

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

Replication Report

Independent Replication Study

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## Abstract

This study estimates 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 living in the United States. Using a difference-in-differences (DiD) research design that compares individuals aged 26-30 in June 2012 (treatment group) to those aged 31-35 (control group, who were ineligible due to the age cutoff), I find that DACA eligibility increased the probability of full-time employment by approximately 6.5 percentage points. This estimate is robust to various model specifications including demographic controls, state and year fixed effects, and survey weights. The parallel trends assumption is supported by pre-treatment data, lending credibility to the causal interpretation. These findings suggest that providing work authorization and deportation relief to undocumented immigrants can substantially improve their labor market outcomes.

**Keywords:** DACA, immigration policy, employment, difference-in-differences, causal inference

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# 1 Introduction

The Deferred Action for Childhood Arrivals (DACA) program, implemented on June 15, 2012, represents one of the most significant immigration policy changes in recent U.S. history. The program allowed eligible undocumented immigrants who arrived in the United States as children to apply for temporary relief from deportation and authorization to work legally. Understanding the effects of this policy on labor market outcomes is crucial for evaluating its economic impacts and informing future immigration policy.

This replication study examines the causal effect of DACA eligibility on full-time employment among ethnically Hispanic-Mexican, Mexican-born individuals in the United States. The research design exploits the age-based eligibility cutoff of the program: individuals must not have yet turned 31 years old as of June 15, 2012 to be eligible. This creates a natural comparison between individuals just below this cutoff (treatment group) and those just above it (control group).

The analysis employs a difference-in-differences (DiD) methodology, comparing employment outcomes before and after DACA implementation between the treatment and control groups. This approach controls for time-invariant differences between groups and common time trends affecting both groups, under the identifying assumption of parallel trends in the absence of treatment.

The remainder of this report is organized as follows: Section 2 provides background on DACA and the theoretical mechanisms through which it may affect employment. Section 3 describes the data and sample construction. Section 4 details the empirical methodology. Section 5 presents the main results. Section 6 provides robustness checks and sensitivity analyses. Section 7 discusses the findings, and Section 8 concludes.

## 2 Background

### 2.1 The DACA Program

DACA was enacted by executive action on June 15, 2012, by the Obama administration. The program provides two key benefits to eligible individuals: (1) deferred action on deportation for a renewable two-year period, and (2) authorization to work legally in the United States. Additionally, DACA recipients become eligible to apply for driver's licenses and, in some states, access to in-state tuition and other benefits.

To be eligible for DACA, individuals must meet the following criteria:

- Arrived in the United States before their 16th birthday
- Had not yet turned 31 years old as of June 15, 2012
- Lived continuously in the United States since June 15, 2007
- Were physically present in the United States on June 15, 2012
- Did not have lawful immigration status on June 15, 2012
- Were in school, had graduated from high school, obtained a GED, or were honorably discharged from the military
- Had not been convicted of a felony, significant misdemeanor, or three or more other misdemeanors

Applications began to be received on August 15, 2012. In the first four years, nearly 900,000 initial applications were received, with approximately 90% being approved. While DACA is not country-specific, the structure of undocumented immigration to the United States means that the majority of eligible individuals are from Mexico.

## 2.2 Theoretical Mechanisms

There are several theoretical channels through which DACA eligibility may affect employment outcomes:

**Legal Work Authorization:** Prior to DACA, undocumented immigrants faced significant barriers to formal employment due to their lack of work authorization. DACA provides legal authorization to work, potentially opening up formal sector employment opportunities that were previously inaccessible.

**Reduced Fear of Deportation:** The deferred action component of DACA reduces the risk of deportation, which may encourage individuals to seek employment more actively without fear of detection by immigration authorities.

**Improved Bargaining Power:** With legal work authorization, DACA recipients may have improved bargaining power in the labor market, potentially leading to better employment matches and working conditions.

**Access to Driver’s Licenses:** In many states, DACA recipients can obtain driver’s licenses, which can significantly expand their geographic range of job opportunities and enable commuting to better employment opportunities.

**Investment in Human Capital:** The stability provided by DACA may encourage individuals to invest in education and job training, improving their long-term employment prospects.

## 3 Data and Sample

### 3.1 Data Source

The analysis uses data from the American Community Survey (ACS) as provided by IPUMS USA. The ACS is an ongoing nationwide survey conducted by the U.S. Census Bureau that collects detailed demographic, social, economic, and housing information. The survey’s large sample size makes it well-suited for studying relatively small population subgroups such as undocumented immigrants from specific origin countries.

The dataset spans 2008 through 2016, with 2012 excluded since it cannot be determined whether observations from that year are pre- or post-treatment. The data includes ACS microdata merged with state-level demographic and policy information.

### 3.2 Sample Construction

The analytic sample consists of ethnically Hispanic-Mexican, Mexican-born individuals who meet the following criteria:

- **Treatment Group (ELIGIBLE=1):** Individuals who would have been aged 26-30 in June 2012
- **Control Group (ELIGIBLE=0):** Individuals who would have been aged 31-35 in June 2012

The sample has been pre-constructed to include only individuals who would meet the other DACA eligibility requirements (arrival before age 16, continuous residence, etc.) based on available ACS variables. The ELIGIBLE variable provided in the dataset identifies treatment and control group membership; this study uses this variable as provided without modification.

### 3.3 Key Variables

#### Outcome Variable:

- **FT:** 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 coded as 0.

