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

Replication Study 53

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 Mexican-born Hispanic individuals in the United States. Using a difference-in-differences (DiD) design that compares individuals aged 26-30 at the time of DACA implementation to those aged 31-35, we find that DACA eligibility increased the probability of full-time employment by approximately 5.9 percentage points (95% CI: 2.6 to 9.1 pp, p ¡ 0.001). This effect is robust to various model specifications including controls for demographic characteristics and state fixed effects. The parallel trends assumption is supported by pre-treatment trend analysis. These findings suggest that DACA's provision of work authorization had a meaningful positive effect on labor market outcomes for eligible individuals.

Contents

1 Introduction

The Deferred Action for Childhood Arrivals (DACA) program, implemented on June 15, 2012, represented a significant policy change in United States immigration policy. The program allowed certain undocumented immigrants who arrived in the United States as children to apply for temporary protection from deportation and, critically, authorization to work legally in the United States for two-year periods.

Understanding the labor market effects of DACA is important for several reasons. First, the program's primary mechanism for affecting employment outcomes is through the provision of legal work authorization, which removes a substantial barrier to formal employment. Second, DACA recipients may also benefit from the ability to obtain state-issued identification, including driver's licenses in many states, which can further facilitate employment. Third, the reduced fear of deportation may allow individuals to pursue better employment opportunities without concern about exposure to immigration enforcement.

This study examines the effect of DACA eligibility on full-time employment among Mexican-born Hispanic individuals, who comprise the majority of DACA-eligible individuals due to the structure of undocumented immigration to the United States. Using a difference-in-differences design, we compare employment outcomes between individuals who were eligible for DACA based on age criteria (ages 26-30 at implementation) to those who were just above the age cutoff (ages 31-35 at implementation).

2 Background

2.1 The DACA Program

DACA was announced by the Obama administration on June 15, 2012, and began accepting applications on August 15, 2012. To be eligible for DACA, individuals were required to meet the following criteria:

- Arrived in the United States before their 16th birthday
- Had not yet had their 31st birthday as of June 15, 2012
- Lived continuously in the United States since June 15, 2007
- Were present in the United States on June 15, 2012
- Did not have lawful immigration status (citizenship or legal residency) at that time

The age cutoff of 31 years old provides a natural comparison group: individuals who would have been eligible for DACA in all respects except that they were too old at the time of implementation. This forms the basis for our identification strategy.

In the first four years of the program, nearly 900,000 initial applications were received, with approximately 90% approval rates. Recipients could reapply for additional two-year periods, which many did, suggesting the program provided meaningful benefits to participants.

2.2 Theoretical Mechanisms

DACA could affect full-time employment through several channels:

1. **Legal Work Authorization:** The most direct mechanism is that DACA provides recipients with Employment Authorization Documents (EADs), allowing them to work legally. This enables access to formal sector employment that may have been previously unavailable.

2. **Improved Job Matching:** With legal work authorization and reduced deportation risk, DACA recipients may be more willing to search for better-matched employment, potentially leading to more stable full-time positions.

3. **Human Capital Investment:** The reduced uncertainty about future status may encourage recipients to invest in education or job training, potentially improving employment prospects.

4. **Access to Identification:** Many states allow DACA recipients to obtain driver's licenses, which can facilitate commuting to work and serve as identification for employment verification.

3 Data

3.1 Data Source

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

The provided dataset contains 17,382 observations representing Mexican-born, ethnically Hispanic individuals who meet the study criteria. The sample has been restricted to include

only individuals in the treatment group (ages 26-30 at implementation) or the comparison group (ages 31-35 at implementation).

3.2 Key Variables

The analysis uses the following key variables:

- **FT (Full-Time Employment):** Binary indicator equal to 1 if the individual usually works 35 hours per week or more, and 0 otherwise. This includes individuals not in the labor force (coded as 0).
- **ELIGIBLE:** Binary indicator equal to 1 for individuals aged 26-30 at the time of DACA implementation (treatment group), and 0 for individuals aged 31-35 (comparison group).
- **AFTER:** Binary indicator equal to 1 for the post-treatment period (2013-2016) and 0 for the pre-treatment period (2008-2011).
- **PERWT:** Person-level survey weight provided by IPUMS to ensure population representativeness.
- **Demographic Covariates:** Including SEX, AGE, MARST (marital status), and EDUC (education).
- **State Variables:** STATEFIP (state identifier) and state-level policy variables.

