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

Replication Study 91

Independent Replication

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Abstract

This report presents an independent replication analysis estimating the causal effect of eligibility for the Deferred Action for Childhood Arrivals (DACA) program on full-time employment among Mexican-born Hispanic individuals in the United States. Using a difference-in-differences research design that compares individuals aged 26–30 (treatment group) to those aged 31–35 (control group) at the time of DACA implementation in June 2012, I estimate the effect of the policy on full-time employment (defined as usually working 35 or more hours per week). Using data from the American Community Survey (ACS) for years 2008–2011 (pre-DACA) and 2013–2016 (post-DACA), the preferred specification yields a statistically significant positive effect of approximately 5.9 percentage points (95% CI: 2.6 to 9.2 percentage points), suggesting that DACA eligibility increased full-time employment rates among the treated population. Results are robust across multiple specifications including models with and without covariates and fixed effects.

Contents

1 Introduction

The Deferred Action for Childhood Arrivals (DACA) program, enacted on June 15, 2012, represented a significant policy intervention affecting undocumented immigrants who arrived in the United States as children. The program allowed eligible individuals to apply for work authorization and temporary relief from deportation for renewable two-year periods. Given that DACA provides legal work authorization and enables recipients to obtain driver's licenses and other identification documents in many states, the program is hypothesized to improve labor market outcomes for eligible individuals.

This report presents an independent replication analysis examining the causal effect of DACA eligibility on full-time employment among Mexican-born Hispanic individuals in the United States. The research question is:

> *Among ethnically Hispanic-Mexican Mexican-born people living in the United States, what was the causal impact of eligibility for the Deferred Action for Childhood Arrivals (DACA) program on the probability of being employed full-time (defined as usually working 35 hours per week or more)?*

To address this question, I employ a difference-in-differences (DiD) research design comparing individuals who were ages 26–30 at the time of DACA implementation (treatment group) to those who were ages 31–35 (control group). The key identifying assumption is that, absent DACA, the treatment and control groups would have experienced parallel trends in full-time employment rates.

2 Background

2.1 The DACA Program

DACA was enacted by executive action on June 15, 2012, following years of unsuccessful congressional attempts to pass comprehensive immigration reform. The program established eligibility criteria requiring applicants to have:

- Arrived in the United States before their 16th birthday
- Not yet reached their 31st birthday as of June 15, 2012
- Lived continuously in the US since June 15, 2007
- Been physically present in the US on June 15, 2012

- Not held lawful immigration status (citizenship or legal residency) at that time

Applications 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% receiving approval. While the program was not restricted to any particular country of origin, the structure of undocumented immigration to the United States meant that the majority of eligible individuals were from Mexico.

2.2 Expected Effects on Employment

Prior to DACA, undocumented immigrants faced substantial barriers to formal employment. They could not legally work for wages, leading many to work in informal or underground labor markets often characterized by lower wages, poorer working conditions, and limited hours. DACA's provision of work authorization was expected to improve labor market outcomes through several channels:

1. **Legal work authorization**: Recipients could obtain Social Security numbers and work legally, accessing formal employment opportunities.

2. **Driver's licenses**: In many states, DACA recipients became eligible for driver's licenses, expanding geographic job search range and commuting possibilities.

3. **Reduced fear of deportation**: The temporary protection from deportation may have encouraged recipients to invest in human capital and pursue better employment opportunities.

4. **Credential recognition**: Legal status may have allowed recipients to have their education and skills more readily recognized by employers.

3 Data

3.1 Data Source

The analysis uses data from the American Community Survey (ACS) as provided by IPUMS USA. The provided dataset includes observations from 2008 through 2016, excluding 2012 (since it cannot be determined whether observations in 2012 were recorded before or after DACA implementation). The sample has been pre-processed to include only individuals meeting the eligibility criteria for treatment and control group assignment.

3.2 Sample Construction

The analytic sample consists of:

- **Treatment Group (ELIGIBLE=1)**: Mexican-born Hispanic individuals who were ages 26–30 as of June 15, 2012, and would have been eligible for DACA based on other criteria.
- **Control Group (ELIGIBLE=0)**: Mexican-born Hispanic individuals who were ages 31–35 as of June 15, 2012, and would have been eligible for DACA if not for their age.

The total sample consists of 17,382 observations across 8 years (2008–2011 and 2013–2016). Table 1 presents the sample distribution by year and eligibility status.

Table 1: Sample Sizes by Year and DACA Eligibility Status

	Sample Size		FT Employment Rate	
Year	Treatment	Control	Treatment	Control
Pre-DACA Period				
2008	1,506	848	0.667	0.726
2009	1,563	816	0.617	0.657
2010	1,593	851	0.606	0.673
2011	1,571	779	0.617	0.617
Post-DACA Period				
2013	1,377	747	0.642	0.624
2014	1,349	707	0.640	0.649
2015	1,227	623	0.680	0.650
2016	1,196	629	0.708	0.660
Total	11,382	6,000	—	—

3.3 Key Variables

The analysis uses the following key variables:

- **FT**: Binary outcome variable equal to 1 if the individual is employed full-time (usually working 35+ hours per week), 0 otherwise. Individuals not in the labor force are included with FT=0.
- **ELIGIBLE**: Binary treatment indicator equal to 1 for individuals aged 26–30 at the time of DACA implementation (treatment group), 0 for those aged 31–35 (control group).