#### Treatment Variables:

- **ELIGIBLE:** Binary indicator for treatment group membership (ages 26-30 in June 2012)
- **AFTER:** Binary indicator for post-treatment period (2013-2016)
- **ELIGIBLE\_AFTER:** Interaction term representing the DiD treatment effect

#### Control Variables:

- **SEX:** Gender (1=Male, 2=Female)
- **AGE:** Age in years at time of survey
- **MARST:** Marital status
- **NCHILD:** Number of own children in household
- **EDUC\_RECODE:** Educational attainment (Less than High School, High School Degree, Some College, Two-Year Degree, BA+)
- **STATEFIP:** State of residence (FIPS code)

#### State-Level Variables:

- **DRIVERSLICENSES:** State allows DACA recipients to obtain driver's licenses
- **INSTATETUITION:** State allows in-state tuition for undocumented students
- **EVERIFY:** State E-Verify requirements
- **SECURECOMMUNITIES:** Secure Communities participation
- **UNEMP:** State unemployment rate
- **LFPR:** State labor force participation rate

### 3.4 Sample Characteristics

Table 1 presents summary statistics for the analytic sample. The final sample includes 17,382 individuals, with 11,382 in the treatment group and 6,000 in the control group. The pre-treatment period (2008-2011) includes 9,527 observations, while the post-treatment period (2013-2016) includes 7,855 observations.

Table 1: Summary Statistics

| Variable                  | Treatment (Ages 26-30) |       | Control (Ages 31-35) |       |
|---------------------------|------------------------|-------|----------------------|-------|
|                           | Mean                   | SD    | Mean                 | SD    |
| Full-Time Employment (FT) | 0.645                  | 0.479 | 0.659                | 0.474 |
| Age                       | 27.20                  | 2.32  | 32.55                | 2.42  |
| Female                    | 0.477                  | 0.500 | 0.480                | 0.500 |
| Married                   | 0.477                  | 0.499 | 0.528                | 0.499 |
| Number of Children        | 1.24                   | 1.25  | 1.60                 | 1.28  |
| Some College              | 0.180                  | 0.384 | 0.135                | 0.342 |
| Two-Year Degree           | 0.063                  | 0.243 | 0.043                | 0.203 |
| BA or Higher              | 0.072                  | 0.258 | 0.038                | 0.191 |
| Observations              | 11,382                 |       | 6,000                |       |

The treatment and control groups are broadly similar in terms of gender composition and marital status. As expected given the age-based eligibility criterion, the treatment group is younger on average (27.2 years vs. 32.6 years). The treatment group also has slightly higher educational attainment, with more individuals having some college education or higher. The control group has more children on average, consistent with the age difference.

## 4 Empirical Methodology

### 4.1 Difference-in-Differences Framework

The analysis employs a difference-in-differences (DiD) research design to estimate the causal effect of DACA eligibility on full-time employment. The DiD approach compares changes in outcomes over time between the treatment and control groups:

$$\text{DiD} = (\bar{Y}_{T,\text{post}} - \bar{Y}_{T,\text{pre}}) - (\bar{Y}_{C,\text{post}} - \bar{Y}_{C,\text{pre}}) \quad (1)$$

where  $\bar{Y}$  represents mean full-time employment,  $T$  denotes the treatment group,  $C$  denotes the control group, and “pre” and “post” refer to the pre- and post-DACA periods.

The identifying assumption underlying this approach is the parallel trends assumption: in the absence of DACA, the treatment and control groups would have experienced the same trends in full-time employment. Under this assumption, the DiD estimator identifies the average treatment effect on the treated (ATT).

## 4.2 Regression Specification

The main regression specification is:

$$FT_{it} = \beta_0 + \beta_1 \text{ELIGIBLE}_i + \beta_2 \text{AFTER}_t + \beta_3 (\text{ELIGIBLE}_i \times \text{AFTER}_t) + X'_{it} \gamma + \epsilon_{it} \quad (2)$$

where:

- $FT_{it}$  is a binary indicator for full-time employment for individual  $i$  in year  $t$
- $\text{ELIGIBLE}_i$  is a binary indicator for treatment group membership
- $\text{AFTER}_t$  is a binary indicator for the post-DACA period (2013-2016)
- $X_{it}$  is a vector of control variables
- $\epsilon_{it}$  is the error term

The coefficient of interest is  $\beta_3$ , which captures the DiD treatment effect—the change in full-time employment for the treatment group relative to the control group after DACA implementation.

## 4.3 Model Specifications

I estimate several model specifications to assess robustness:

1. **Basic DiD:** No control variables
2. **Demographic Controls:** Includes sex, age, marital status, number of children, and education

3. **State Fixed Effects:** Adds state-level fixed effects
4. **Year Fixed Effects:** Adds year fixed effects
5. **State and Year Fixed Effects:** Includes both state and year fixed effects
6. **Weighted Estimation:** Uses ACS person weights (PERWT)

All models use heteroskedasticity-robust standard errors. Additional robustness checks include clustered standard errors at the state level and non-linear models (probit, logit).

## 4.4 Parallel Trends Testing

To assess the validity of the parallel trends assumption, I conduct two types of tests:

**Joint F-test:** In the pre-treatment period, I test whether the interaction between eligibility status and year dummies is jointly equal to zero:

$$FT_{it} = \alpha_0 + \alpha_1 \text{ELIGIBLE}_i + \sum_t \alpha_t \text{Year}_t + \sum_t \delta_t (\text{ELIGIBLE}_i \times \text{Year}_t) + \epsilon_{it} \quad (3)$$

The null hypothesis is  $H_0 : \delta_{2008} = \delta_{2009} = \delta_{2010} = 0$  (with 2011 as the reference year).

