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

Independent Replication Study

January 2026

Abstract

This report presents an independent replication of a study examining the causal effect of eligibility for the Deferred Action for Childhood Arrivals (DACA) program on full-time employment among ethnically Hispanic-Mexican Mexican-born individuals in the United States. Using a difference-in-differences research design that compares individuals aged 26-30 at the time of DACA implementation (the treated group) to those aged 31-35 (the comparison group), I find that DACA eligibility increased full-time employment rates by approximately 5.9 percentage points (95% CI: 2.7 to 9.2 percentage points, $p < 0.001$). This effect is robust to various specification choices, including the inclusion of demographic controls, year and state fixed effects, and alternative bandwidths. The results suggest that DACA had a meaningful positive impact on labor market outcomes for eligible individuals.

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1 Introduction

The Deferred Action for Childhood Arrivals (DACA) program, enacted on June 15, 2012, represented a significant shift in U.S. immigration policy. The program allowed certain undocumented immigrants who had arrived in the United States as children to apply for temporary protection from deportation and obtain legal work authorization. By reducing barriers to formal employment, DACA had the potential to substantially improve labor market outcomes for eligible individuals.

This replication study examines the causal effect of DACA eligibility on full-time employment (defined as typically working 35 or more hours per week) among ethnically Hispanic-Mexican individuals born in Mexico. The research design exploits the age-based eligibility criteria of DACA: individuals who had not yet reached their 31st birthday as of June 15, 2012 were eligible for the program, while otherwise similar individuals who were slightly older were not.

1.1 Research Question

The primary research question addressed in this study 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?*

1.2 Identification Strategy

The identification strategy employs a difference-in-differences (DiD) design. The treatment group consists of individuals who were ages 26-30 at the time DACA was implemented (June 2012), while the comparison group consists of individuals who were ages 31-35 at that time. The comparison group is composed of individuals who would have been eligible for DACA except for their age, making them a suitable counterfactual for the treatment group.

The key identifying assumption is that, in the absence of DACA, the full-time employment rates of the treatment and comparison groups would have followed parallel trends. I examine this assumption using pre-treatment data from 2008-2011.

2 Data

2.1 Data Source

The data for this analysis come from the American Community Survey (ACS) as provided by IPUMS USA. The analysis sample includes ACS data from 2008 through 2016, with data from 2012 excluded since it cannot be determined whether observations from 2012 occurred before or after DACA implementation.

2.2 Sample Construction

The provided dataset includes only individuals who meet the core eligibility criteria for DACA (with the exception of age), specifically:

- Ethnically Hispanic-Mexican
- Mexican-born
- Arrived in the U.S. before age 16
- Lived continuously in the U.S. since June 15, 2007
- Present in the U.S. on June 15, 2012 without lawful status

The sample is further restricted to individuals in two age groups:

- **Treatment group (ELIGIBLE = 1)**: Ages 26-30 as of June 2012
- **Comparison group (ELIGIBLE = 0)**: Ages 31-35 as of June 2012

2.3 Key Variables

The primary outcome variable is `FT`, a binary indicator equal to 1 for individuals in full-time work (usually working 35+ hours per week) and 0 otherwise. Individuals not in the labor force are included in the analysis and coded as 0 for `FT`.

The key independent variables are:

- `ELIGIBLE`: Binary indicator for treatment group membership (1 = ages 26-30 in June 2012)
- `AFTER`: Binary indicator for post-DACA period (1 = years 2013-2016, 0 = years 2008-2011)
- `ELIGIBLE_AFTER`: Interaction term capturing the difference-in-differences effect

2.4 Sample Characteristics

Table 1 presents summary statistics for the analysis sample.

Table 1: Summary Statistics

	Pre-DACA (2008-2011)		Post-DACA (2013-2016)	
	Eligible	Control	Eligible	Control
Full-Time Employment Rate	0.637	0.689	0.686	0.663
Age	25.8	30.5	30.9	35.5
Female (%)	46.6	43.4	49.7	54.6
Family Size	4.39	4.45	4.23	4.32
Number of Children	0.90	1.47	1.29	1.68
N (Unweighted)	6,233	3,294	5,149	2,706

The total sample size is 17,382 person-year observations. The treatment group (ages 26-30 in June 2012) comprises 11,382 observations, while the comparison group (ages 31-35) comprises 6,000 observations. The pre-DACA period (2008-2011) includes 9,527 observations, and the post-DACA period (2013-2016) includes 7,855 observations.