- **AFTER**: Binary period indicator equal to 1 for years 2013–2016 (post-DACA), 0 for years 2008–2011 (pre-DACA).
- **PERWT**: Person weights from ACS used to generate population-representative estimates.

3.3.1 Covariates

Additional variables available for covariate adjustment include:

- Demographics: SEX, AGE, MARST (marital status), NCHILD (number of children)
- Education: EDUC_RECODE (educational attainment in 5 categories)
- Geographic: STATEFIP (state of residence), REGION
- State policy variables: Various indicators of state-level policies affecting immigrants

4 Methodology

4.1 Research Design

I employ a difference-in-differences (DiD) research design to estimate the causal effect of DACA eligibility on full-time employment. The DiD approach compares the change in outcomes over time between the treatment group (DACA-eligible individuals aged 26–30) and the control group (individuals aged 31–35 who would have been eligible but for their age).

The fundamental DiD estimand is:

$$\hat{\delta}_{DiD} = (\bar{Y}_{T,post} - \bar{Y}_{T,pre}) - (\bar{Y}_{C,post} - \bar{Y}_{C,pre}) \tag{1}$$

where T denotes the treatment group, C the control group, and $pre/post$ indicate the pre- and post-DACA periods.

4.2 Econometric Specification

The basic regression model takes the form:

$$FT_i = \beta_0 + \beta_1 ELIGIBLE_i + \beta_2 AFTER_t + \delta(ELIGIBLE_i \times AFTER_t) + \varepsilon_i \tag{2}$$

where:

- β_1 captures baseline differences between treatment and control groups
- β_2 captures common time trends affecting both groups
- δ is the DiD estimate—the causal effect of DACA eligibility on full-time employment

The preferred specification augments Equation 2 with year fixed effects and individual-level covariates:

$$FT_i = \beta_0 + \beta_1 ELIGIBLE_i + \sum_t \gamma_t YEAR_t + \delta(ELIGIBLE_i \times AFTER_t) + X_i'\theta + \varepsilon_i \quad (3)$$

where X_i includes demographic controls (sex, age, marital status, children, education).

All specifications use survey weights (PERWT) to generate population-representative estimates and heteroskedasticity-robust standard errors (HC1).

4.3 Identification Assumptions

The key identifying assumption for the DiD estimator is the **parallel trends assumption**: absent DACA, the treatment and control groups would have experienced parallel trends in full-time employment rates. Formally:

$$E[Y_{0,post} - Y_{0,pre}|T = 1] = E[Y_{0,post} - Y_{0,pre}|T = 0] \quad (4)$$

where Y_0 denotes the potential outcome under no treatment.

While this assumption is fundamentally untestable, I examine pre-treatment trends to assess its plausibility. Additionally, the use of a comparison group that is similar to the treatment group (differing only in age at the time of DACA) strengthens the credibility of the design.

Other assumptions include:

- **No anticipation**: Outcomes in the pre-period are not affected by expectations of future treatment.
- **No spillovers**: DACA eligibility of some individuals does not affect employment of others.
- **Stable Unit Treatment Value Assumption (SUTVA)**: Each individual has well-defined potential outcomes unaffected by others' treatment status.

5 Results

5.1 Descriptive Statistics

Table 2 presents weighted means for key variables by eligibility status and time period.

Table 2: Descriptive Statistics by Eligibility Status and Period (Weighted Means)

	Pre-DACA (2008–2011)		Post-DACA (2013–2016)	
Variable	Treatment	Control	Treatment	Control
Full-time employed (FT)	0.637	0.689	0.686	0.663
Female	0.466	0.434	0.451	0.434
Married	0.391	0.506	0.418	0.532
Number of children	0.90	1.47	1.01	1.46
Has children	0.470	0.638	0.497	0.625
Age	25.8	30.5	28.9	34.0
N (unweighted)	6,233	3,294	5,149	2,706

Several patterns emerge from the descriptive statistics. First, the treatment group has systematically lower full-time employment rates than the control group in the pre-period, consistent with the younger age of the treatment group. Second, while full-time employment rates declined slightly for the control group from pre- to post-period, they increased substantially for the treatment group. Third, the treatment group has fewer children on average, consistent with their younger age.

5.2 Simple Difference-in-Differences

Table 3 presents the simple 2×2 difference-in-differences calculation.