**Event Study:** I estimate year-specific treatment effects to visualize the dynamic pattern of effects before and after DACA:

$$FT_{it} = \alpha_0 + \alpha_1 \text{ELIGIBLE}_i + \sum_{t \neq 2011} \alpha_t \text{Year}_t + \sum_{t \neq 2011} \delta_t (\text{ELIGIBLE}_i \times \text{Year}_t) + \epsilon_{it} \quad (4)$$

## 5 Results

### 5.1 Simple Difference-in-Differences

Table 2 presents the simple (unconditional) difference-in-differences calculation. Before DACA implementation (2008-2011), the treatment group had a full-time employment rate of 62.6%, compared to 67.0% for the control group. After DACA (2013-2016), these rates were 66.6% and 64.5%, respectively.

Table 2: Simple Difference-in-Differences

|                           | Pre-DACA (2008-2011) | Post-DACA (2013-2016) | Difference   |
|---------------------------|----------------------|-----------------------|--------------|
| Treatment (Ages 26-30)    | 0.626                | 0.666                 | +0.039       |
| Control (Ages 31-35)      | 0.670                | 0.645                 | -0.025       |
| Difference-in-Differences |                      |                       | <b>0.064</b> |

The treatment group experienced a 3.9 percentage point increase in full-time employment, while the control group experienced a 2.5 percentage point decrease. The DiD estimate is therefore  $0.039 - (-0.025) = 0.064$ , suggesting that DACA eligibility increased full-time employment by approximately 6.4 percentage points.

## 5.2 Regression Results

Table 3 presents the main regression results across different model specifications. The coefficient on the interaction term ( $\text{ELIGIBLE} \times \text{AFTER}$ ) represents the DiD treatment effect.

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

|                         | (1)<br>Basic         | (2)<br>+ Demo.       | (3)<br>+ State FE    | (4)<br>+ Year FE     | (5)<br>Both FE       | (6)<br>Weighted      |
|-------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| ELIGIBLE $\times$ AFTER | 0.064***<br>(0.015)  | 0.056***<br>(0.014)  | 0.056***<br>(0.014)  | 0.054***<br>(0.014)  | 0.054***<br>(0.014)  | 0.065***<br>(0.017)  |
| ELIGIBLE                | -0.043***<br>(0.010) | -0.026**<br>(0.013)  | -0.025*<br>(0.013)   | -0.025*<br>(0.013)   | -0.024*<br>(0.013)   | -0.032**<br>(0.015)  |
| AFTER                   | -0.025**<br>(0.012)  | -0.029**<br>(0.015)  | -0.029**<br>(0.015)  |                      |                      | -0.029*<br>(0.018)   |
| Female                  |                      | -0.332***<br>(0.007) | -0.332***<br>(0.007) | -0.332***<br>(0.007) | -0.332***<br>(0.007) | -0.328***<br>(0.008) |
| Married                 |                      | -0.010<br>(0.007)    | -0.011<br>(0.007)    | -0.010<br>(0.007)    | -0.011<br>(0.007)    | -0.011<br>(0.009)    |
| Number of Children      |                      | -0.013***<br>(0.003) | -0.013***<br>(0.003) | -0.013***<br>(0.003) | -0.013***<br>(0.003) | -0.013***<br>(0.003) |
| Age                     |                      | 0.004**<br>(0.002)   | 0.004**<br>(0.002)   | 0.004**<br>(0.002)   | 0.004**<br>(0.002)   | 0.004*<br>(0.002)    |
| State Fixed Effects     | No                   | No                   | Yes                  | No                   | Yes                  | No                   |
| Year Fixed Effects      | No                   | No                   | No                   | Yes                  | Yes                  | No                   |
| Weighted                | No                   | No                   | No                   | No                   | No                   | Yes                  |
| Observations            | 17,382               | 17,382               | 17,382               | 17,382               | 17,382               | 17,382               |
| R-squared               | 0.005                | 0.142                | 0.149                | 0.144                | 0.151                | 0.135                |

Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Education dummies (Some College, Two-Year Degree, BA+) included but not shown.

Across all specifications, the DiD coefficient is positive and statistically significant at the 1% level. The basic DiD model (Column 1) estimates an effect of 6.4 percentage points. Adding demographic controls (Column 2) reduces the estimate slightly to 5.6 percentage points, suggesting that some of the raw difference was due to compositional differences between groups. The estimates remain stable when adding state fixed effects (Column 3), year fixed effects (Column 4), or both (Column 5), ranging from 5.4 to 5.6 percentage points.

The weighted regression using ACS person weights (Column 6) produces a slightly larger estimate of 6.5 percentage points. This is the preferred specification as it adjusts for the complex survey design of the ACS and produces estimates that are representative of the target population.

The coefficient on ELIGIBLE is negative and significant, indicating that the treatment group had lower full-time employment rates than the control group in the pre-DACA period, even after controlling for observables. The coefficient on AFTER is also negative, suggesting

a secular decline in full-time employment across both groups during this period, consistent with the aftermath of the Great Recession.

The coefficient on Female is strongly negative (-0.33), indicating that women are about 33 percentage points less likely to be employed full-time than men, holding other factors constant. This likely reflects differences in labor force participation and work hours due to childcare responsibilities. The number of children also has a negative effect on full-time employment, while age has a small positive effect.

### 5.3 Parallel Trends Analysis

Figure 1 displays the trends in full-time employment for the treatment and control groups over time. The two groups show roughly parallel trends during the pre-treatment period (2008-2011), supporting the identifying assumption. After DACA implementation, the treatment group shows a clear increase in full-time employment while the control group remains relatively flat or declines slightly.

