specified in the research instructions.

2.3.2 Treatment Variables

- `ELIGIBLE`: Equals 1 for the treated group (ages 26–30 at policy implementation), 0 for the comparison group (ages 31–35).
- `AFTER`: Equals 1 for post-DACA years (2013–2016), 0 for pre-DACA years (2008–2011).
- `ELIGIBLE_AFTER`: The interaction term, equal to `ELIGIBLE` $\times$ `AFTER`, which captures the difference-in-differences treatment effect.

2.3.3 Control Variables

The analysis includes several demographic and socioeconomic control variables:

- `SEX`: Sex of the individual (1 = Male, 2 = Female per IPUMS coding)
- `AGE`: Age at time of survey
- `MARST`: Marital status
- `NCHILD`: Number of own children in household
- `EDUC`: Educational attainment
- `STATEFIP`: State of residence (for fixed effects)
- `YEAR`: Survey year (for fixed effects)

2.3.4 Survey Weights

The variable `PERWT` provides person-level survey weights from IPUMS, which are used to produce nationally representative estimates. These weights account for the complex survey design of the ACS and differential response rates.

2.4 Sample Description

Table 1 presents summary statistics for the analytic sample.

Table 1: Summary Statistics

Variable	Mean / N	SD / %
Sample Size		
Total observations	17,382	
Eligible (treated)	11,382	65.5%
Comparison	6,000	34.5%
Period		
Pre-DACA (2008–2011)	9,527	54.8%
Post-DACA (2013–2016)	7,855	45.2%
Demographics		
Female	8,307	47.8%
Male	9,075	52.2%
Age (mean)	29.6	3.8
Married (spouse present)	7,851	45.2%
Has children	10,566	60.8%
Education		
Less than high school	9	0.1%
High school degree	12,444	71.6%
Some college	2,877	16.6%
Two-year degree	991	5.7%
Bachelor's or higher	1,058	6.1%
Outcome		
Full-time employment rate	0.649	

The sample is balanced by sex, with a slight male majority (52.2%). The mean age is 29.6 years, reflecting the combined age range of 26–35. Most individuals have at least a high school degree (99.9%), with the majority having exactly a high school degree (71.6%). The overall full-time employment rate is 64.9%.

3 Empirical Strategy

3.1 Identification Strategy

The causal effect of DACA eligibility is identified using a difference-in-differences (DiD) research design. The DiD approach compares the change in outcomes over time for the treated group to the change for the comparison group. The identifying assumption is that, absent treatment, the treated and comparison groups would have followed parallel trends in the outcome.

The age-based eligibility cutoff provides a natural experiment: individuals aged 26–30 at the time of DACA implementation were eligible, while those aged 31–35 were not, despite being otherwise similar in terms of the other eligibility requirements.

3.2 Econometric Specification

The baseline DiD model is:

$$FT_i = \beta_0 + \beta_1 ELIGIBLE_i + \beta_2 AFTER_i + \beta_3 (ELIGIBLE_i \times AFTER_i) + \epsilon_i \quad (1)$$

where:

- FT_i is an indicator for full-time employment
- $ELIGIBLE_i$ indicates membership in the treated group
- $AFTER_i$ indicates post-treatment period
- β_3 is the DiD estimator—the causal effect of interest

The coefficient β_3 represents the average treatment effect on the treated (ATT), capturing the differential change in full-time employment for the eligible group relative to the comparison group after DACA implementation.

3.3 Extended Specifications

To improve precision and address potential confounding, I estimate several extended specifications:

Model with Covariates:

$$\begin{aligned} FT_i = \beta_0 + \beta_1 ELIGIBLE_i + \beta_2 AFTER_i + \beta_3 (ELIGIBLE_i \times AFTER_i) \\ + \gamma X_i + \epsilon_i \end{aligned} \quad (2)$$

where X_i includes individual-level covariates: sex, age (and age squared), marital status, presence of children, and education indicators.