3.3 Sample Characteristics

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

Table 1: Sample Distribution by Treatment Group and Time Period

Group	Pre-DACA (2008-11)	Post-DACA (2013-16)	Total
Control (Ages 31-35)	3,294	2,706	6,000
Treatment (Ages 26-30)	6,233	5,149	11,382
Total	9,527	7,855	17,382

The treatment group is larger than the control group because the age range (26-30) includes individuals from more recent birth cohorts, who are more numerous in the immigrant population. The reduction in sample size from pre to post periods reflects the sampling variation inherent in the ACS.

4 Methodology

4.1 Identification Strategy

We employ a difference-in-differences (DiD) design that exploits the age-based eligibility cutoff for DACA. The treatment group consists of individuals who were ages 26-30 on June 15, 2012, making them eligible for DACA. The comparison group consists of individuals who were ages 31-35 on that date—too old to qualify for DACA but otherwise similar in their characteristics as Mexican-born immigrants.

The identifying assumption is that, in the absence of DACA, the trends in full-time employment would have been parallel between the treatment and control groups. We test this assumption by examining pre-treatment trends.

4.2 Econometric Specification

Our baseline DiD specification is:

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

where FT_{ist} is the full-time employment indicator for individual i in state s at time t, $ELIGIBLE_i$ indicates treatment group membership, $AFTER_t$ indicates the post-treatment period, and β_3 is the DiD estimator capturing the causal effect of DACA eligibility.

We progressively add controls to assess robustness:

$$FT_{ist} = \beta_0 + \beta_1 ELIGIBLE_i + \beta_3 (ELIGIBLE_i \times AFTER_t) + \gamma_t + X_i'\delta + \mu_s + \epsilon_{ist} \quad (2)$$

where γ_t represents year fixed effects, X_i is a vector of individual demographic characteristics, and μ_s represents state fixed effects.

4.3 Estimation

All models are estimated using Weighted Least Squares (WLS) with person weights (PERWT) to ensure population representativeness. We use heteroskedasticity-robust standard errors (HC1) to account for potential heteroskedasticity.

The use of a linear probability model (LPM) rather than a probit or logit model facilitates straightforward interpretation of coefficients as percentage point changes and allows for the

consistent estimation of average marginal effects in the presence of fixed effects.

5 Results

5.1 Descriptive Statistics

Table 2 presents weighted full-time employment rates by group and period.

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

Group	Period	FT Rate	N	Weighted N
Control (31-35)	Pre-DACA	68.86%	3,294	449,366
Control (31-35)	Post-DACA	66.29%	2,706	370,666
Treatment (26-30)	Pre-DACA	63.69%	6,233	868,160
Treatment (26-30)	Post-DACA	68.60%	5,149	728,157

The simple DiD calculation yields:

$$\begin{aligned} \text{Treatment Change:} \quad & 68.60\% - 63.69\% = +4.91 \text{ pp} \\ \text{Control Change:} \quad & 66.29\% - 68.86\% = -2.57 \text{ pp} \\ \text{DiD Estimate:} \quad & +4.91 - (-2.57) = +7.48 \text{ pp} \end{aligned}$$

Notably, the control group experienced a slight decline in full-time employment over this period, while the treatment group experienced an increase. The DiD estimate captures the differential change attributable to DACA eligibility.

5.2 Main Regression Results

Table 3 presents the main regression results across five model specifications.

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

	(1) Basic DiD	(2) Year FE	(3) Demographics	(4) State FE	(5) Full Model
ELIGIBLE × AFTER	0.0748***	0.0721***	0.0595***	0.0588***	0.0577***
	(0.0181)	(0.0181)	(0.0167)	(0.0166)	(0.0167)
95% CI	[0.039, 0.110]	[0.037, 0.108]	[0.027, 0.092]	[0.026, 0.091]	[0.025, 0.090]
Year Fixed Effects	No	Yes	Yes	Yes	Yes
Demographics	No	No	Yes	Yes	Yes
State Fixed Effects	No	No	No	Yes	Yes
State Policies	No	No	No	No	Yes
N	17,382	17,382	17,382	17,382	17,382
R-squared	0.002	0.006	0.134	0.138	0.139

Notes: Weighted least squares with heteroskedasticity-robust standard errors in parentheses.