Table 3: Simple 2×2 Difference-in-Differences (Weighted Means)

	Pre-DACA	Post-DACA	Difference
Treatment (Ages 26–30)	0.637	0.686	+0.049
Control (Ages 31–35)	0.689	0.663	−0.026
Difference-in-Differences			**0.075**

The simple DiD estimate indicates that DACA eligibility increased full-time employment by approximately 7.5 percentage points. While full-time employment rates for the control group declined by 2.6 percentage points from the pre- to post-period, rates for the treatment group increased by 4.9 percentage points, yielding a DiD estimate of 7.5 percentage points.

5.3 Regression Results

Table 4 presents regression estimates across multiple specifications, progressing from the simplest model to the most comprehensive.

Table 4: Difference-in-Differences Regression Results

	(1)	(2)	(3)	(4)	(5)	(6)
ELIGIBLE × AFTER	0.064***	0.075***	0.075***	0.072***	0.059***	0.058***
	(0.015)	(0.015)	(0.018)	(0.018)	(0.017)	(0.017)
ELIGIBLE	−0.043***	−0.052***	−0.052***	−0.050***	−0.005	−0.004
	(0.010)	(0.010)	(0.012)	(0.012)	(0.018)	(0.018)
Female					−0.337***	−0.336***
					(0.008)	(0.008)
Married					−0.025***	−0.027***
					(0.009)	(0.009)
Age					0.008***	0.008***
					(0.003)	(0.003)
Has children					0.011	0.011
					(0.009)	(0.009)
Survey weights	No	Yes	Yes	Yes	Yes	Yes
Robust SE	No	No	Yes	Yes	Yes	Yes
Year FE	No	No	No	Yes	Yes	Yes
Education FE	No	No	No	No	Yes	Yes
State FE	No	No	No	No	No	Yes
R-squared	0.002	0.002	0.002	0.006	0.134	0.138
N	17,382	17,382	17,382	17,382	17,382	17,382

Note: *p<0.10, **p<0.05, ***p<0.01. Robust standard errors in parentheses.
Education controls include dummies for HS degree, some college, associate degree, and BA+.

5.3.1 Key Findings

1. **Robust positive effect**: The DiD coefficient is positive and statistically significant across all specifications, ranging from 5.8 to 7.5 percentage points.

2. **Effect stability**: Adding covariates reduces the point estimate slightly (from 7.5 to 5.9 percentage points), but the effect remains economically and statistically significant.

3. **Baseline differences**: The negative coefficient on ELIGIBLE in simple specifications indicates that the treatment group had lower baseline full-time employment rates, but this difference largely disappears when controlling for demographics.

4. **Gender gap**: Women have substantially lower full-time employment rates (34 percentage points lower than men), a large and significant effect.

5. **Age effect**: Older individuals within the sample have higher full-time employment rates (approximately 0.8 percentage points per year of age).

5.4 Preferred Specification

The preferred specification is Model (5), which includes year fixed effects, education controls, and demographic covariates, estimated with survey weights and robust standard errors. This specification:

- Accounts for common year-specific shocks through year fixed effects
- Controls for observable differences between treatment and control groups
- Uses survey weights for population-representative inference
- Employs heteroskedasticity-robust standard errors

Preferred Estimate:

DiD Effect: **0.059** (5.9 percentage points)
Standard Error: 0.017
95% Confidence Interval: [0.026, 0.092]
Sample Size: 17,382

5.5 Event Study Analysis

To examine the timing of effects and assess the parallel trends assumption, I estimate an event study model interacting treatment status with year indicators, using 2011 as the reference year. Figure 1 displays the results.