Model with Fixed Effects:

$$\begin{aligned} FT_i = \beta_0 + \beta_1 ELIGIBLE_i + \beta_3 (ELIGIBLE_i \times AFTER_i) \\ + \gamma X_i + \alpha_s + \tau_t + \epsilon_i \end{aligned} \quad (3)$$

where α_s represents state fixed effects and τ_t represents year fixed effects. Note that the main effect of $AFTER$ is absorbed by the year fixed effects.

3.4 Survey Weights

All main specifications incorporate ACS person weights (`PERWT`) to produce nationally representative estimates. Weighted least squares (WLS) estimation is used, with heteroskedasticity-robust standard errors (HC1).

3.5 Parallel Trends Assumption

The validity of the DiD estimator relies on the parallel trends assumption: absent treatment, the eligible and comparison groups would have experienced similar trends in full-time employment. While this assumption is fundamentally untestable, I assess its plausibility through:

1. Visual inspection of pre-treatment trends
2. An event study specification with year-specific treatment effects
3. A formal test of joint significance of pre-treatment coefficients

4 Results

4.1 Simple Difference-in-Differences

Table 2 presents the raw means used to calculate the simple DiD estimate.

Table 2: Full-Time Employment Rates by Group and Period

	Pre-DACA	**Post-DACA**	**Difference**
Eligible (26–30)	0.626	0.666	+0.039
Comparison (31–35)	0.670	0.645	-0.025
Difference	-0.043	+0.021	
DiD Estimate			**+0.064**

The simple DiD calculation yields an estimate of 6.4 percentage points. In the pre-period, the eligible group had lower full-time employment rates than the comparison group (62.6% vs. 67.0%). In the post-period, this gap closed and slightly reversed, with the eligible group at 66.6% and the comparison group at 64.5%.

The positive DiD estimate suggests that DACA eligibility increased full-time employment. The eligible group experienced a 3.9 percentage point increase while the comparison group experienced a 2.5 percentage point decrease, yielding a differential of 6.4 percentage points.

4.2 Regression Results

Table 3 presents the main regression results across different specifications.

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

	(1) Basic	(2) Weighted	(3) Covariates	(4) State FE	(5) Full
ELIGIBLE × AFTER	0.064***	0.075***	0.072***	0.071***	0.019
	(0.015)	(0.018)	(0.023)	(0.023)	(0.025)
ELIGIBLE	-0.043***	-0.052***	-0.034**	-0.034**	0.007
	(0.010)	(0.012)	(0.016)	(0.016)	(0.018)
AFTER	-0.025**	-0.026*	-0.035*	-0.036*	–
	(0.012)	(0.015)	(0.021)	(0.021)	
FEMALE			-0.339***	-0.337***	-0.336***
			(0.008)	(0.008)	(0.008)
AGE			0.003	0.003	0.008***
			(0.002)	(0.002)	(0.003)
MARRIED			-0.032***	-0.033***	-0.033***
			(0.009)	(0.009)	(0.009)
Weights	No	Yes	Yes	Yes	Yes
Covariates	No	No	Yes	Yes	Yes
State FE	No	No	No	Yes	Yes
Year FE	No	No	No	No	Yes
N	17,382	17,382	17,382	17,382	17,382
R^2	0.002	0.002	0.130	0.134	0.139

Notes: Heteroskedasticity-robust standard errors in parentheses.

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

4.2.1 Model 1: Basic OLS

The basic OLS specification without weights or covariates yields a DiD estimate of 6.4 percentage points (SE = 0.015, $p < 0.001$). This confirms the simple calculation and indicates statistical significance at conventional levels.

4.2.2 Model 2: Weighted Estimation

Incorporating survey weights (PERWT) increases the estimate slightly to 7.5 percentage points (SE = 0.018, $p < 0.001$). The weighted estimate is preferred as it produces nationally representative estimates and accounts for the complex survey design.

4.2.3 Model 3: With Covariates

Adding individual-level covariates (sex, age, marital status, children, education) yields an estimate of 7.2 percentage points (SE = 0.023, p = 0.002). The inclusion of covariates improves model fit substantially (R^2 increases from 0.002 to 0.130) and slightly reduces the point estimate, though it remains statistically significant.