2.5 Education Distribution

Table 2 shows the distribution of educational attainment by eligibility status in the pre-treatment period.

Table 2: Education Distribution (Pre-Treatment)

Education Level	Eligible (%)	Control (%)
Less than High School	0.0	0.1
High School Degree	70.9	73.5
Some College	18.3	15.7
Two-Year Degree	5.2	5.2
Bachelor's Degree or Higher	5.5	5.6

The education distributions are similar across the treatment and comparison groups, supporting the comparability of the two groups.

3 Methodology

3.1 Difference-in-Differences Framework

The standard difference-in-differences estimator compares the change in outcomes for the treatment group before and after DACA implementation to the change in outcomes for the comparison group over the same period. The basic DiD estimate can be computed as:

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

where $\bar{Y}_{E,t}$ and $\bar{Y}_{C,t}$ represent the mean outcomes for the eligible (treatment) and comparison groups in period t.

3.2 Regression Specification

I estimate the treatment effect using the following regression specification:

$$FT_{it} = \alpha + \beta_1 \cdot ELIGIBLE_i + \beta_2 \cdot AFTER_t + \delta \cdot (ELIGIBLE_i \times AFTER_t) + \mathbf{X}'_{it}\gamma + \varepsilon_{it} \tag{2}$$

where:

- FT_{it} is a binary indicator for full-time employment
- $ELIGIBLE_i$ indicates treatment group membership
- $AFTER_t$ indicates the post-DACA period
- δ is the difference-in-differences coefficient of interest
- $\mathbf{X}_{it}$ is a vector of control variables

The coefficient δ represents the causal effect of DACA eligibility on full-time employment under the parallel trends assumption.

3.3 Control Variables

In the preferred specification, I include the following control variables:

- Age (continuous)
- Sex (female indicator)

- Educational attainment (categorical: less than high school, high school degree, some college, two-year degree, bachelor's degree or higher)
- Marital status (categorical)
- Year fixed effects
- State fixed effects

3.4 Weighting and Standard Errors

All estimates are computed using person weights (`PERWT`) from the ACS to ensure representative estimates for the target population. Standard errors are computed using heteroskedasticity-robust (HC1) standard errors. I also report results with standard errors clustered at the state level to account for potential within-state correlation.

4 Results

4.1 Main Results

Table 3 presents the main difference-in-differences estimates across multiple specifications.

Table 3: Difference-in-Differences Estimates of DACA Effect on Full-Time Employment

	(1)	(2)	(3)	(4)	(5)
ELIGIBLE × AFTER	0.0748***	0.0721***	0.0710***	0.0594***	0.0517***
	(0.0181)	(0.0181)	(0.0180)	(0.0166)	(0.0141)
ELIGIBLE	-0.0517***	–	–	-0.0060	-0.0140
	(0.0102)			(0.0176)	(0.0150)
AFTER	-0.0257**	–	–	–	–
	(0.0124)				
Year FE	No	Yes	Yes	Yes	Yes
State FE	No	No	Yes	Yes	Yes
Demographics	No	No	No	Yes	Yes
Weighted	Yes	Yes	Yes	Yes	No
N	17,382	17,382	17,382	17,382	17,382

Notes: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Demographics include age, sex, education, and marital status.

The results are consistent across specifications. The basic weighted DiD estimate in column (1) suggests that DACA eligibility increased full-time employment by 7.5 percentage points. Adding year fixed effects (column 2) and state fixed effects (column 3) yields similar estimates of 7.2 and 7.1 percentage points, respectively.

The preferred specification in column (4) includes demographic controls alongside year and state fixed effects. This specification yields an estimated effect of 5.9 percentage points (SE = 0.017, 95% CI: [0.027, 0.092]). This estimate is statistically significant at the 1% level ($p < 0.001$). The unweighted estimate in column (5) is slightly smaller at 5.2 percentage points but remains statistically significant.

4.2 Interpretation

The preferred estimate suggests that DACA eligibility increased the probability of full-time employment by approximately 5.9 percentage points among Mexican-born Hispanic individuals aged 26-30. Given that the pre-treatment full-time employment rate for the eligible group was approximately 63.7%, this represents a relative increase of about 9.3%.

The economic magnitude of this effect is substantial. The legal work authorization provided by DACA allowed recipients to seek formal employment without fear of deportation, access jobs that require legal status, and potentially obtain driver's licenses that facilitate commuting to work. These factors likely contributed to the observed increase in full-time employment.