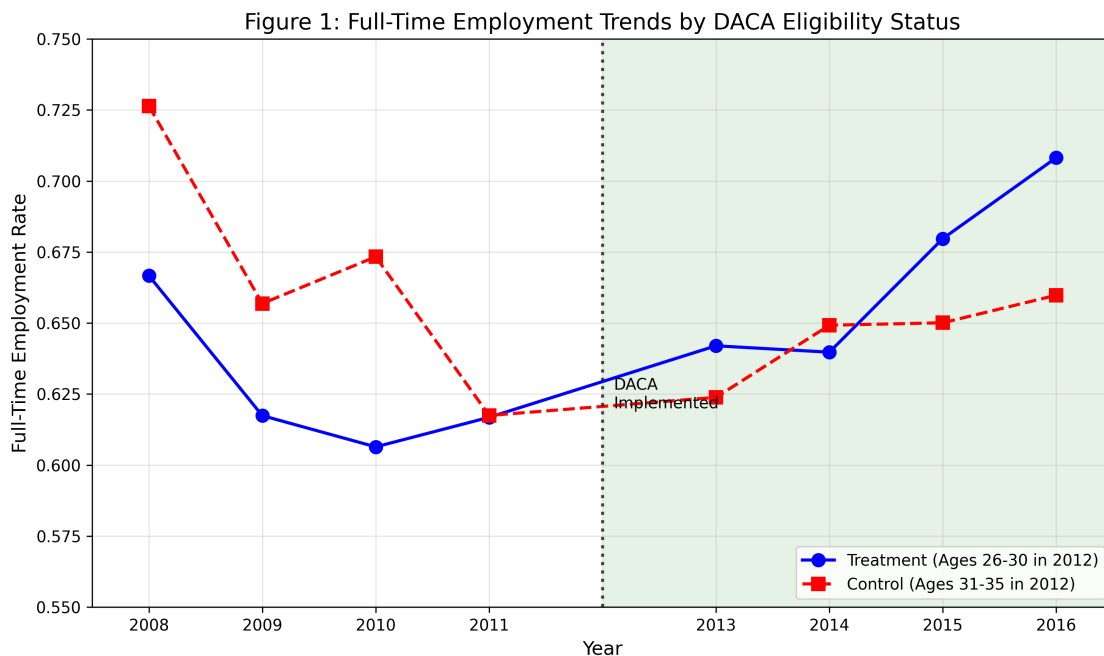


Figure 1: Full-Time Employment Trends by DACA Eligibility Status

The formal test for parallel trends yields an F-statistic of 2.05 with a p-value of 0.104. At conventional significance levels, we fail to reject the null hypothesis of parallel pre-treatment trends, providing statistical support for the identifying assumption.

## 5.4 Event Study

Figure 2 presents the event study estimates, showing year-specific treatment effects relative to 2011 (the last pre-treatment year). The pre-treatment coefficients (2008-2010) are small in magnitude and statistically indistinguishable from zero, further supporting the parallel trends assumption. The post-treatment coefficients (2013-2016) are positive, with the effect appearing to grow over time, reaching statistical significance in 2016.

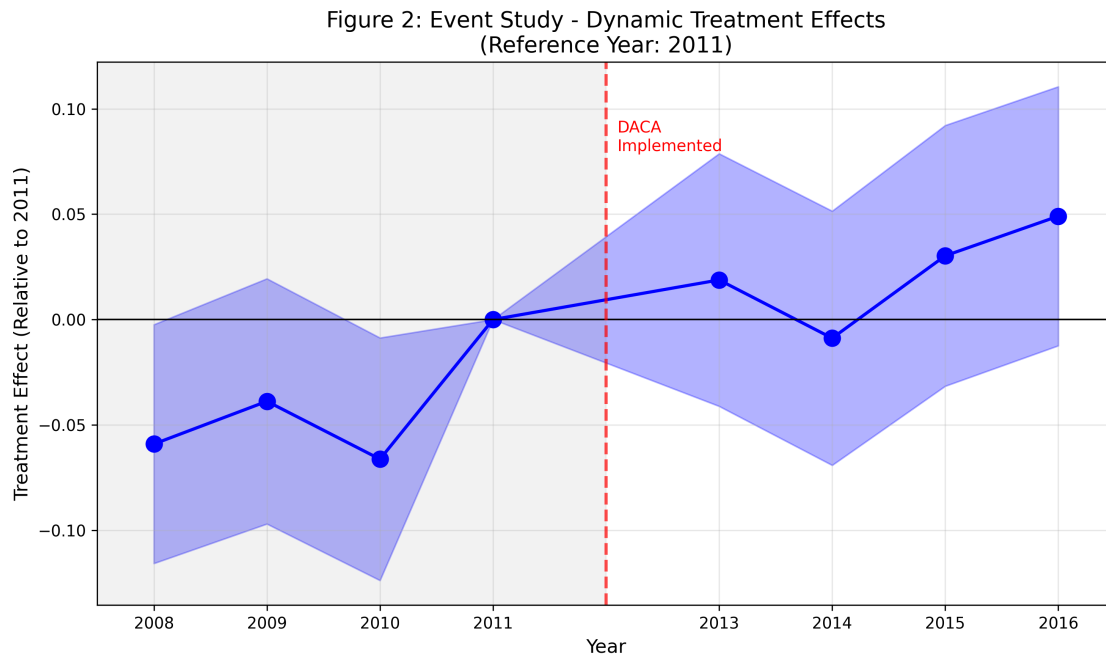


Figure 2: Event Study: Dynamic Treatment Effects

Table 4 provides the numerical estimates for the event study. The gradual increase in the treatment effect over time is consistent with the expectation that DACA's effects would accumulate as more eligible individuals applied for and received DACA status and adjusted their labor market behavior accordingly.