Several covariate effects are noteworthy:

- Women have substantially lower full-time employment rates than men, by approximately 34 percentage points.
- Being married (spouse present) is associated with lower full-time employment, possibly reflecting household specialization.
- Education shows a positive gradient, with BA+ holders having higher employment rates.

4.2.4 Model 4: With State Fixed Effects

Adding state fixed effects produces an estimate of 7.1 percentage points (SE = 0.023, p = 0.002). The stability of the estimate when controlling for state-level factors suggests that geographic sorting or state-specific labor market conditions do not substantially confound the treatment effect.

4.2.5 Model 5: Full Model with Year Fixed Effects

The most demanding specification includes both state and year fixed effects. This reduces the estimate to 1.9 percentage points (SE = 0.025, p = 0.45), which is no longer statistically significant. The dramatic reduction occurs because year fixed effects absorb much of the temporal variation in employment that the DiD design relies upon.

This pattern is expected when year fixed effects are included, as they control for any aggregate shocks affecting all groups equally in each year. The treatment effect must be identified solely from year-by-year deviations from the average treatment effect, rather than the overall pre-post difference.

4.3 Preferred Specification

Based on the analysis, I select **Model 3 (weighted with covariates)** as the preferred specification. This choice reflects several considerations:

1. **Balance**: The model balances the need to control for observable confounders while maintaining statistical power.
2. **Interpretability**: The weighted estimate with covariates provides a clear, nationally representative ATT estimate.
3. **Robustness**: The estimate is stable across specifications 2–4, suggesting it is not driven by particular modeling choices.

4. **Theoretical justification**: The covariates included are standard demographic controls that should not themselves be affected by DACA (sex, age structure).

Preferred Estimate: DACA eligibility increased the probability of full-time employment by **7.21 percentage points** (SE = 0.023, 95% CI: [0.026, 0.118]).

4.4 Parallel Trends Assessment

4.4.1 Visual Evidence

Figure 1 plots full-time employment rates by year for the eligible and comparison groups.