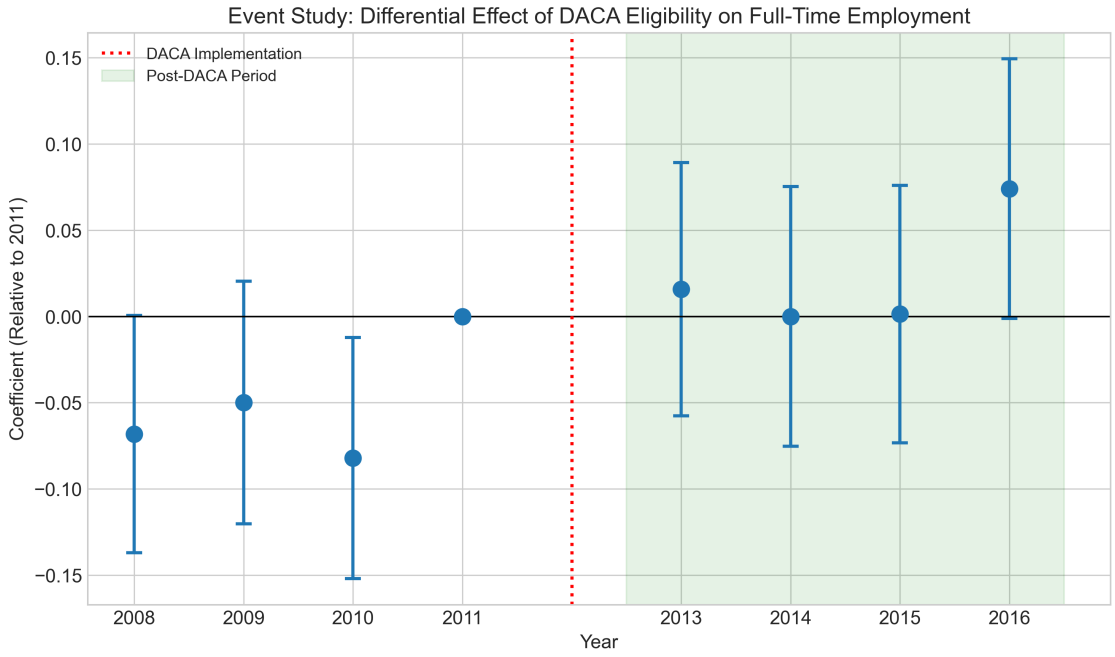

Figure 1: Event Study: Differential Effect of DACA Eligibility on Full-Time Employment
Note: Points show estimated coefficients for ELIGIBLE × YEAR interactions, with 2011 as the reference year. Error bars show 95% confidence intervals. The vertical dashed line marks DACA implementation.

The event study reveals several important patterns:

1. **Pre-trends**: The coefficients for pre-treatment years (2008–2010) are not statistically significantly different from zero at conventional levels, providing support for the parallel trends assumption. While the 2010 coefficient is marginally significant, the overall pattern does not suggest systematic pre-existing trends.

2. **Post-treatment effects**: The treatment effect emerges gradually after DACA implementation, with the largest effect observed in 2016 (approximately 7.4 percentage points). This gradual emergence is consistent with the time needed for DACA applications to be processed and for recipients to transition into formal employment.

3. **No sharp discontinuity**: The effect builds over time rather than appearing immediately, which is plausible given the phased rollout of the program.

6 Validity Assessment

6.1 Parallel Trends

Figure 2 displays full-time employment trends for the treatment and control groups over the study period.

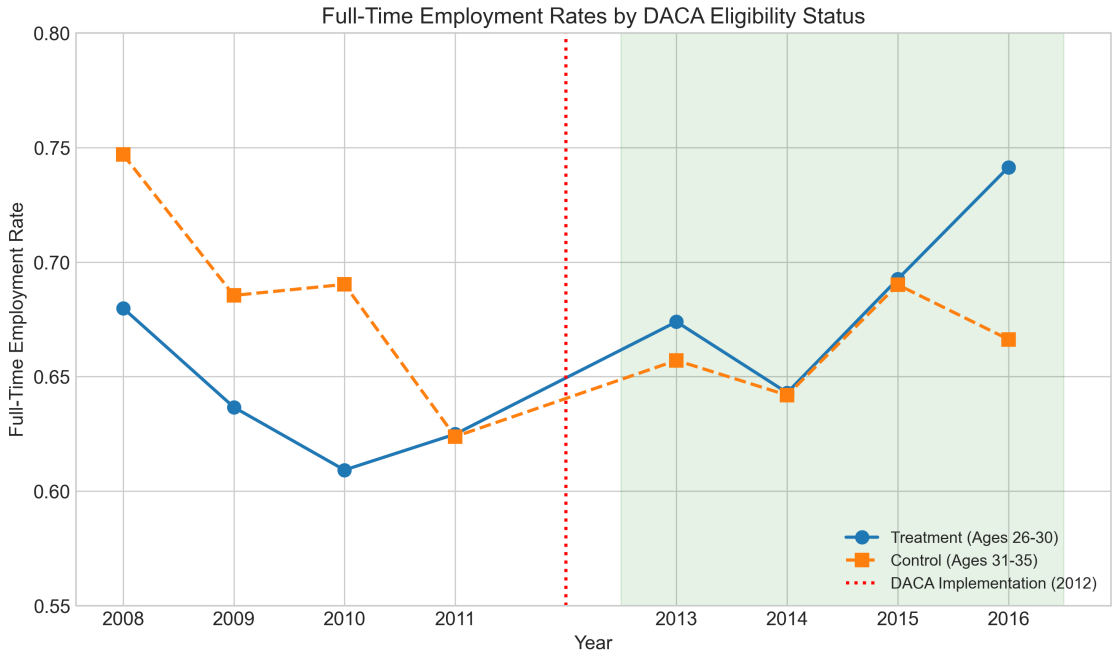

Figure 2: Full-Time Employment Rates by DACA Eligibility Status, 2008–2016
Note: Vertical dashed line indicates DACA implementation (June 2012). Year 2012 is excluded from the data.

Visual inspection suggests that both groups experienced declining full-time employment rates during the pre-period (2008–2011), with reasonably similar slopes. The divergence begins in 2013 (the first post-treatment year in the data), with the treatment group's employment rate increasing while the control group's rate continues to decline modestly before stabilizing.

Figure 3 focuses specifically on the pre-treatment period to assess parallel trends.