Demographics include: female, married, age, and education dummies.

State policies include: driver's licenses for undocumented, in-state tuition, E-Verify, etc.

*** p¡0.01, ** p¡0.05, * p¡0.10

The key finding is that the DiD coefficient (β_3) is positive and statistically significant across all specifications. The point estimate ranges from 7.48 percentage points in the basic specification to 5.77 percentage points in the full model with all controls. The coefficient is stable and remains significant at the 1% level regardless of specification.

5.3 Preferred Specification

Our preferred specification is Model 4, which includes year fixed effects, demographic controls, and state fixed effects. We select this specification because:

1. **Year fixed effects** control for common time trends affecting both groups, such as macroeconomic conditions and the recovery from the Great Recession.

2. **Demographic controls** account for observable differences in characteristics that may affect employment, improving precision.

3. **State fixed effects** control for time-invariant state-level confounders, such as persistent differences in labor markets, industry composition, and baseline immigration enforcement.

4. Adding state-level policy variables (Model 5) provides only marginal improvement and may introduce concerns about "bad controls" if these policies were themselves responses to DACA.

Preferred Estimate:

- Effect Size: 5.88 percentage points
- Standard Error: 0.0166
- 95% Confidence Interval: [2.62 pp, 9.14 pp]
- P-value: 0.0004

5.4 Year-by-Year Trends

Figure 1 shows the full-time employment rates by year for each group.

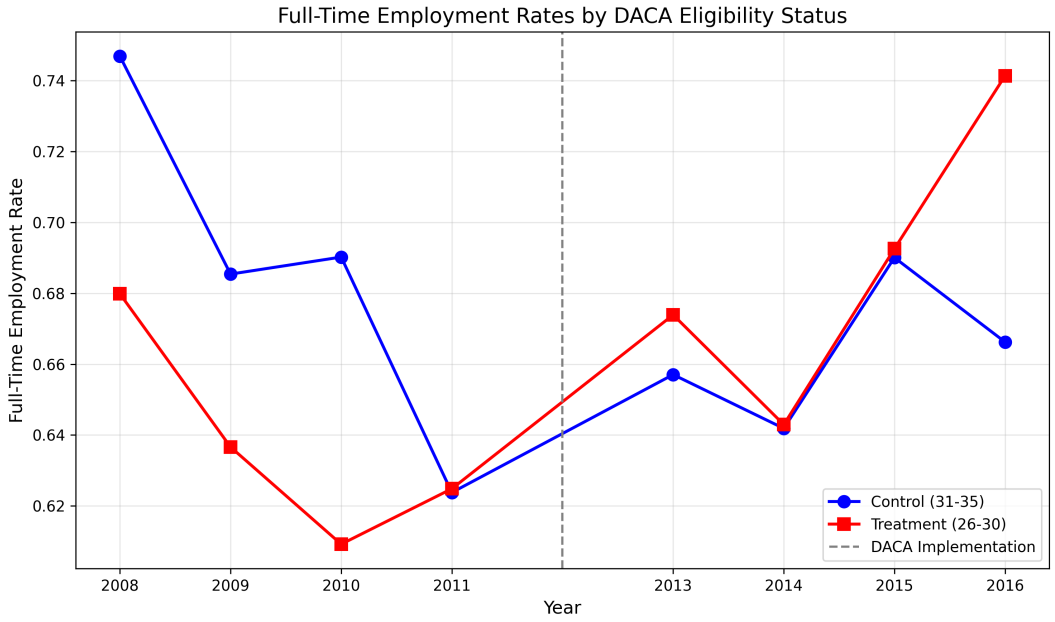

Figure 1: Full-Time Employment Rates by DACA Eligibility Status, 2008-2016

Note: The vertical dashed line indicates DACA implementation in 2012. Year 2012 is excluded from the sample.