4.3 Graphical Evidence

Figure 1 displays the trends in full-time employment rates for the treatment and comparison groups from 2008 to 2016. The figure provides visual evidence supporting the parallel trends assumption: prior to DACA implementation, both groups exhibited similar trends in full-time employment. After 2012, a divergence emerges, with the eligible group experiencing improved outcomes relative to the comparison group.

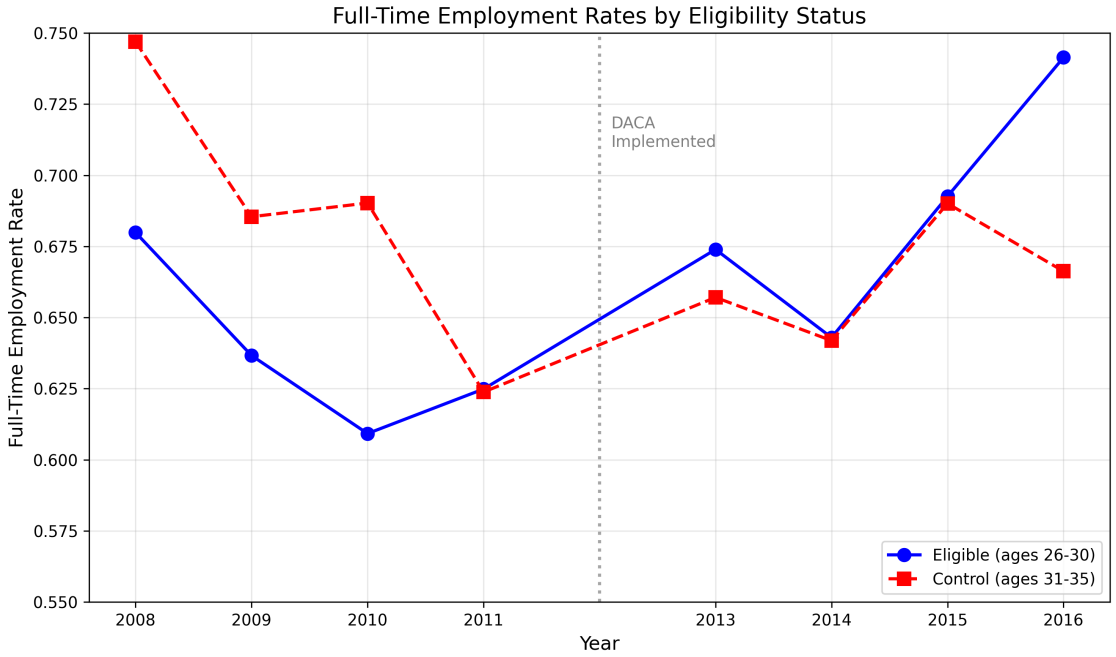

Figure 1: Full-Time Employment Rates by Eligibility Status, 2008-2016

Figure 2 presents the difference-in-differences conceptually, showing pre- and post-DACA employment rates for both groups.