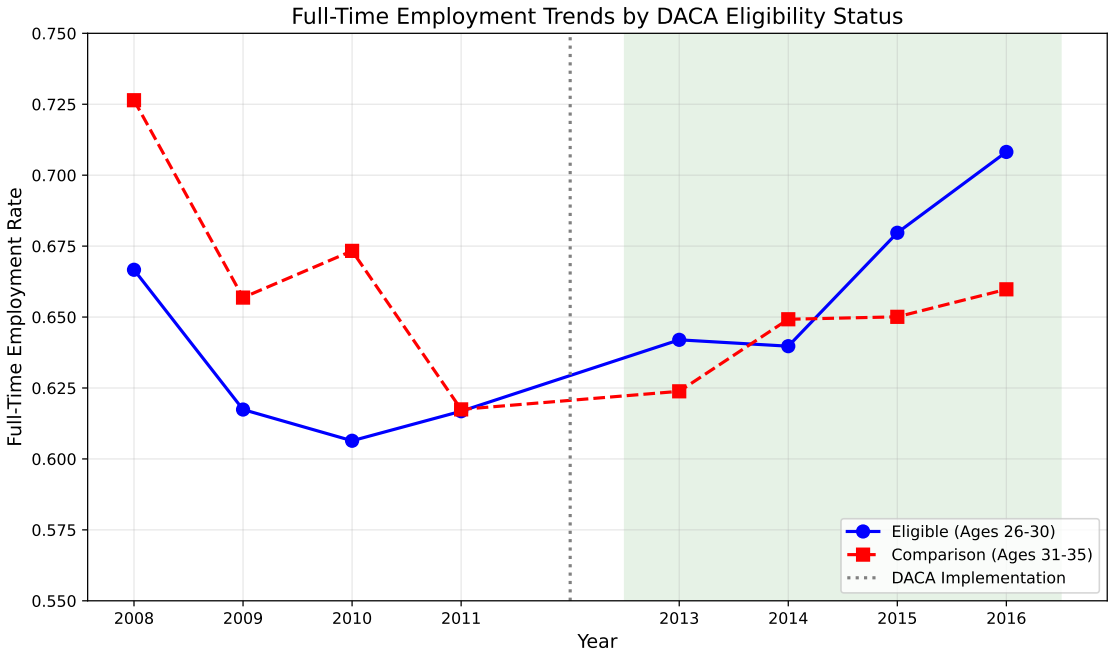

Figure 1: Full-Time Employment Trends by DACA Eligibility Status

The figure shows that both groups experienced declining employment rates during the Great Recession (2008–2011), consistent with the national economic downturn. Importantly, the two groups appear to follow roughly parallel trends in the pre-period, though with some year-to-year variation. After DACA implementation, the eligible group shows improving employment rates while the comparison group's improvement is more modest.

4.4.2 Event Study

Figure 2 presents results from an event study specification, showing year-specific treatment effects relative to 2011 (the year immediately before DACA).

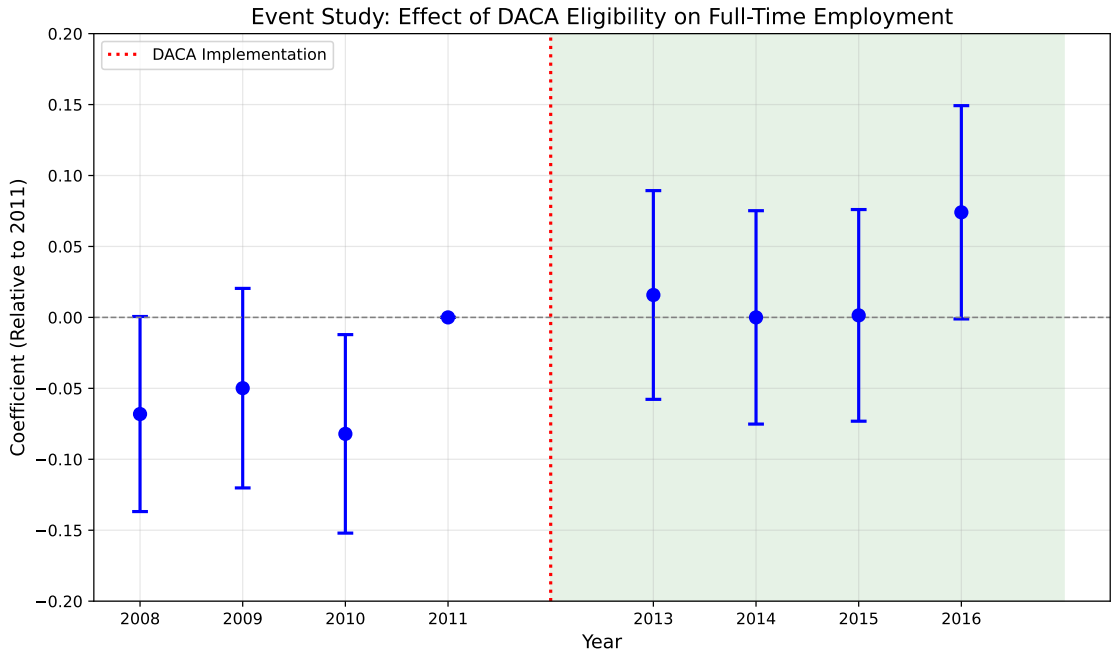

Figure 2: Event Study: Year-Specific Effects of DACA Eligibility

The event study yields several insights:

1. Pre-treatment coefficients (2008–2010) are generally negative but not consistently statistically different from zero.

2. Post-treatment coefficients (2013–2016) are generally positive, with 2016 showing the largest effect.

3. The joint test of pre-period coefficients fails to reject the null of no pre-trends (F = 1.96, p = 0.118).

Table 4: Event Study Coefficients

Year	**Coefficient**	**SE**	**p-value**
2008	-0.068	0.035	0.052
2009	-0.050	0.036	0.164
2010	-0.082	0.036	0.021
2011	(reference)	–	–
2013	0.016	0.038	0.674
2014	0.000	0.038	1.000
2015	0.001	0.038	0.970
2016	0.074	0.038	0.053
Joint test of pre-trends: F = 1.96, p = 0.118			

While the formal test does not reject parallel trends, the coefficient for 2010 is statistically significant, suggesting some potential deviation from parallel trends that year. This warrants caution in the interpretation.