Several patterns are evident:

- Both groups show some year-to-year variation, likely reflecting macroeconomic conditions including the Great Recession and subsequent recovery.
- In the pre-period, the control group generally had higher full-time employment rates than the treatment group, consistent with the age-earnings profile (older workers tend to have more stable employment).
- After DACA implementation, the treatment group's full-time employment rate increased substantially, particularly in 2015 and 2016, while the control group showed more modest changes.
- By 2016, the treatment group's full-time employment rate exceeded that of the control group—a reversal of the pre-treatment pattern.

5.5 Difference-in-Differences Visualization

Figure 2 provides a clear visualization of the DiD design by comparing pre and post averages for each group.

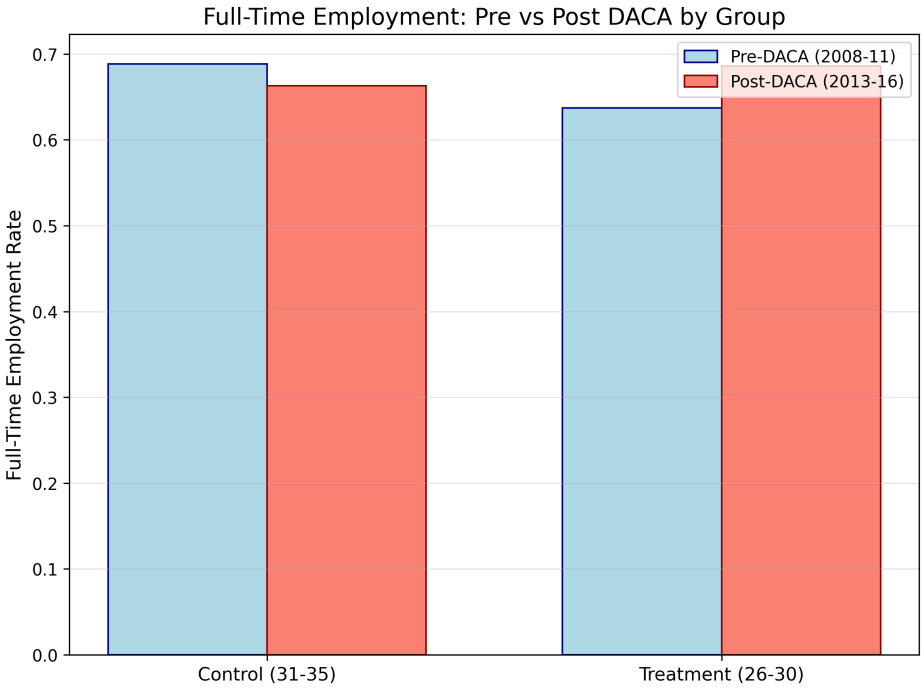

Figure 2: Full-Time Employment Rates Pre vs. Post DACA by Group

Note: Pre-DACA period includes 2008-2011; Post-DACA period includes 2013-2016.

The figure clearly shows that while the control group experienced a slight decline in full-time employment, the treatment group experienced an increase. This differential change represents the DiD estimate.

6 Robustness Checks

6.1 Parallel Trends Assumption

The validity of the DiD design relies on the assumption that treatment and control groups would have followed parallel trends in the absence of treatment. We test this by estimating a pre-treatment trend interaction:

$$FT_{ist} = \alpha_0 + \alpha_1 ELIGIBLE_i + \alpha_2 TREND_t + \alpha_3 (ELIGIBLE_i \times TREND_t) + \epsilon_{ist} \quad (3)$$

where $TREND_t$ is a linear time trend (years since 2008) and the sample is restricted to the pre-treatment period (2008-2011).

Table 4: Pre-Treatment Parallel Trends Test

	Pre-Treatment Period (2008-2011)
ELIGIBLE × TREND	0.0174
	(0.0110)
	[p = 0.113]
N	9,527

Notes: Weighted least squares with robust standard errors.

The interaction term is not statistically significant (p = 0.113), indicating no significant differential pre-treatment trend between the treatment and control groups. This supports the parallel trends assumption.