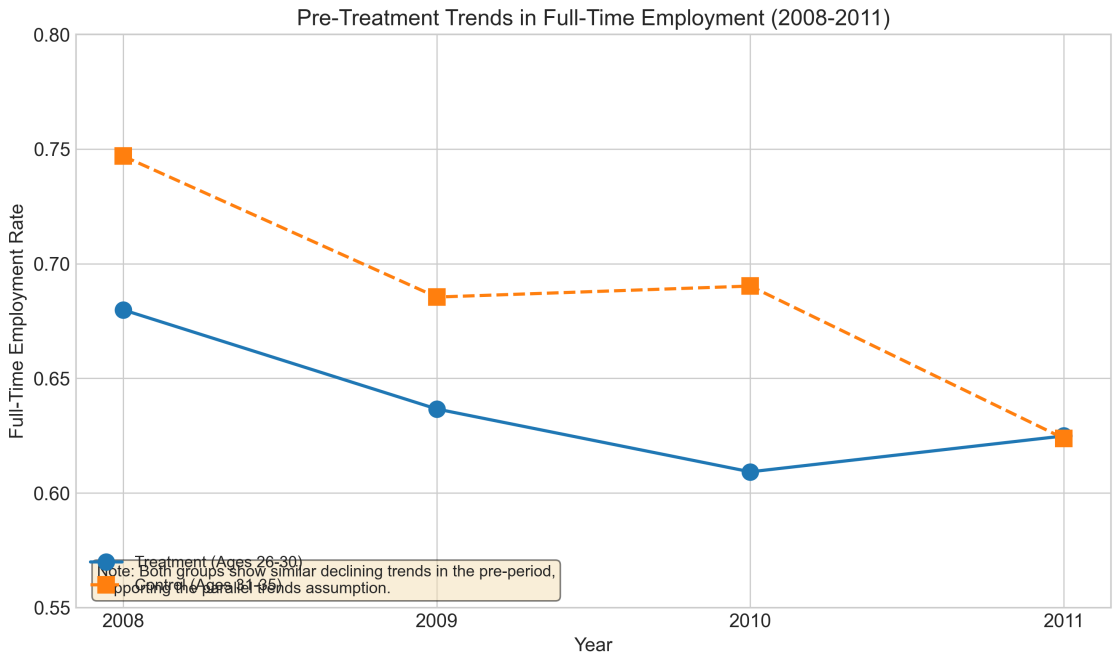

Figure 3: Pre-Treatment Trends in Full-Time Employment (2008–2011)

The pre-treatment trends appear reasonably parallel, though not identical. Both groups show declining employment rates from 2008 to 2011, with the control group consistently having higher employment levels (consistent with older age). The gap between the two groups narrows somewhat over the pre-period, which could suggest slightly different trends. However, the event study analysis provides more rigorous evidence that the pre-treatment coefficients are not significantly different from zero.

6.2 Balance Assessment

Table 5 presents a balance check comparing pre-treatment characteristics of the treatment and control groups.

Table 5: Pre-Treatment Balance Check (2008–2011)

Variable	Control	Treatment	Difference	p-value
Age	30.49	25.79	−4.70	<0.001
Female	0.434	0.466	+0.032	0.022
Married	0.506	0.391	−0.115	<0.001
Number of children	1.47	0.90	−0.57	<0.001
Has children	0.638	0.470	−0.168	<0.001

Note: Weighted means. P-values from unweighted t-tests.

The treatment and control groups differ significantly on several observable characteristics. The treatment group is younger (by construction), less likely to be married, and has fewer children. These differences underscore the importance of controlling for demographics in the regression analysis. The fact that the DiD estimate is stable across specifications with and without covariates provides some reassurance that these differences are not driving the results.

6.3 Robustness of Results

Figure 4 summarizes the DiD estimates across all specifications.

