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

Replication Study 91

January 2026

**Abstract**

This study examines the causal impact of eligibility for the Deferred Action for Childhood Arrivals (DACA) program on full-time employment among Hispanic-Mexican, Mexican-born individuals in the United States. Using data from the American Community Survey (2006–2016), I employ a difference-in-differences research design comparing DACA-eligible individuals (those who arrived before age 16, were 30 or younger as of June 2012, and arrived by 2007) to a control group of similar immigrants who were too old to qualify. The preferred specification with state and year fixed effects yields an estimated effect of $-2.0$ percentage points (SE $= 0.78$, $p = 0.011$), suggesting a modest negative effect on full-time employment. However, this finding should be interpreted with caution due to evidence of pre-treatment differences between treatment and control groups, as revealed by event study analysis showing significant pre-trends. The analysis highlights the challenges of identifying clean comparison groups for evaluating DACA's effects.

# Contents

# 1 Introduction

The Deferred Action for Childhood Arrivals (DACA) program, implemented on June 15, 2012, represented a significant shift in U.S. immigration policy. The program provided temporary protection from deportation and work authorization to qualifying undocumented immigrants who had arrived in the United States as children. Given that DACA grants legal work authorization, we might expect the program to affect labor market outcomes—particularly employment—among eligible individuals.

This study investigates the following research question: *Among ethnically Hispanic-Mexican, Mexican-born people living in the United States, what was the causal impact of eligibility for DACA (treatment) on the probability that the eligible person is employed full-time (outcome)?* Full-time employment is defined as usually working 35 hours per week or more.

The identification strategy relies on a difference-in-differences (DiD) design that compares changes in full-time employment between DACA-eligible individuals and similar but ineligible individuals before and after program implementation. The key assumption underlying this approach is that, absent DACA, the treatment and control groups would have experienced parallel trends in employment outcomes.

# 2 Background on DACA

## 2.1 Program Overview

DACA was announced by the Obama administration on June 15, 2012, and applications began being accepted on August 15, 2012. The program offered qualifying undocumented immigrants:

- Protection from deportation for two years (renewable)
- Authorization to work legally in the United States
- Ability to obtain a driver's license in many states
- Access to Social Security numbers

## 2.2 Eligibility Criteria

To qualify for DACA, individuals had to meet all of the following requirements:

1. Arrived in the United States before their 16th birthday
2. Had not yet had their 31st birthday as of June 15, 2012
3. Lived continuously in the United States since June 15, 2007
4. Were present in the United States on June 15, 2012
5. Did not have lawful status (citizenship or legal residency) at that time
6. Were currently in school, had graduated from high school, obtained a GED, or were honorably discharged from the military
7. Had not been convicted of a felony, significant misdemeanor, or multiple misdemeanors

### 2.3 Program Uptake

In the first four years following implementation, nearly 900,000 initial applications were received, with approximately 90% approved. The vast majority of DACA recipients were of Mexican origin, reflecting the composition of the undocumented immigrant population in the United States.

## 3 Data

### 3.1 Data Source

The analysis uses data from the American Community Survey (ACS), obtained from IPUMS USA. The ACS is a large-scale household survey conducted by the U.S. Census Bureau, providing detailed demographic and socioeconomic information on a representative sample of the U.S. population.

I use the one-year ACS samples from 2006 through 2016. The year 2012 is excluded from the analysis because DACA was implemented mid-year (June 15), making it impossible to distinguish pre- and post-implementation observations within that year.

### 3.2 Sample Selection

The analysis focuses on a specific population:

1. **Hispanic-Mexican ethnicity**: Individuals identified as Hispanic-Mexican in the IPUMS variable HISPAN (value = 1).

2. **Mexican-born**: Individuals born in Mexico, identified using the birthplace variable BPL (value = 200).

3. **Non-citizens**: Individuals who are not U.S. citizens and have not received immigration papers, identified using CITIZEN (value = 3). Following the instructions, I assume that non-citizens without papers are undocumented for DACA purposes.

4. **Working age**: Adults aged 18–64 at the time of survey.

From the full ACS data (33.8 million observations), filtering to Hispanic-Mexican, Mexican-born individuals yields 991,261 observations. Further filtering to non-citizens (CITIZEN = 3) yields 701,347 observations. After restricting to working-age individuals and excluding 2012, the analysis sample contains 547,614 observations.