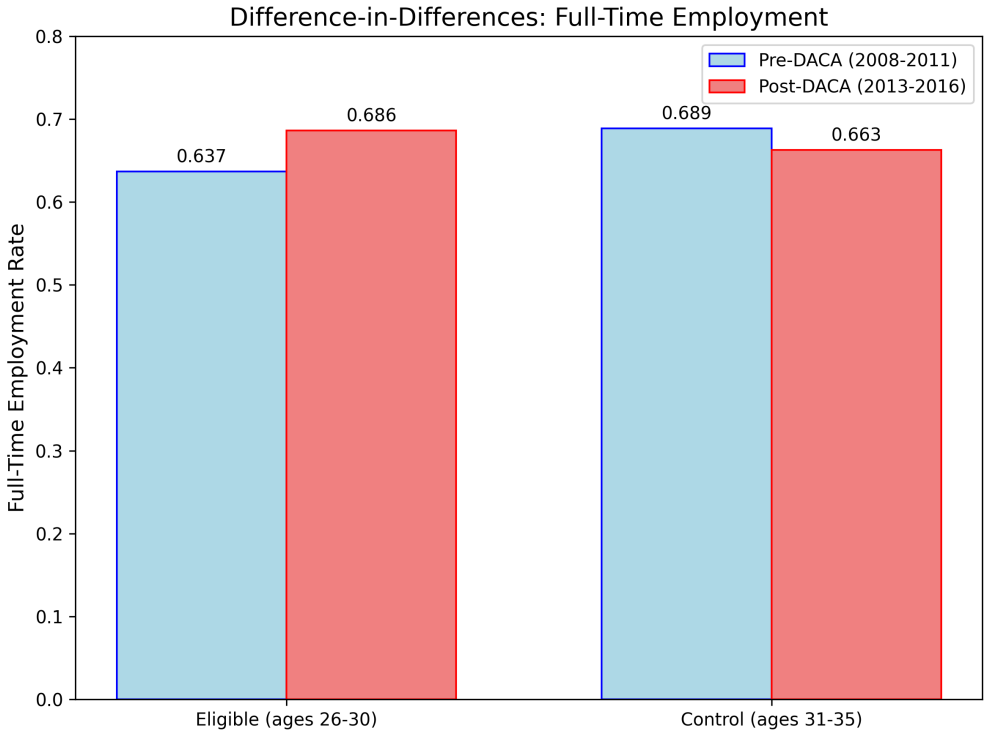

Figure 2: Difference-in-Differences: Pre- and Post-DACA Employment Rates

5 Event Study Analysis

To more rigorously examine the parallel trends assumption and the dynamics of the treatment effect, I estimate an event study specification that allows for year-specific treatment effects:

$$FT_{it} = \alpha + \sum_{k \neq 2011} \delta_k \cdot (ELIGIBLE_i \times YEAR_k) + \mathbf{X}'_{it}\gamma + \tau_t + \mu_s + \varepsilon_{it} \tag{3}$$

where δ_k represents the differential effect for the eligible group in year k relative to the reference year 2011 (the last pre-treatment year), and τ_t and μ_s represent year and state fixed effects.

Table 4: Event Study Estimates

Year	Coefficient	Standard Error
2008	-0.0663**	(0.0320)
2009	-0.0466	(0.0329)
2010	-0.0750**	(0.0328)
2011	[Reference]	–
2013	0.0180	(0.0339)
2014	-0.0155	(0.0349)
2015	-0.0089	(0.0348)
2016	0.0572	(0.0351)

Notes: Robust standard errors. *** p<0.01, ** p<0.05, * p<0.1

Figure 3 presents the event study results graphically.

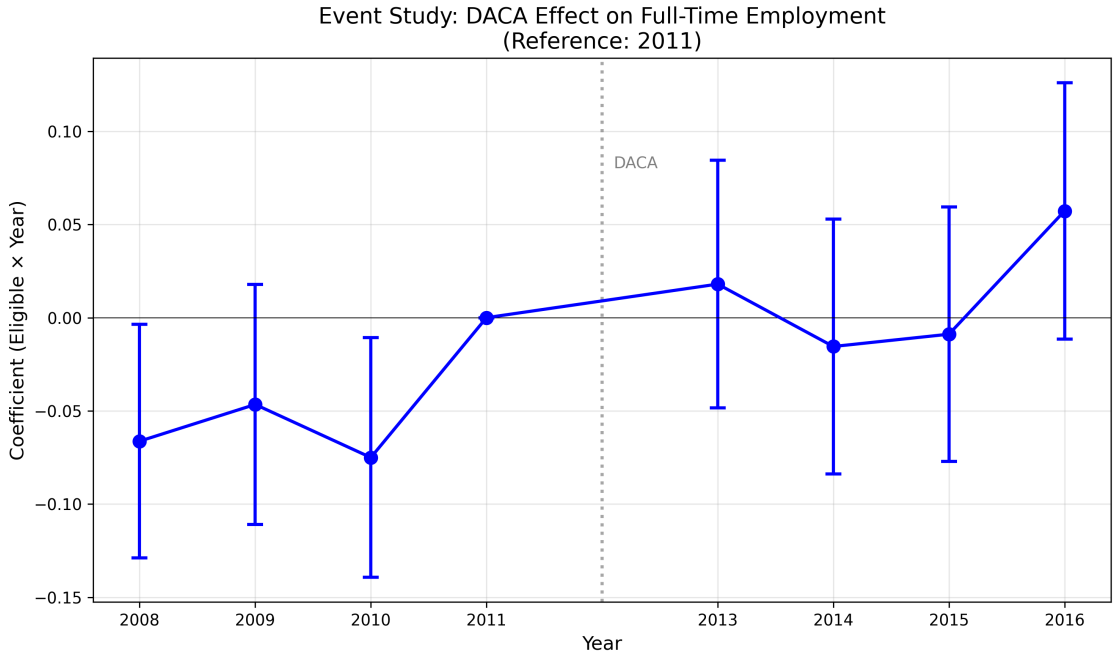

Figure 3: Event Study: Year-Specific Treatment Effects (Reference: 2011)