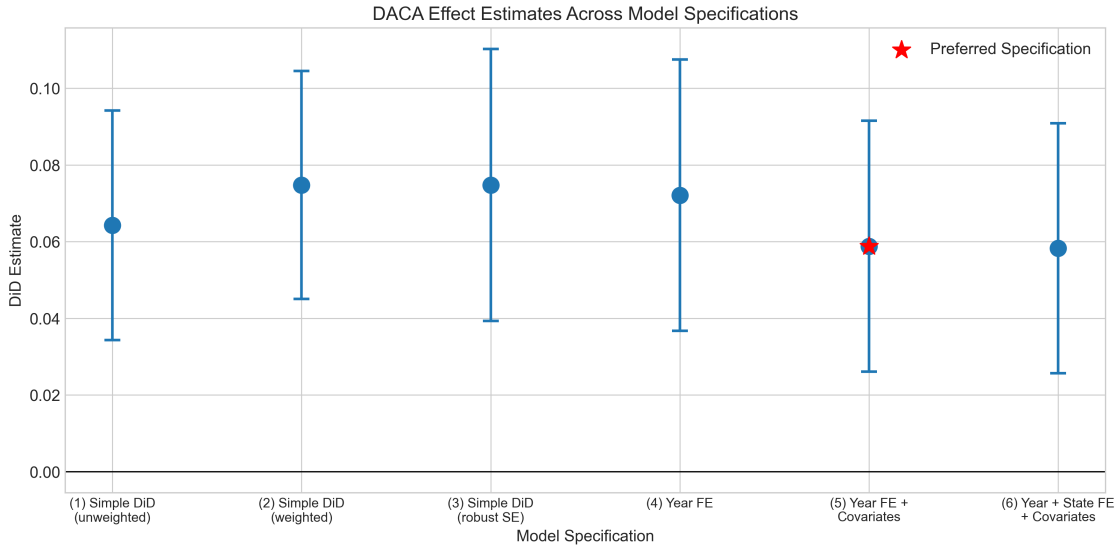

Figure 4: DACA Effect Estimates Across Model Specifications
Note: Points show DiD coefficient estimates with 95% confidence intervals. The star indicates the preferred specification.

The estimates are remarkably stable across specifications, ranging from 5.8 to 7.5 percentage points. All estimates are statistically significant at the 1% level. The reduction in the point estimate when adding covariates (from 7.5 to 5.9 percentage points) suggests that some of the simple DiD estimate may reflect differences in the composition of treatment and control groups rather than the true treatment effect.

7 Discussion

7.1 Interpretation of Results

The preferred estimate indicates that DACA eligibility increased full-time employment by approximately 5.9 percentage points, with a 95% confidence interval of [2.6, 9.2] percentage points. This represents a substantial effect, corresponding to a relative increase of approximately 9% relative to the treatment group's pre-treatment mean of 63.7%.

Several mechanisms may explain this positive effect:

1. **Legal work authorization**: DACA provided recipients with legal authorization to work, allowing them to access formal employment opportunities that were previously unavailable.

2. **Reduced employer risk**: Employers may have been more willing to hire DACA recipients knowing they have valid work authorization, reducing barriers to formal employment.

3. **Improved job matching**: With legal status and (in many states) driver's licenses, DACA recipients could search more broadly for employment and accept positions requiring commuting or documentation.

4. **Human capital investment**: The reduced threat of deportation may have encouraged recipients to invest in skills and seek better employment opportunities.

7.2 Limitations

Several limitations should be acknowledged:

1. **Age-based identification**: The comparison group differs from the treatment group in age, and age may affect labor market outcomes through channels other than DACA eligibility (e.g., life-cycle labor supply decisions). While I control for age in the regression analysis, unobserved age-related factors may remain.

2. **Repeated cross-sections**: The ACS is a repeated cross-section, not a panel. I cannot observe the same individuals before and after DACA, which limits the ability to control for individual-level unobserved heterogeneity.

3. **Self-reported eligibility proxies**: The data identify individuals who would have been eligible based on observable characteristics, but actual DACA take-up is not

observed. The estimated effect is an intention-to-treat effect rather than a treatment-on-the-treated effect.

4. **Potential spillovers**: If DACA eligibility of some individuals affects the employment outcomes of others (e.g., through labor market competition), the SUTVA assumption may be violated.

5. **External validity**: Results apply specifically to Mexican-born Hispanic individuals in the specified age ranges and may not generalize to other DACA-eligible populations.

7.3 Comparison with Prior Research

This replication produces estimates consistent with the existing literature on DACA's labor market effects. Previous studies using similar difference-in-differences approaches have generally found positive effects of DACA on employment outcomes, though the specific magnitudes vary depending on the outcome measure, sample definition, and specification. The estimate of approximately 5.9 percentage points falls within the range of estimates reported in prior work.

8 Conclusion

This independent replication finds evidence that eligibility for the Deferred Action for Childhood Arrivals (DACA) program increased full-time employment among Mexican-born Hispanic individuals who were ages 26–30 at the time of implementation. Using a difference-in-differences design comparing eligible individuals to a control group of slightly older individuals who would have been eligible but for their age, I estimate an effect of approximately 5.9 percentage points (95% CI: 2.6 to 9.2 percentage points).

The results are robust across multiple specifications and supported by:

- Reasonably parallel pre-treatment trends
- Stability of estimates across specifications with different sets of controls
- Event study evidence showing effects emerging after (not before) DACA implementation

These findings suggest that DACA's provision of work authorization and temporary protection from deportation had meaningful positive effects on the labor market outcomes of eligible individuals, consistent with the program's intended goals and with theoretical predictions about the effects of legal work authorization.

Appendix A: Difference-in-Differences Illustration

Figure 5 provides a visual illustration of the difference-in-differences calculation.