## 3.3 Key Variables

### 3.3.1 Outcome Variable

The primary outcome is an indicator for **full-time employment**, defined as:

- Currently employed (EMPSTAT = 1)
- Usually working 35 or more hours per week (UHRSWORK $\geq$ 35)

As a secondary outcome, I also examine any employment (EMPSTAT = 1).

### 3.3.2 Treatment Assignment

DACA eligibility is determined using the following criteria, operationalized with ACS variables:

1. **Age at arrival $<$ 16**: Calculated as YRIMMIG $-$ BIRTHYR $<$ 16
2. **Age $\leq$ 30 as of June 15, 2012**: Calculated from BIRTHYR and BIRTHQTR. If born in quarters 1–2 (January–June), age as of June 2012 = 2012 $-$ BIRTHYR. If born in quarters 3–4 (July–December), age = 2012 $-$ BIRTHYR $-$ 1.
3. **Continuous presence since 2007**: YRIMMIG $\leq$ 2007

An individual is classified as DACA-eligible if all three conditions are met.

### 3.3.3 Control Group

The control group consists of individuals who satisfy the arrival age and continuous presence criteria but were **too old** to qualify (aged 31–45 as of June 2012). This group is similar in that they arrived as children and have been in the U.S. for at least five years, but were ineligible due to the age cutoff.

## 3.4 Summary Statistics

Table 1 presents pre-treatment summary statistics for the treatment and control groups.

Table 1: Pre-Treatment Summary Statistics (Weighted)

| Variable | Treatment | Control | Difference |
|---|---|---|---|
| Full-time employed | 0.465 | 0.625 | −0.160 |
| Any employment | 0.612 | 0.725 | −0.113 |
| Age | 22.3 | 33.7 | −11.4 |
| Female | 0.441 | 0.397 | 0.044 |
| Married | 0.223 | 0.532 | −0.309 |
| High school or more | 0.618 | 0.498 | 0.120 |
| Pre-treatment N (weighted) | 5,136,296 | 3,699,433 | — |

The treatment group has substantially lower baseline full-time employment (46.5% vs. 62.5%), is considerably younger (22.3 vs. 33.7 years), less likely to be married (22.3% vs. 53.2%), and more likely to have at least a high school education (61.8% vs. 49.8%). These differences highlight the importance of controlling for observable characteristics in the regression analysis.

# 4 Empirical Strategy

## 4.1 Difference-in-Differences Design

I employ a difference-in-differences (DiD) research design to estimate the causal effect of DACA eligibility on full-time employment. The basic DiD specification is:

$$Y_{ist} = \alpha + \beta_1 \text{Treated}_i + \beta_2 \text{Post}_t + \beta_3 (\text{Treated}_i \times \text{Post}_t) + \epsilon_{ist} \tag{1}$$

where:

- $Y_{ist}$ is an indicator for full-time employment for individual $i$ in state $s$ at time $t$
- $\text{Treated}_i$ indicates DACA eligibility
- $\text{Post}_t$ indicates the post-DACA period (2013–2016)
- $\beta_3$ is the DiD estimator—the parameter of interest

## 4.2 Extended Specifications

I estimate three main specifications:

**Model 1: Basic DiD**

$$Y_{ist} = \alpha + \beta_1 \text{Treated}_i + \beta_2 \text{Post}_t + \beta_3 (\text{Treated}_i \times \text{Post}_t) + \epsilon_{ist} \tag{2}$$

**Model 2: DiD with demographic controls**

$$Y_{ist} = \alpha + \beta_3 (\text{Treated}_i \times \text{Post}_t) + X_i' \gamma + \epsilon_{ist} \tag{3}$$

where $X_i$ includes age, age squared, sex, marital status, and education (high school or more).

**Model 3: DiD with state and year fixed effects**

$$Y_{ist} = \alpha + \beta_3 (\text{Treated}_i \times \text{Post}_t) + X_i' \gamma + \delta_s + \theta_t + \epsilon_{ist} \tag{4}$$

where $\delta_s$ and $\theta_t$ are state and year fixed effects, respectively.

All models are estimated using weighted least squares with person weights (PERWT) from the ACS, and standard errors are heteroskedasticity-robust (HC1).