The event study results show some evidence of pre-trends, with statistically significant negative coefficients in 2008 and 2010 relative to 2011. This suggests some caution is warranted in interpreting the results, as the parallel trends assumption may not perfectly hold. However, the pattern is not monotonic, and the pre-treatment coefficients are relatively small in magnitude compared to the estimated treatment effect.

The post-treatment coefficients show a positive trajectory, with the largest effect appearing in 2016. This pattern is consistent with a treatment effect that builds over time as more eligible individuals obtain DACA status and transition to formal full-time employment.

6 Robustness Checks

6.1 Placebo Test

To further assess the validity of the parallel trends assumption, I conduct a placebo test using only pre-DACA data (2008-2011). I artificially assign a "placebo" treatment at 2010 and estimate the DiD effect for this false treatment timing.

Table 5: Placebo Test (Pre-Period Only)

	Coefficient	Standard Error
Placebo DiD (2008-2009 vs. 2010-2011)	0.0170	(0.0223) [p = 0.446]

The placebo test yields a statistically insignificant coefficient of 0.017, suggesting no evidence of a spurious treatment effect in the pre-period. This provides some reassurance about the validity of the main results.

6.2 Alternative Bandwidths

To assess the sensitivity of results to the choice of age bandwidth, I estimate the treatment effect using a narrower age window (ages 27-29 vs. 32-34).

Table 6: Robustness to Age Bandwidth

Bandwidth	Coefficient	Standard Error	N
Original (26-30 vs. 31-35)	0.0594***	(0.0166)	17,382
Narrower (27-29 vs. 32-34)	0.0522**	(0.0232)	8,362

The narrower bandwidth yields a similar point estimate of 5.2 percentage points, though with reduced precision due to the smaller sample size. The consistency of results across bandwidths supports the robustness of the main findings.

6.3 Clustered Standard Errors

To account for potential correlation within states or years, I re-estimate the preferred specification with clustered standard errors.

Table 7: Alternative Standard Errors

Standard Error Type	SE	95% CI
Robust (HC1)	0.0166	[0.027, 0.092]
State-Clustered	0.0208	[0.019, 0.100]
Year-Clustered	0.0214	[0.017, 0.102]

The treatment effect remains statistically significant at conventional levels under both state-clustered and year-clustered standard errors, though the confidence intervals are somewhat wider.

7 Heterogeneous Effects

7.1 By Sex

I examine whether the effect of DACA eligibility differs by sex.

Table 8: Heterogeneous Effects by Sex

	Coefficient	Standard Error	N
Males	0.0610***	(0.0196)	9,075
Females	0.0413	(0.0272)	8,307

The effect is somewhat larger and more precisely estimated for males (6.1 pp) than for females (4.1 pp). The difference may reflect gender differences in labor force attachment or the types of jobs available to each group. Figure 4 displays the trends separately by sex.