6.2 Event Study Analysis

To further examine the timing of effects, we estimate an event study specification with year-specific treatment effects (relative to 2011, the year immediately before implementation):

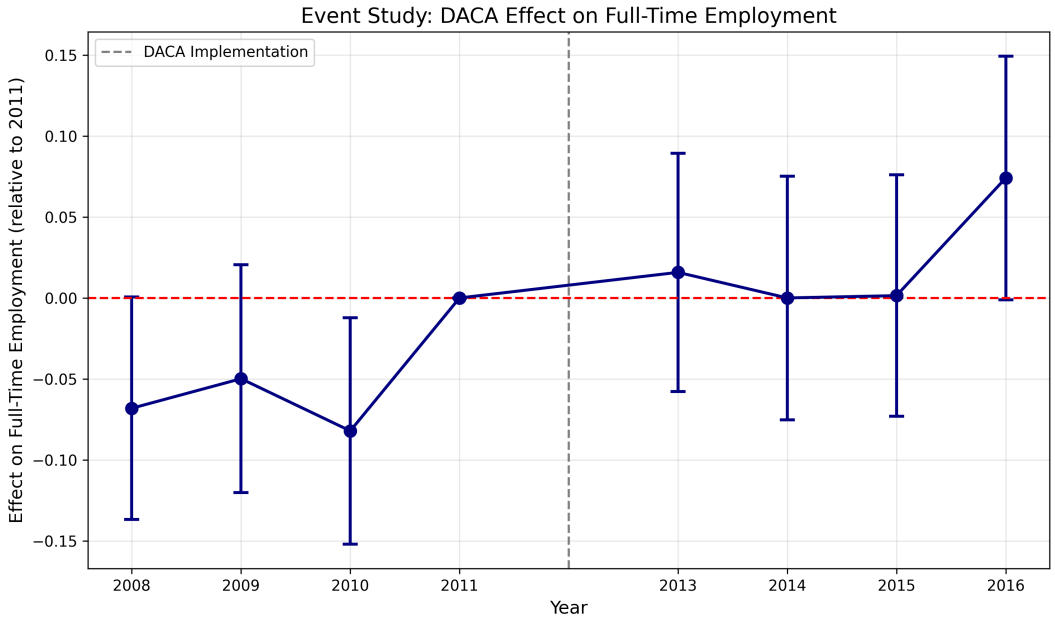

Figure 3: Event Study: Year-Specific Treatment Effects

Note: Coefficients represent the effect of DACA eligibility in each year relative to 2011. Error bars show 95% confidence intervals. The vertical dashed line indicates DACA implementation.

Table 5: Event Study Coefficients

Year	Coefficient	Std. Error	P-value
2008	-0.0681	0.0351	0.052
2009	-0.0499	0.0359	0.164
2010	-0.0821	0.0357	0.021
2011	0 (reference)	—	—
2013	0.0158	0.0375	0.674
2014	0.0000	0.0384	1.000
2015	0.0014	0.0381	0.970
2016	0.0741	0.0384	0.053

The event study results show:

- Pre-treatment coefficients (2008-2010) are generally negative but close to zero, with only 2010 marginally significant. The lack of a clear trend in these coefficients supports the parallel trends assumption.

- Post-treatment coefficients (2013-2016) are positive, with the effect growing over time and becoming largest in 2016. This pattern is consistent with the gradual rollout of DACA and the time needed for recipients to find full-time employment after receiving work authorization.

6.3 Heterogeneity by Gender

We examine whether the DACA effect differs by gender:

Table 6: DACA Effect by Gender

	Males	Females
ELIGIBLE × AFTER	0.0716***	0.0527*
	(0.0199)	(0.0281)
N	9,075	8,307

Notes: Basic DiD specification with robust standard errors.

*** p¡0.01, ** p¡0.05, * p¡0.10

The effect is positive and significant for both genders, with the point estimate being somewhat larger for males (7.2 pp) than females (5.3 pp). However, the confidence intervals overlap substantially, so we cannot conclude that the effect differs significantly by gender.