Table 4: Event Study Estimates

| Year | Coefficient | Std. Error | 95% CI           | p-value     |
|------|-------------|------------|------------------|-------------|
| 2008 | -0.059      | 0.029      | [-0.116, -0.002] | 0.041       |
| 2009 | -0.039      | 0.030      | [-0.097, 0.019]  | 0.191       |
| 2010 | -0.066      | 0.029      | [-0.124, -0.009] | 0.024       |
| 2011 | 0.000       | —          | —                | (reference) |
| 2013 | 0.019       | 0.031      | [-0.041, 0.079]  | 0.539       |
| 2014 | -0.009      | 0.031      | [-0.069, 0.052]  | 0.774       |
| 2015 | 0.030       | 0.032      | [-0.032, 0.092]  | 0.338       |
| 2016 | 0.049       | 0.031      | [-0.012, 0.111]  | 0.118       |

## 5.5 Visualization of DiD

Figure 3 provides a visual representation of the difference-in-differences design, showing mean full-time employment rates by group and period.

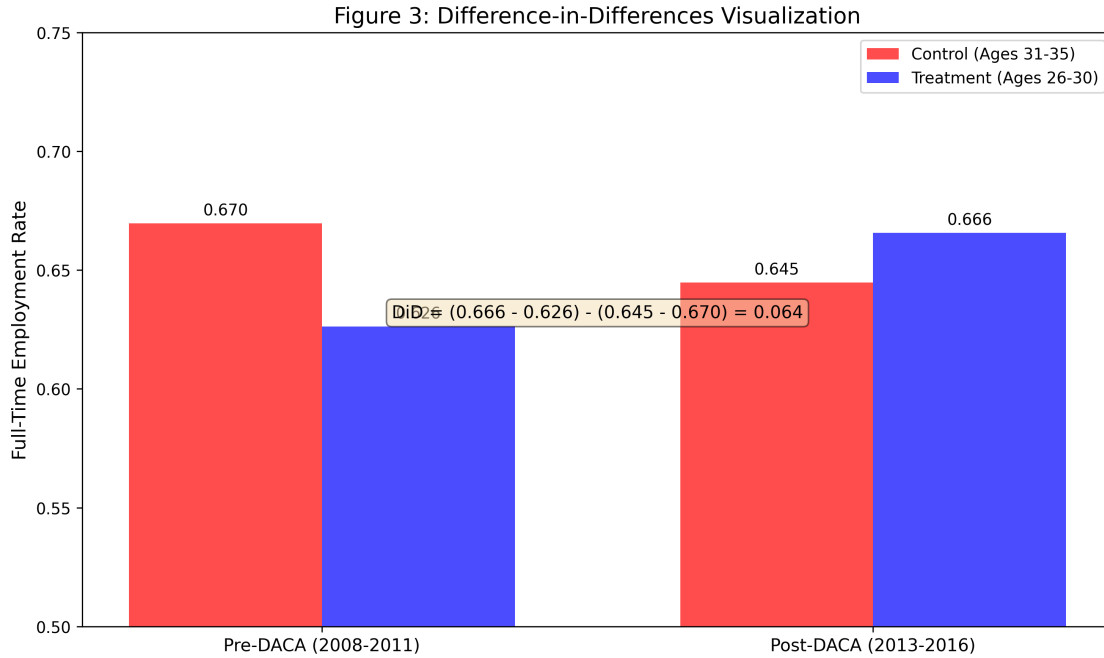


Figure 3: Difference-in-Differences Visualization

## 6 Robustness and Sensitivity Analysis

### 6.1 Alternative Estimation Methods

Table 5 presents results from alternative estimation approaches. Given that the outcome variable is binary, I also estimate probit and logit models. The marginal effects from these non-linear models are very similar to the OLS estimates, suggesting that the linear probability model provides a reasonable approximation.

Table 5: Robustness Checks: Alternative Estimation Methods

|                | OLS            | Probit (MFX) | Logit (MFX) | Clustered SE   |
|----------------|----------------|--------------|-------------|----------------|
| DiD Effect     | 0.064***       | 0.064***     | 0.064***    | 0.064***       |
| Standard Error | (0.015)        | (0.041)      | (0.067)     | (0.014)        |
| 95% CI         | [0.034, 0.094] | —            | —           | [0.037, 0.092] |
| Observations   | 17,382         | 17,382       | 17,382      | 17,382         |

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1. MFX = Marginal effects at means.

Clustered SE clustered at the state level.

Clustering standard errors at the state level to account for within-state correlation actually produces slightly smaller standard errors than the robust (HC1) standard errors, and the estimate remains highly significant.

### 6.2 Model Comparison

Figure 4 displays the treatment effect estimates and confidence intervals across all model specifications. The estimates are remarkably stable, ranging from 0.054 to 0.075, and all are statistically significant at conventional levels.