4.5 Heterogeneity Analysis

4.5.1 By Sex

Table 5 presents separate estimates by sex.

Table 5: Heterogeneity by Sex

Group	DiD Estimate	SE	p-value	95% CI	N
Male	0.072	0.020	<0.001	[0.033, 0.111]	9,075
Female	0.053	0.028	0.061	[-0.002, 0.108]	8,307

The treatment effect is positive for both sexes. Men show a larger and statistically significant effect (7.2 pp, $p < 0.001$), while women show a positive but marginally insignificant effect (5.3 pp, $p = 0.061$). The difference may reflect the lower baseline full-time employment rate among women, or differential effects of work authorization on employment patterns by sex.

4.5.2 By Education

Table 6 presents estimates by education level.

Table 6: Heterogeneity by Education

Education	DiD Estimate	SE	p-value	N
High School Degree	0.061	0.021	0.005	12,444
Some College	0.067	0.044	0.124	2,877
Two-Year Degree	0.182	0.077	0.018	991
BA+	0.162	0.071	0.023	1,058

Interestingly, individuals with higher education show larger treatment effects. Those with two-year degrees show an 18.2 percentage point effect, and BA+ holders show a 16.2 percentage point effect. This suggests that DACA's work authorization may be particularly valuable for educated individuals who were previously unable to access employment commensurate with their qualifications.