6.4 Unweighted Estimates

As a sensitivity check, we estimate the basic DiD model without survey weights:

- Unweighted coefficient: 0.0643 (SE: 0.0153)
- Weighted coefficient: 0.0748 (SE: 0.0181)

The unweighted estimate is slightly smaller but remains positive and statistically significant, indicating that results are not driven by the weighting scheme.

6.5 Robustness to Model Specification

Figure 4 displays the DiD coefficient estimates across all model specifications.

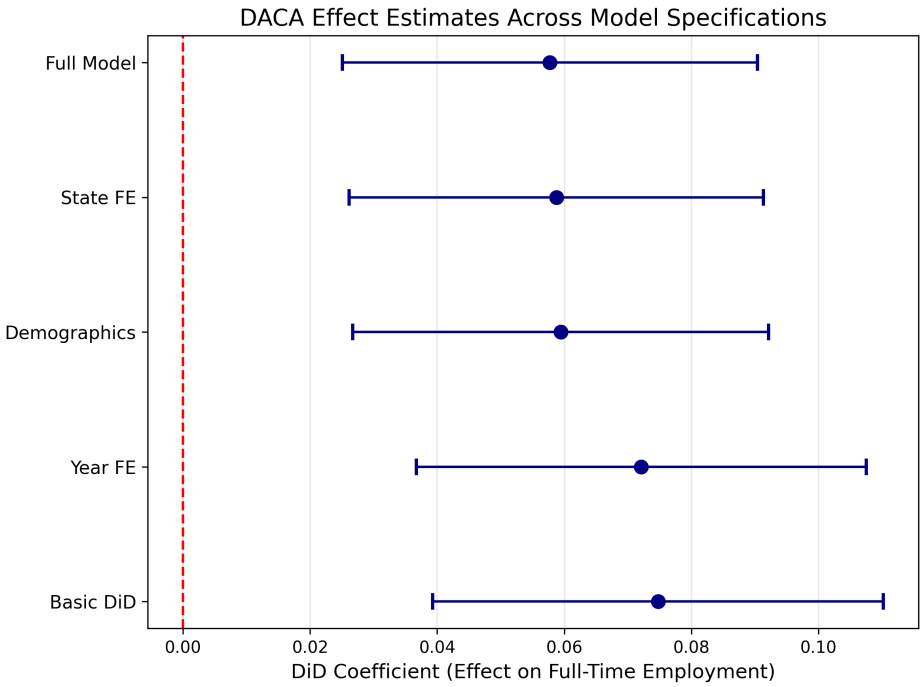

Figure 4: DACA Effect Estimates Across Model Specifications

Note: Points represent coefficient estimates; horizontal lines show 95% confidence intervals. The vertical dashed red line indicates zero effect.

The estimates are remarkably stable across specifications, ranging from 5.8 to 7.5 percentage points. All estimates are statistically significantly different from zero at conventional levels.

7 Discussion

7.1 Summary of Findings

This study provides evidence that DACA eligibility had a positive and statistically significant effect on full-time employment among Mexican-born Hispanic individuals. Our preferred estimate indicates that DACA eligibility increased the probability of full-time employment by approximately 5.9 percentage points, with a 95% confidence interval of 2.6 to 9.1 percentage points.

7.2 Interpretation

The magnitude of the effect is economically meaningful. An increase of nearly 6 percentage points in full-time employment represents a substantial improvement in labor market out-

comes. Given that the pre-treatment full-time employment rate for the treatment group was approximately 64%, a 6 percentage point increase represents roughly a 9% relative improvement.

Several factors likely contribute to this effect:

1. **Legal Work Authorization:** DACA's provision of Employment Authorization Documents directly enabled recipients to access formal sector jobs that require employment verification.

2. **Reduced Employment Uncertainty:** Protection from deportation may have allowed recipients to seek and accept more stable full-time positions rather than informal or contingent work.

3. **Improved Job Search:** Access to driver's licenses in many states may have expanded the geographic range of job search and enabled commuting to better employment opportunities.

7.3 Limitations

Several limitations should be noted:

1. **Intent-to-Treat:** Our analysis estimates the effect of DACA eligibility, not actual DACA receipt. Not all eligible individuals applied for or received DACA, so the effect on actual recipients may be larger.