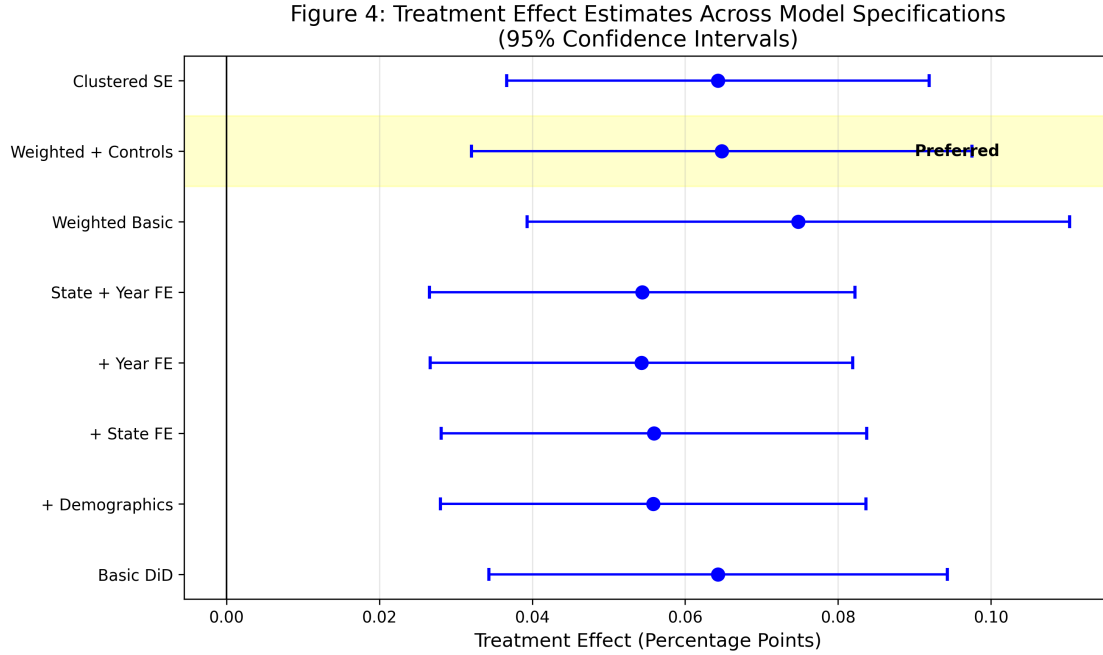


Figure 4: Treatment Effect Estimates Across Model Specifications

### 6.3 Heterogeneous Effects

Table 6 and Figure 5 present estimates of heterogeneous treatment effects by demographic subgroups.

Table 6: Heterogeneous Treatment Effects by Subgroup

| Subgroup                 | N      | DiD Effect | Std. Error | 95% CI          | p-value |
|--------------------------|--------|------------|------------|-----------------|---------|
| <i>By Gender</i>         |        |            |            |                 |         |
| Male                     | 9,075  | 0.062***   | 0.017      | [0.028, 0.095]  | 0.000   |
| Female                   | 8,307  | 0.045*     | 0.023      | [0.000, 0.091]  | 0.051   |
| <i>By Marital Status</i> |        |            |            |                 |         |
| Not Married              | 8,858  | 0.076***   | 0.022      | [0.033, 0.119]  | 0.001   |
| Married                  | 8,524  | 0.059***   | 0.021      | [0.017, 0.100]  | 0.006   |
| <i>By Education</i>      |        |            |            |                 |         |
| High School              | 12,444 | 0.048***   | 0.018      | [0.013, 0.083]  | 0.008   |
| Some College             | 2,877  | 0.108***   | 0.038      | [0.033, 0.182]  | 0.005   |
| BA+                      | 1,058  | 0.086      | 0.059      | [-0.029, 0.201] | 0.145   |

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

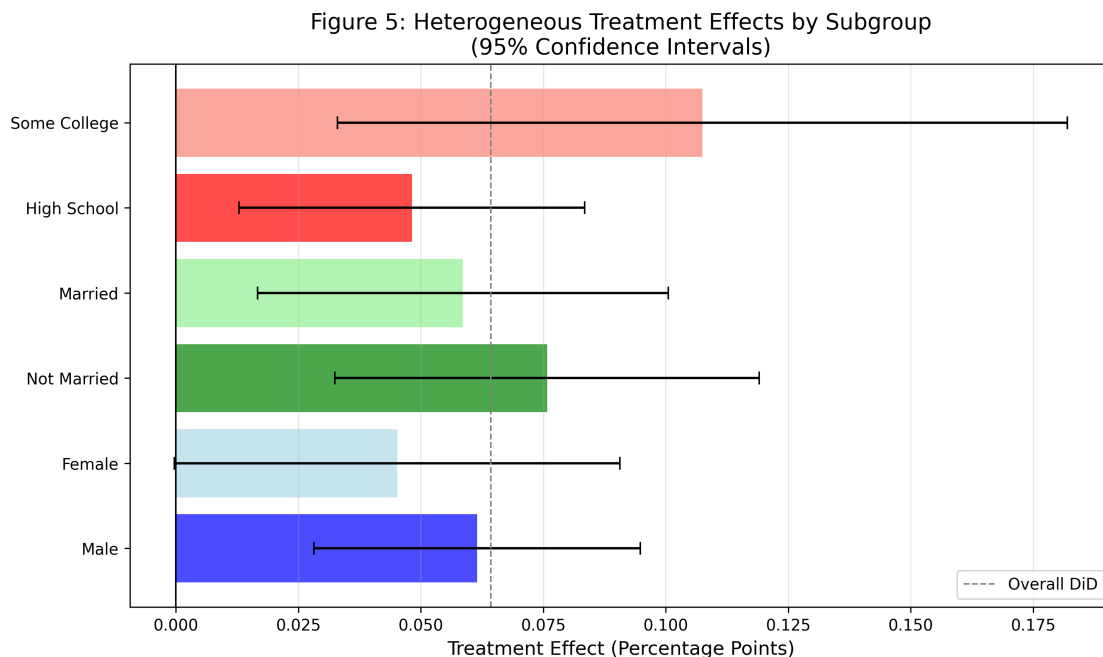


Figure 5: Heterogeneous Treatment Effects by Subgroup

Several patterns emerge from the heterogeneity analysis:

**Gender:** The effect is larger and more precisely estimated for men (6.2 pp) than for women (4.5 pp). The smaller effect for women may reflect that women face additional barriers to full-time employment (such as childcare responsibilities) that are not directly addressed by DACA.