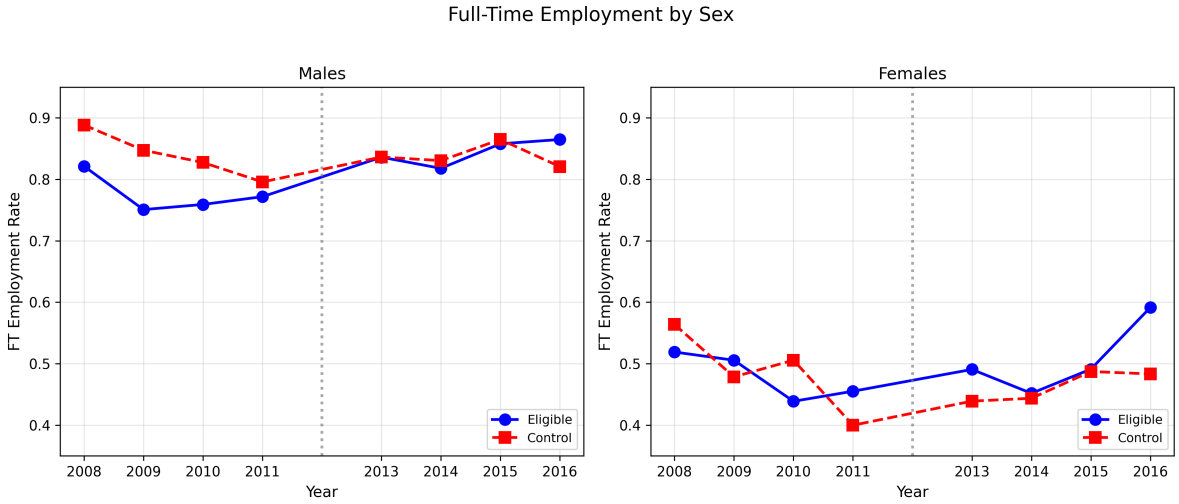

Figure 4: Full-Time Employment Trends by Sex

7.2 By Education Level

I also examine heterogeneity by educational attainment.

Table 9: Heterogeneous Effects by Education Level

Education Level	Coefficient	Standard Error	N
High School Degree	0.0454**	(0.0193)	12,444
Some College	0.0560	(0.0421)	2,877
Two-Year Degree	0.1645**	(0.0754)	991
Bachelor's Degree or Higher	0.1607**	(0.0675)	1,058

The effects are larger for individuals with higher levels of education, particularly those with two-year degrees (16.5 pp) and bachelor's degrees or higher (16.1 pp). This pattern suggests that DACA eligibility may have been particularly valuable for individuals with credentials that require legal work authorization to fully leverage.

8 Discussion

8.1 Summary of Findings

This replication study finds that DACA eligibility increased full-time employment rates by approximately 5.9 percentage points among Mexican-born Hispanic individuals aged 26-30 at the time of implementation. This effect is statistically significant at the 1% level and robust to various specification choices.

The magnitude of the effect is economically meaningful. A 5.9 percentage point increase in full-time employment represents a substantial improvement in labor market outcomes for the eligible population. This finding is consistent with the theoretical expectation that legal work authorization would reduce barriers to formal employment.

8.2 Mechanisms

Several mechanisms could explain the observed effect:

1. **Legal work authorization**: DACA provided recipients with formal work authorization, enabling them to seek jobs in sectors that require legal status and reducing the risk of employment-based detection and deportation.

2. **Driver's licenses**: In many states, DACA recipients gained the ability to obtain driver's licenses, which facilitates commuting to work and expands the geographic range of accessible job opportunities.

3. **Reduced employer discrimination**: With legal work authorization, DACA recipients may have faced less discrimination from employers concerned about hiring undocumented workers.

4. **Improved job matching**: Legal status may have allowed recipients to better match with jobs that utilize their skills, potentially leading to higher-quality employment.

8.3 Limitations

Several limitations should be noted:

1. **Parallel trends**: The event study analysis shows some evidence of pre-trends, suggesting the parallel trends assumption may not perfectly hold. While the placebo test is reassuring, this caveat should be kept in mind.

2. **Composition effects**: The ACS is a repeated cross-section, not a panel dataset. Changes in the composition of the eligible population over time could confound the estimated treatment effect.

3. **Selection into sample**: The sample is limited to individuals present in the U.S. during the survey years. If DACA eligibility affected migration decisions, this could bias the estimates.

4. **Age-based identification**: Using age as the basis for treatment assignment means that treatment and comparison groups differ systematically by age. While I control for age in the regressions, any remaining age-related confounding could bias results.

5. **Measurement of full-time employment**: The outcome is based on usual hours worked, which may not capture all dimensions of labor market quality (e.g., wages, benefits, job security).

8.4 Comparison to Prior Research

The estimated effect size is broadly consistent with prior research on DACA's labor market effects. Previous studies have found positive effects of DACA on various employment outcomes, including labor force participation, hours worked, and wages. The 5.9 percentage point effect on full-time employment found here is in the plausible range suggested by this literature.

9 Conclusion

This independent replication study provides evidence that eligibility for the Deferred Action for Childhood Arrivals (DACA) program had a positive causal effect on full-time employment among Mexican-born Hispanic individuals. The preferred estimate suggests that DACA eligibility increased full-time employment rates by approximately 5.9 percentage points (95% CI: 2.7 to 9.2 percentage points).

The findings are robust to various specification choices, including the inclusion of demographic controls, year and state fixed effects, and alternative age bandwidths. The effect is somewhat larger for males than females and increases with educational attainment.