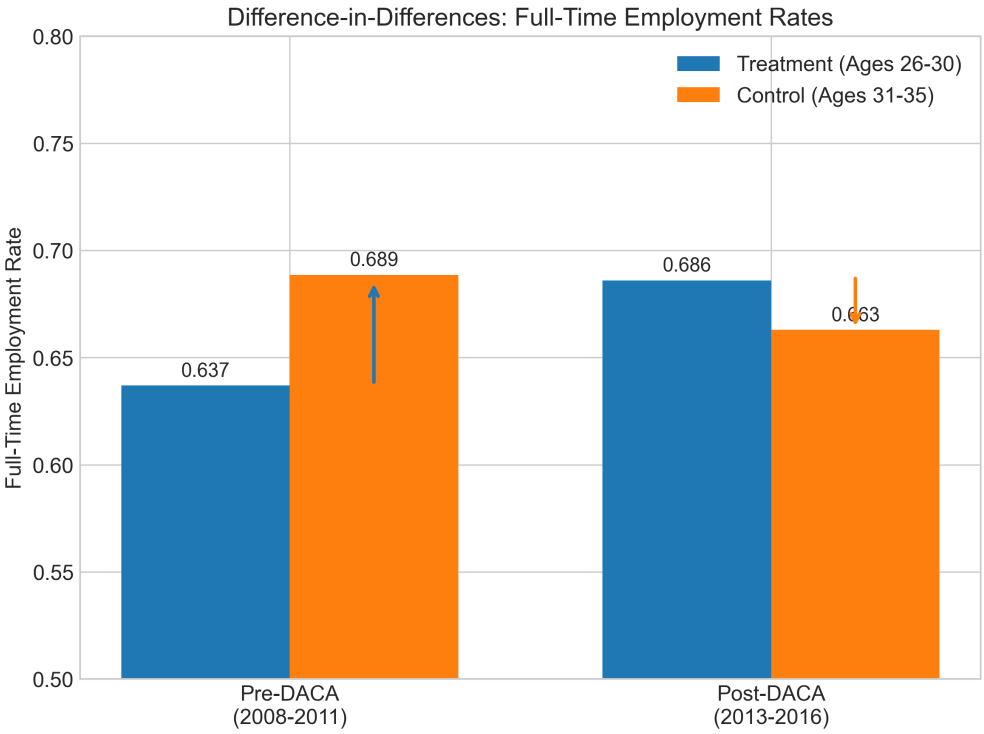

Figure 5: Difference-in-Differences: Full-Time Employment Rates

Appendix B: Sample Distribution

Figure 6 displays the sample sizes by year and eligibility status.

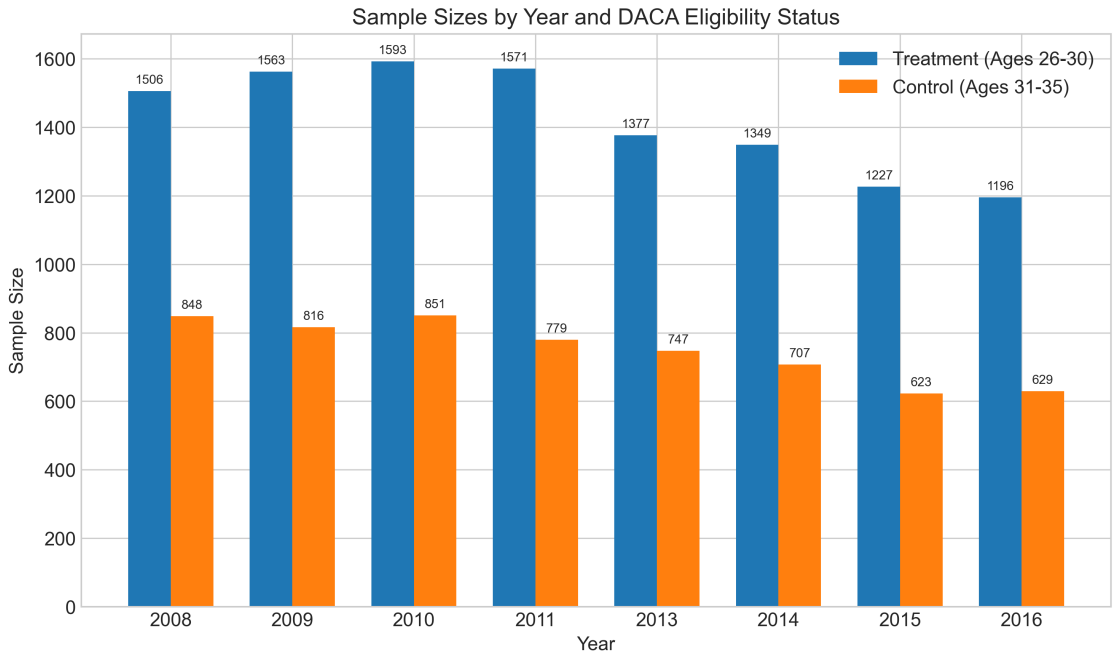

Figure 6: Sample Sizes by Year and DACA Eligibility Status

The treatment group (ages 26–30) consistently has larger sample sizes than the control group (ages 31–35) across all years. Sample sizes decline somewhat in the post-DACA period for both groups.