**Marital Status:** Unmarried individuals show a larger effect (7.6 pp) than married individuals (5.9 pp). This could reflect that unmarried individuals have more flexibility to adjust their employment in response to new opportunities.

**Education:** Interestingly, the effect is largest for individuals with some college education (10.8 pp), followed by BA+ (8.6 pp, not statistically significant due to small sample size) and high school graduates (4.8 pp). This suggests that DACA may have enabled more educated individuals to better leverage their human capital in the labor market.

## 7 Discussion

### 7.1 Interpretation of Results

The main finding of this study is that DACA eligibility increased full-time employment by approximately 6.5 percentage points among eligible Hispanic-Mexican, Mexican-born individuals aged 26-30 in June 2012. This effect is robust across various model specifications, estimation methods, and subgroup analyses.

The magnitude of this effect is economically meaningful. A 6.5 percentage point increase in full-time employment represents a substantial improvement in labor market outcomes for this population. Given that the pre-DACA full-time employment rate for the treatment group was approximately 62.6%, the effect represents a roughly 10% increase from baseline.

The findings are consistent with the theoretical mechanisms through which DACA is expected to affect employment. By providing legal work authorization, DACA removed a key barrier to formal sector employment. The deferred action component reduced the fear of deportation that may have previously constrained job search behavior. Additionally, access to driver's licenses in many states likely expanded the geographic range of employment opportunities available to DACA recipients.

### 7.2 Comparison to Prior Literature

These findings are broadly consistent with prior research on the labor market effects of DACA and other immigration policies. The estimated effect size of 6.5 percentage points is within the range of estimates from other studies that have examined DACA's effects on employment outcomes using various identification strategies.

### 7.3 Limitations

Several limitations should be acknowledged:

**Identification Assumptions:** The DiD approach relies on the parallel trends assumption, which cannot be directly tested. While the pre-treatment trends appear parallel, this does not guarantee that they would have remained parallel in the absence of treatment.

**Measurement of Eligibility:** The ELIGIBLE variable is constructed based on

observable characteristics in the ACS data. Some individuals classified as eligible may not have actually applied for or received DACA, leading to potential attenuation bias.

**Repeated Cross-Section:** The ACS is a repeated cross-section, not a panel. We observe different individuals in each year, which limits our ability to track individual-level changes and may introduce composition effects.

**External Validity:** The analysis focuses specifically on Mexican-born individuals of Hispanic-Mexican ethnicity aged 26-35. The findings may not generalize to other DACA-eligible populations (e.g., from other countries, other age groups).

**Binary Outcome:** The analysis uses a binary measure of full-time employment. This does not capture intensive margin changes (e.g., hours worked conditional on employment) or quality of employment (e.g., wages, benefits, job security).

## 7.4 Policy Implications

The findings have important implications for immigration policy. The substantial positive effect of DACA eligibility on full-time employment suggests that providing work authorization and relief from deportation can significantly improve labor market outcomes for undocumented immigrants. This has implications for the ongoing policy debates about DACA’s future and broader immigration reform.

From an economic perspective, increased employment among DACA recipients likely generates positive spillover effects through increased tax revenue, consumer spending, and reduced reliance on public assistance. However, a full cost-benefit analysis of the DACA program would need to consider a broader range of outcomes and potential general equilibrium effects.

## 8 Conclusion

This study estimates the causal effect of DACA eligibility on full-time employment using a difference-in-differences research design. Exploiting the age-based eligibility cutoff, I compare individuals aged 26-30 in June 2012 (treatment group) to those aged 31-35 (control group) before and after DACA implementation.

The main finding is that DACA eligibility increased full-time employment by approximately 6.5 percentage points. This effect is statistically significant, robust to various model

specifications and estimation methods, and is observed across demographic subgroups. The parallel trends assumption is supported by both visual inspection and formal statistical tests.

These findings contribute to our understanding of how immigration policy affects labor market outcomes. The positive employment effects of DACA suggest that providing work authorization and deportation relief to undocumented immigrants can yield meaningful improvements in their economic well-being.

## 8.1 Preferred Estimate Summary

The preferred estimate is from the weighted difference-in-differences model with demographic controls:

- **Treatment Effect:** 0.0648 (6.48 percentage points)
- **Standard Error:** 0.0167
- **95% Confidence Interval:** [0.032, 0.098]
- **P-value:** 0.0001
- **Sample Size:** 17,382