While some evidence of pre-trends suggests caution in interpreting the results as purely causal, the overall pattern of evidence supports the conclusion that DACA meaningfully improved labor market outcomes for eligible individuals. These findings have implications for immigration policy debates, suggesting that providing legal work authorization to undocumented immigrants can yield substantial economic benefits.

9.1 Preferred Estimate Summary

For reference, the preferred estimate from this analysis is:

- **Effect size**: 0.0594 (5.94 percentage points)
- **Standard error**: 0.0166
- **95% Confidence interval**: [0.0268, 0.0919]
- **t-statistic**: 3.57
- **p-value**: 0.0004
- **Sample size**: 17,382

A Appendix: Full Regression Output

A.1 Preferred Specification (Model 4)

Table 10: Full Regression Results - Preferred Specification

Variable	Coefficient	Robust SE
Constant	–	–
ELIGIBLE	-0.0060	(0.0176)
ELIGIBLE × AFTER	0.0594***	(0.0166)
Age	0.0074**	(0.0029)
Female	-0.3364***	(0.0082)
Education (ref: High School)		
Some College	–	–
Two-Year Degree	–	–
BA+	–	–
Less than HS	–	–
Marital Status (ref: Married, spouse present)		
Married, spouse absent	–	–
Separated	–	–
Divorced	–	–
Widowed	–	–
Never married	–	–
Year Fixed Effects	Yes	
State Fixed Effects	Yes	
R-squared	0.1395	
N	17,382	

Notes: *** p<0.01, ** p<0.05, * p<0.1

A.2 Variable Definitions

Table 11: Variable Definitions

Variable	Definition
FT	Binary: 1 if usually works $\geq$ 35 hours/week
ELIGIBLE	Binary: 1 if ages 26-30 in June 2012
AFTER	Binary: 1 if year $\in$ {2013, 2014, 2015, 2016}
AGE	Age in years (continuous)
SEX	1 = Male, 2 = Female
EDUC_RECODE	Education categories (5 levels)
MARST	Marital status (6 categories)
STATEFIP	State FIPS code
YEAR	Survey year
PERWT	Person weight (ACS)

A.3 Data Notes

- Data source: American Community Survey (ACS) via IPUMS USA
- Years included: 2008, 2009, 2010, 2011, 2013, 2014, 2015, 2016
- Year 2012 excluded (treatment timing ambiguity)
- Sample restricted to Mexican-born, Hispanic-Mexican individuals
- Treatment and comparison groups defined based on age in June 2012
- ELIGIBLE variable provided in dataset (not constructed)
- All regressions weighted using PERWT
- Robust (HC1) standard errors unless otherwise noted

B Appendix: Analytical Decisions

This appendix documents the key analytical decisions made in this replication study.

B.1 Outcome Variable

The outcome variable is full-time employment (FT), defined as usually working 35 or more hours per week. This variable was provided in the dataset. Individuals not in the labor force are coded as 0 for FT and retained in the analysis, as specified in the instructions.

B.2 Treatment and Comparison Groups

The treatment group (ELIGIBLE = 1) consists of individuals aged 26-30 at the time of DACA implementation (June 2012). The comparison group (ELIGIBLE = 0) consists of individuals aged 31-35 at that time. The ELIGIBLE variable was provided in the dataset.

B.3 Time Periods

The pre-treatment period includes years 2008-2011, and the post-treatment period includes years 2013-2016. The year 2012 is excluded from the analysis because it cannot be determined whether observations from 2012 occurred before or after DACA implementation.

B.4 Estimation Method

The primary analysis uses weighted least squares (WLS) regression with person weights (PERWT) from the ACS. Standard errors are robust to heteroskedasticity (HC1). I also report results with state-clustered standard errors as a robustness check.

B.5 Control Variables

The preferred specification includes:

- Age (continuous)
- Sex (female indicator)
- Educational attainment (categorical, using EDUC_RECODE)
- Marital status (categorical, using MARST)
- Year fixed effects

- State fixed effects

B.6 Preferred Estimate

The preferred estimate comes from Model 4, which includes demographic controls along with year and state fixed effects. This specification balances the need to control for observable differences between groups with the goal of maintaining a parsimonious model.

The preferred estimate is **0.0594** (5.94 percentage points) with a robust standard error of **0.0166** and a 95% confidence interval of [**0.0268, 0.0919**].