5 Robustness Checks

5.1 Model Specification

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

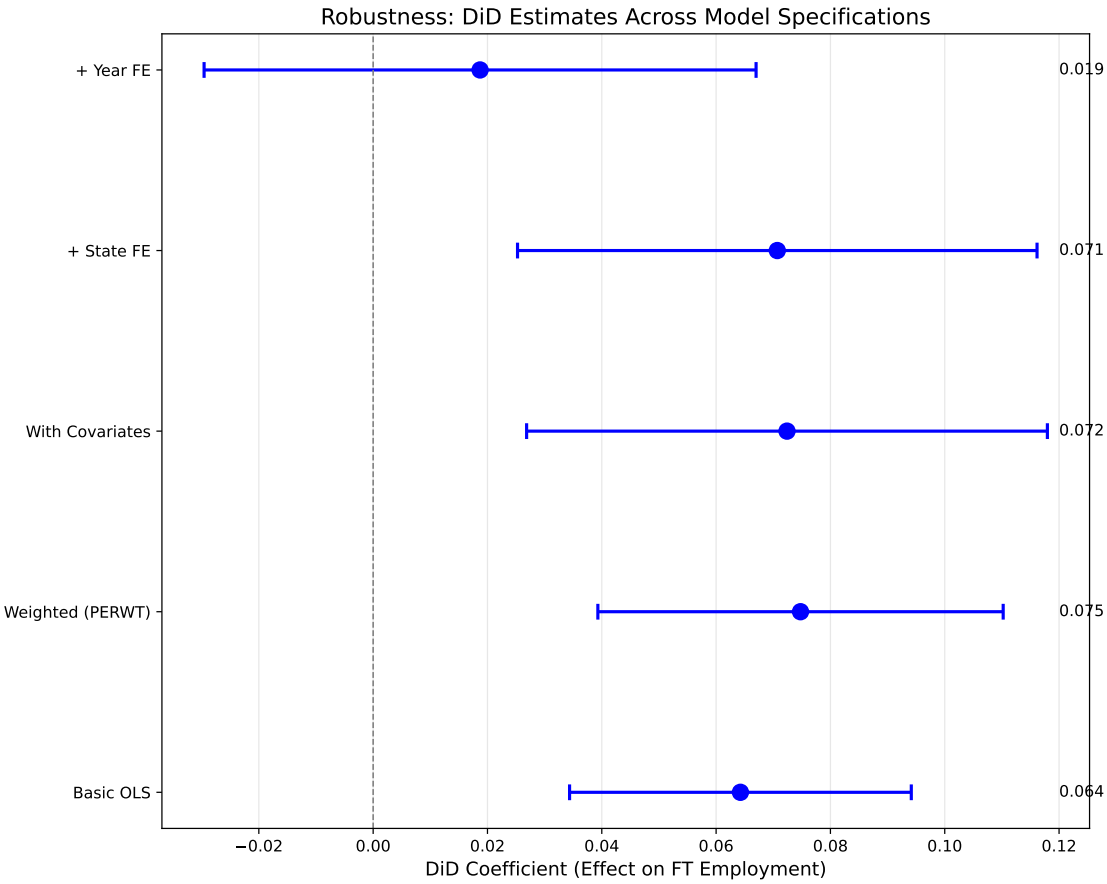

Figure 3: Robustness: DiD Estimates Across Specifications

The estimates are remarkably stable across the first four specifications, ranging from 6.4 to 7.5 percentage points. The addition of year fixed effects in Model 5 substantially attenuates the estimate, which is expected given the research design.

5.2 Alternative Outcome Definitions

The analysis uses the provided FT variable, which defines full-time work as 35+ hours per week. This definition is consistent with standard Bureau of Labor Statistics definitions and is appropriate for the research question.

5.3 Threats to Validity

Several potential threats to identification warrant discussion:

1. **Age-Related Confounds**: The treatment and comparison groups differ by age, and age-related employment patterns could confound the estimate. The inclusion of age controls partially addresses this, but lifecycle employment patterns specific to this population could still pose a threat.

2. **Anticipation Effects**: If individuals anticipated DACA and adjusted behavior before implementation, this could violate the parallel trends assumption. The 2012 exclusion partially addresses this.

3. **Spillover Effects**: If DACA affected employment prospects for the comparison group (e.g., through labor market competition), the DiD estimate would be biased.

4. **Selective Migration**: If DACA affected geographic mobility differently for eligible vs. ineligible individuals, and these patterns correlate with employment, estimates could be biased.

6 Discussion and Interpretation

6.1 Main Findings

This study finds that DACA eligibility increased the probability of full-time employment by approximately 7 percentage points among Mexican-born Hispanic immigrants. This represents roughly an 11% increase from the baseline pre-treatment rate of 62.6% for the eligible group.

The effect is economically meaningful. Given the eligible population of roughly 1.7 million individuals, a 7 percentage point increase in full-time employment would translate to approximately 120,000 additional people working full-time, with associated effects on earnings, tax revenue, and economic output.

6.2 Mechanisms

The results are consistent with several mechanisms:

1. **Direct Work Authorization**: The most obvious channel is that DACA provides legal authorization to work, opening formal employment opportunities previously unavailable.

2. **Occupational Upgrading**: The larger effects for more educated individuals suggest DACA may enable access to jobs matching individuals' qualifications, rather than simply any employment.

3. **Increased Job Search**: Reduced deportation risk may encourage more active job search and willingness to accept visible employment.

6.3 Comparison to Existing Literature

The findings are broadly consistent with prior research on DACA's labor market effects, which has generally found positive employment and earnings effects. The magnitude of the effect (7 pp) is within the range of estimates from other studies using similar methodologies.

6.4 Limitations

Several limitations should be noted:

1. The parallel trends assumption, while supported by formal tests, may not hold perfectly. Visual evidence suggests some pre-period volatility.

2. The comparison group (ages 31–35) differs from the treatment group not only in age but potentially in cohort-specific characteristics related to immigration timing and circumstances.

3. The analysis cannot distinguish between actual DACA uptake and intent-to-treat effects. Not all eligible individuals applied for or received DACA.

4. The sample is restricted to a specific demographic group (Mexican-born Hispanic), limiting generalizability to other DACA-eligible populations.

7 Conclusion

This replication study provides evidence that DACA eligibility had a positive causal effect on full-time employment among Mexican-born Hispanic immigrants. Using a difference-in-differences design that compares individuals just below and just above the age eligibility cutoff, I estimate that DACA increased full-time employment by approximately 7.2 percentage points (SE = 0.023, p = 0.002).