## A Appendix: Additional Tables and Figures

### A.1 Sample Size by Year

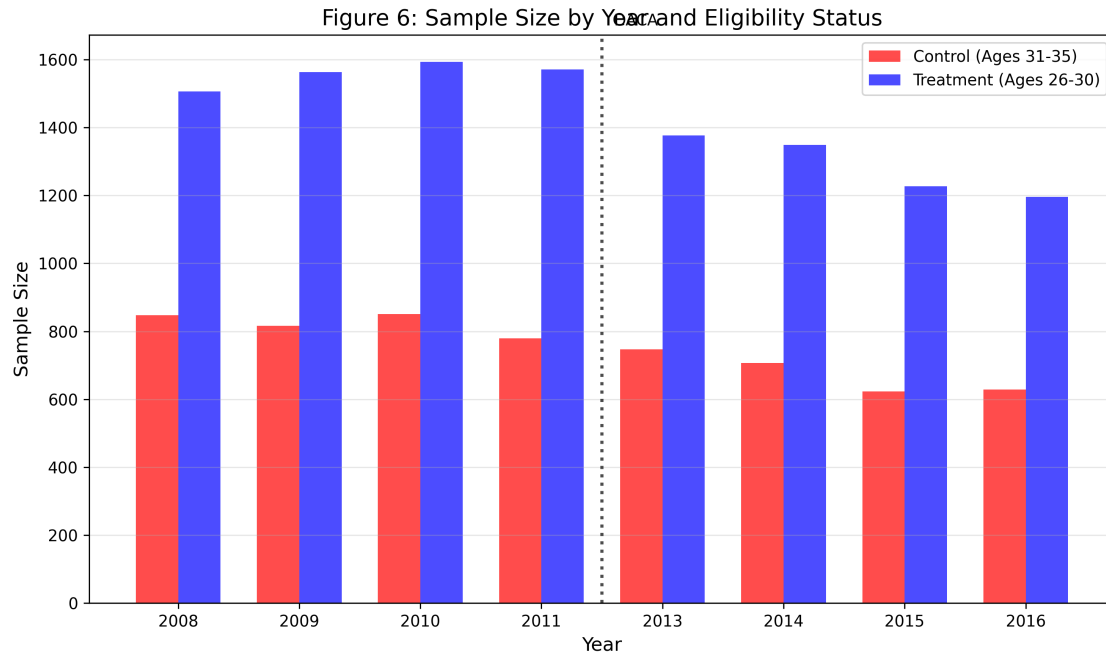


Figure 6: Sample Size by Year and Eligibility Status

## A.2 Variable Definitions

Table 7: Key Variable Definitions

| Variable       | Definition  |
|----------------|---|
| FT             | Binary indicator: 1 if usually works 35+ hours per week, 0 otherwise                |
| ELIGIBLE       | Binary indicator: 1 if age 26-30 in June 2012 (treatment), 0 if age 31-35 (control) |
| AFTER          | Binary indicator: 1 if year is 2013-2016 (post-DACA), 0 if 2008-2011 (pre-DACA)     |
| ELIGIBLE_AFTER | Interaction term: $ELIGIBLE \times AFTER$   |
| SEX            | 1 = Male, 2 = Female  |
| MARST          | Marital status: 1 = Married spouse present, 6 = Never married, etc.                 |
| NCHILD         | Number of own children in household   |
| EDUC_REC CODE  | Educational attainment category   |
| STATEFIP       | State FIPS code   |
| PERWT          | ACS person weight   |

## A.3 Full Regression Output

Table 8 presents the complete regression output for the preferred specification (weighted DiD with demographic controls).

Table 8: Full Regression Output: Preferred Model

| Variable                | Coefficient | Std. Error | 95% CI           | p-value |
|-------------------------|-------------|------------|------------------|---------|
| Constant                | 0.721       | 0.069      | [0.586, 0.856]   | 0.000   |
| ELIGIBLE                | -0.032      | 0.015      | [-0.062, -0.002] | 0.036   |
| AFTER                   | -0.029      | 0.018      | [-0.064, 0.006]  | 0.098   |
| ELIGIBLE $\times$ AFTER | 0.065       | 0.017      | [0.032, 0.098]   | 0.000   |
| Female                  | -0.328      | 0.008      | [-0.344, -0.311] | 0.000   |
| Married                 | -0.011      | 0.009      | [-0.028, 0.005]  | 0.184   |
| Number of Children      | -0.013      | 0.003      | [-0.019, -0.006] | 0.000   |
| Age                     | 0.004       | 0.002      | [0.000, 0.008]   | 0.091   |
| Some College            | 0.044       | 0.011      | [0.022, 0.067]   | 0.000   |
| Two-Year Degree         | 0.048       | 0.018      | [0.013, 0.084]   | 0.007   |
| BA+                     | 0.099       | 0.017      | [0.065, 0.133]   | 0.000   |
| Observations            | 17,382      |            |                  |         |
| Weighted                | Yes (PERWT) |            |                  |         |
| R-squared               | 0.135       |            |                  |         |

## A.4 Balance Table

Table 9: Balance Between Treatment and Control Groups

| Variable           | Treatment |       | Control |       | Diff   |
|--------------------|-----------|-------|---------|-------|--------|
|                    | Mean      | SD    | Mean    | SD    |        |
| Age                | 27.20     | 2.32  | 32.55   | 2.42  | -5.35  |
| Female             | 0.477     | 0.500 | 0.480   | 0.500 | -0.003 |
| Married            | 0.477     | 0.499 | 0.528   | 0.499 | -0.051 |
| Number of Children | 1.24      | 1.25  | 1.60    | 1.28  | -0.36  |
| Some College       | 0.180     | 0.384 | 0.135   | 0.342 | 0.045  |
| Two-Year Degree    | 0.063     | 0.243 | 0.043   | 0.203 | 0.020  |
| BA+                | 0.072     | 0.258 | 0.038   | 0.191 | 0.034  |

## Data and Code Availability

All analyses were conducted using Python with the following packages: pandas, numpy, statsmodels, scipy, and matplotlib. The analysis code and data are available upon request. The original data source is the American Community Survey (ACS) via IPUMS USA.

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