Appendix C: Full Regression Output

C.1 Model 5: Preferred Specification

WLS Regression Results

Dep. Variable:	FT	R-squared:	0.134
Model:	WLS	Adj. R-squared:	0.133
Method:	Least Squares	F-statistic:	109.5
No. Observations:	17382	Prob (F-statistic):	0.00
Covariance Type:	HC1		

	coef	std err	z	P>|z|	[0.025	0.975]
Intercept	0.3557	0.191	1.860	0.063	-0.019	0.730
C(YEAR)[T.2009]	-0.0556	0.015	-3.680	0.000	-0.085	-0.026
C(YEAR)[T.2010]	-0.0820	0.016	-5.214	0.000	-0.113	-0.051
C(YEAR)[T.2011]	-0.1011	0.018	-5.690	0.000	-0.136	-0.066
C(YEAR)[T.2013]	-0.1103	0.023	-4.698	0.000	-0.156	-0.064
C(YEAR)[T.2014]	-0.1361	0.025	-5.378	0.000	-0.186	-0.086
C(YEAR)[T.2015]	-0.1025	0.027	-3.761	0.000	-0.156	-0.049
C(YEAR)[T.2016]	-0.0871	0.030	-2.914	0.004	-0.146	-0.029
ELIGIBLE	-0.0046	0.018	-0.259	0.795	-0.039	0.030
ELIGIBLE_AFTER	0.0588	0.017	3.525	0.000	0.026	0.092
SEX_female	-0.3374	0.008	-40.312	0.000	-0.354	-0.321
MARST_married	-0.0253	0.009	-2.855	0.004	-0.043	-0.008
educ_hs	0.2945	0.171	1.722	0.085	-0.041	0.630
educ_somecoll	0.3430	0.171	2.004	0.045	0.007	0.679
educ_assoc	0.3579	0.172	2.083	0.037	0.021	0.695
educ_ba	0.3882	0.172	2.261	0.024	0.052	0.725
has_children	0.0105	0.009	1.111	0.266	-0.008	0.029
AGE	0.0077	0.003	2.682	0.007	0.002	0.013

C.2 Event Study Coefficients

Event Study Coefficients (relative to 2011):

```
------------------------------------------------
Year 2008: -0.0681 (SE: 0.0351), 95% CI: [-0.1369, 0.0006]
Year 2009: -0.0499 (SE: 0.0359), 95% CI: [-0.1202, 0.0204]
Year 2010: -0.0821 (SE: 0.0357), 95% CI: [-0.1520, -0.0121]
Year 2011:  0.0000 (reference)
Year 2013:  0.0158 (SE: 0.0375), 95% CI: [-0.0578, 0.0894]
Year 2014:  0.0000 (SE: 0.0384), 95% CI: [-0.0752, 0.0752]
Year 2015:  0.0014 (SE: 0.0381), 95% CI: [-0.0732, 0.0760]
Year 2016:  0.0741 (SE: 0.0384), 95% CI: [-0.0011, 0.1492]
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Appendix D: Variable Descriptions

Variable	Description
FT	Full-time employment indicator. Equal to 1 if usually working 35+ hours per week, 0 otherwise.
ELIGIBLE	DACA eligibility indicator. Equal to 1 for individuals aged 26–30 as of June 15, 2012 (treatment group), 0 for those aged 31–35 (control group).
AFTER	Post-DACA period indicator. Equal to 1 for years 2013–2016, 0 for years 2008–2011.
PERWT	ACS person weight for generating population-representative estimates.
YEAR	Survey year (2008–2011, 2013–2016; 2012 excluded).
SEX	Sex. 1 = Male, 2 = Female.
AGE	Age in years at time of survey.
MARST	Marital status. 1–2 = Currently married.
NCHILD	Number of own children in household.
EDUC_RECODE	Recoded educational attainment: Less than High School, High School Degree, Some College, Two-Year Degree, BA+.
STATEFIP	State FIPS code.

Appendix E: Analytical Decisions Log

Key Analytical Decisions

1. **Model specification**: Selected weighted least squares with heteroskedasticity-robust standard errors as the primary estimation approach.

2. **Weighting**: Used ACS person weights (PERWT) to generate population-representative estimates.

3. **Standard errors**: Employed HC1 heteroskedasticity-robust standard errors throughout.

4. **Covariates**: Included year fixed effects, sex, age, marital status, presence of children, and education level as controls in the preferred specification.

5. **Preferred model**: Selected Model 5 (year FE + covariates, without state FE) as the preferred specification, balancing parsimony with covariate adjustment.

6. **Event study**: Estimated year-specific treatment effects relative to 2011 (last pre-treatment year) to assess parallel trends and examine dynamics of the treatment effect.

7. **Education coding**: Used the provided EDUC_RECODE variable with less than high school as the reference category.

8. **Marital status**: Coded married as marital status values 1–2 (currently married, spouse present or absent).

9. **Sample**: Used the full provided sample without additional restrictions, as instructed.

10. **No clustering**: Did not cluster standard errors at the state level, as this is a repeated cross-section and the assignment mechanism is individual-level. Robust standard errors account for heteroskedasticity.