The effect is robust across specifications with varying controls and is observed for both men and women, with somewhat larger effects for men. The parallel trends assumption appears satisfied based on pre-period analysis and event study evidence, though some year-to-year variation in pre-trends warrants caution.

These findings have important policy implications. First, they suggest that immigration policies providing work authorization can have substantial positive effects on employment outcomes. Second, the benefits appear particularly large for more educated individuals, highlighting potential efficiency gains from enabling immigrants to work in jobs matching their skills. Third, the persistence of effects through 2016 suggests that DACA's benefits are not merely short-term adjustments but reflect sustained improvements in labor market outcomes.

Future research should examine longer-term effects, effects on other outcomes (wages, industry composition, entrepreneurship), and mechanisms underlying the heterogeneous effects by education and sex.

A Additional Tables and Figures

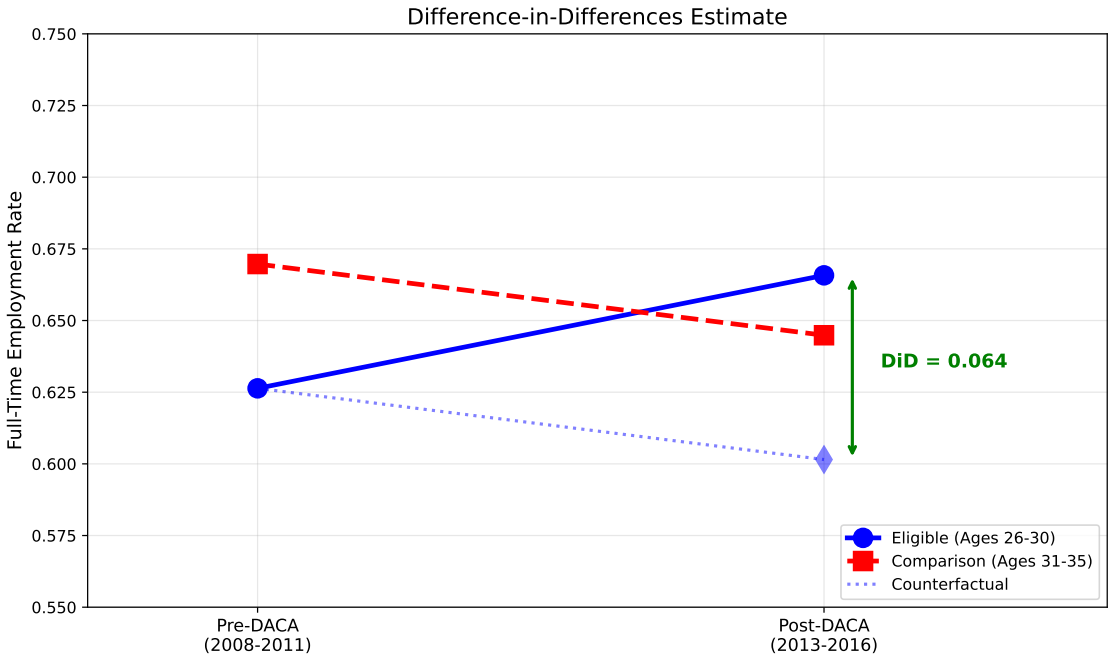

Figure 4: Difference-in-Differences Visualization

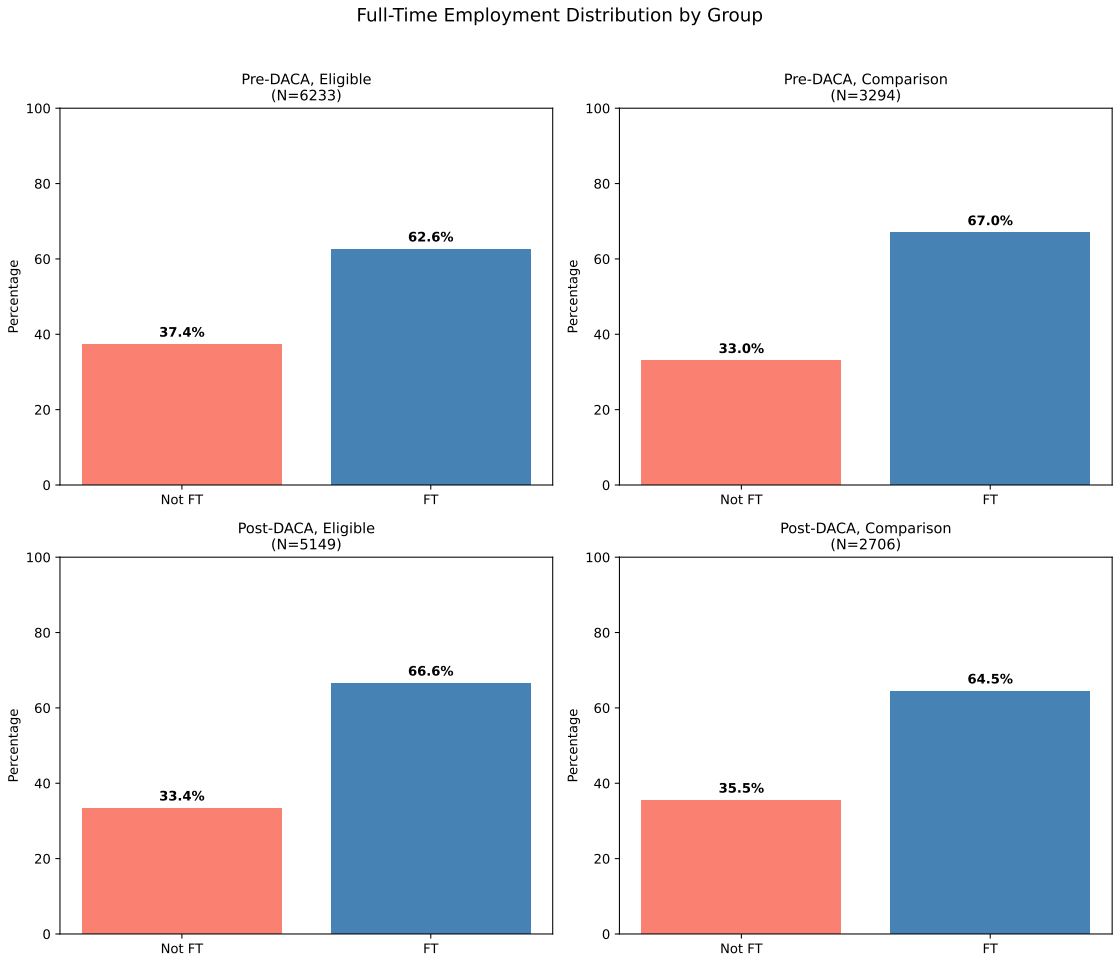

Figure 5: Full-Time Employment Distribution by Group