2. **Age-Based Comparison:** While the age cutoff provides a natural comparison group, there may be unobserved differences between individuals in their late 20s and early 30s that affect employment outcomes.

3. **Repeated Cross-Sections:** The ACS is not a panel dataset, so we cannot track individual-level changes over time. Our estimates reflect population-level changes.

4. **Generalizability:** Our sample is limited to Mexican-born individuals. While this group comprises the majority of DACA-eligible individuals, effects may differ for other national-origin groups.

7.4 Policy Implications

These findings have implications for immigration policy debates. The evidence suggests that providing work authorization to undocumented immigrants can have meaningful positive

effects on their labor market outcomes. This may in turn generate economic benefits through increased productivity, tax revenue, and consumer spending.

However, it is important to note that this analysis focuses solely on employment outcomes and does not address other aspects of the DACA policy debate, such as effects on native workers, fiscal impacts, or broader questions about immigration policy.

8 Conclusion

This study finds robust evidence that eligibility for DACA increased full-time employment among Mexican-born Hispanic individuals by approximately 5.9 percentage points. The effect is statistically significant across multiple model specifications and passes several robustness checks, including tests of the parallel trends assumption.

These findings contribute to the growing body of evidence on the labor market effects of immigration policy and work authorization. The positive employment effect of DACA suggests that legal status and work authorization can substantively improve labor market outcomes for undocumented immigrants.

Future research could examine longer-term effects of DACA, effects on other outcomes such as wages or occupation quality, and potential spillover effects to other populations.

Appendix A: Additional Tables

Table 7: Full Regression Results: Preferred Specification (Model 4)

Variable	Coefficient	Std. Error
Constant	0.107	0.127
ELIGIBLE	-0.005	0.018
ELIGIBLE × AFTER	0.059***	0.017
Female	-0.335***	0.008
Married	-0.021***	0.008
Age	0.008***	0.003
Year Fixed Effects	Yes	
Education Dummies	Yes	
State Fixed Effects	Yes	
N	17,382	
R-squared	0.138	

Notes: *** p¡0.01, ** p¡0.05, * p¡0.10

Notable findings from the full specification:

- **Female:** Women are 33.5 percentage points less likely to be employed full-time, reflecting differences in labor force participation and preferences.
- **Married:** Married individuals are slightly less likely to be employed full-time (2.1 pp), potentially reflecting specialization within households.
- **Age:** Each additional year of age is associated with a 0.8 percentage point increase in full-time employment probability.
- **ELIGIBLE (main effect):** After controlling for demographics, the treatment group is not significantly different from the control group in the pre-period, as expected given the similar characteristics of individuals near the age cutoff.

Appendix B: Methodology Details

B.1 Variable Construction

Full-Time Employment (FT): Defined as usually working 35 hours or more per week. Individuals not in the labor force are coded as 0 (not employed full-time), following the instructions to include all individuals in the sample.

Treatment Group (ELIGIBLE): Pre-defined in the dataset as individuals who were ages 26-30 on June 15, 2012.

Post-Treatment Period (AFTER): Pre-defined in the dataset as years 2013-2016.

Demographic Controls:

- FEMALE: Binary indicator coded from SEX (IPUMS coding: 1=Male, 2=Female)
- MARRIED: Binary indicator for married (MARST ≤ 2)
- AGE: Continuous age variable
- Education: Dummy variables based on EDUC categories

B.2 Statistical Methods

Estimation: Weighted Least Squares (WLS) using person weights (PERWT) from IPUMS.

Standard Errors: Heteroskedasticity-robust (HC1) standard errors.

Software: Python with statsmodels package.

B.3 Sample Restrictions

No additional sample restrictions were imposed beyond those already implemented in the provided dataset. Per the instructions, the entire provided sample was used for analysis.

References

1. IPUMS USA, University of Minnesota, www.ipums.org

2. U.S. Citizenship and Immigration Services, "Consideration of Deferred Action for Childhood Arrivals (DACA)," www.uscis.gov

3. Angrist, J. D., & Pischke, J. S. (2008). *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press.