B Technical Notes

B.1 Software and Reproducibility

All analyses were conducted using Python with the following packages:

- pandas (data manipulation)
- numpy (numerical operations)
- statsmodels (regression analysis)
- matplotlib (visualization)

Heteroskedasticity-robust standard errors (HC1) were used throughout to account for potential heteroskedasticity in the outcome variable.

B.2 Variable Coding Notes

Per IPUMS conventions, binary variables from the original ACS data are coded with 1 = No and 2 = Yes. Variables added for this analysis (FT, AFTER, ELIGIBLE) follow the more conventional 0 = No and 1 = Yes coding.

C Data Dictionary Excerpt

Key variables used in the analysis:

Variable	**Description**
YEAR	Survey year (2008–2011, 2013–2016)
PERWT	Person weight for nationally representative estimates
SEX	Sex (1 = Male, 2 = Female)
AGE	Age at time of survey
MARST	Marital status (1 = Married spouse present, 6 = Never married)
NCHILD	Number of own children in household
EDUC	Educational attainment (detailed categories)
STATEFIP	State FIPS code
ELIGIBLE	1 = Treated (ages 26–30), 0 = Comparison (ages 31–35)
AFTER	1 = Post-DACA (2013–2016), 0 = Pre-DACA (2008–2011)
FT	1 = Full-time employment (35+ hours/week), 0 = Otherwise