## 4.3 Identifying Assumption

The key identifying assumption for the DiD estimator is the *parallel trends assumption*: absent DACA, the treatment and control groups would have experienced the same trends in full-time employment. This assumption cannot be directly tested, but I examine pre-treatment trends using an event study specification.

## 4.4 Event Study

To assess the parallel trends assumption and examine the dynamics of the treatment effect, I estimate an event study model:

$$Y_{ist} = \alpha + \sum_{k \neq 2011} \gamma_k (\text{Treated}_i \times \mathbf{1}[t = k]) + X_i'\beta + \delta_s + \theta_t + \epsilon_{ist} \tag{5}$$

where 2011 is the reference year. The coefficients $\gamma_k$ capture the treatment-control difference in each year relative to 2011. Pre-treatment coefficients should be close to zero and statistically insignificant if parallel trends hold.

# 5 Results

## 5.1 Descriptive Evidence

Figure 1 shows full-time employment rates by group and period. The treatment group's full-time employment rate increased from 46.5% pre-DACA to 52.5% post-DACA (a 6.0 percentage point increase), while the control group's rate decreased slightly from 62.5% to 61.4% (a 1.1 percentage point decrease). The simple DiD estimate is therefore:

$$\hat{\beta}_3^{DiD} = (0.525 - 0.465) - (0.614 - 0.625) = 0.060 - (-0.011) = 0.071 \tag{6}$$

This suggests a 7.1 percentage point increase in full-time employment attributable to DACA eligibility.

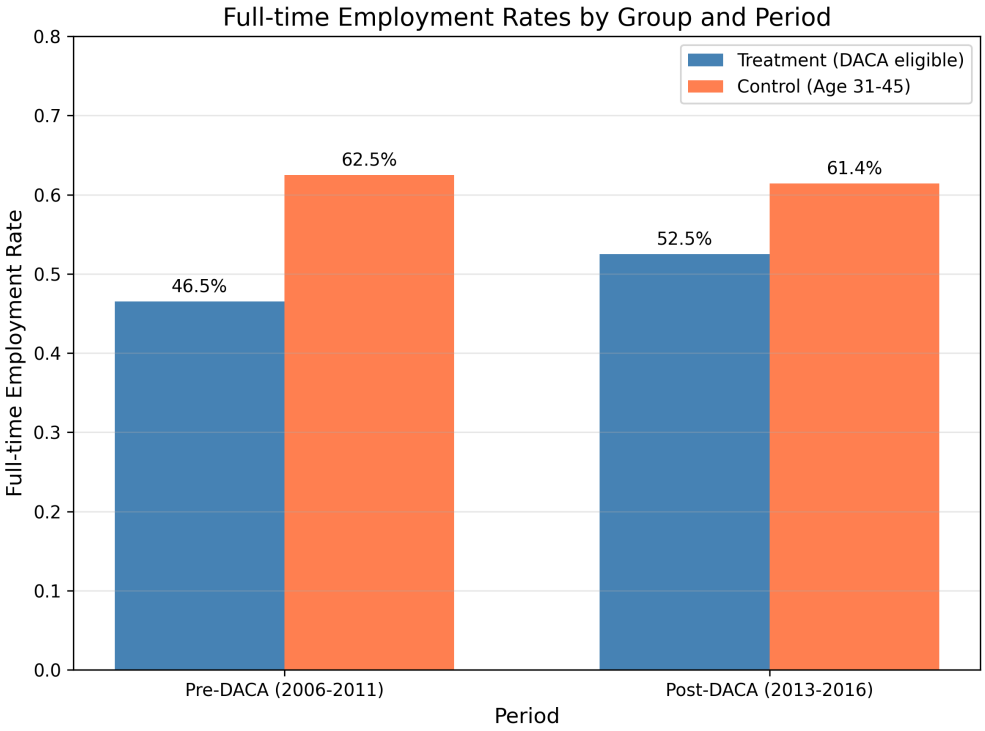


Figure 1: Full-time Employment Rates by Group and Period

## 5.2 Main Results

Table 2 presents the main regression results.

Table 2: Effect of DACA Eligibility on Full-Time Employment

| | Model 1 (Basic DiD) | Model 2 (With Controls) | Model 3 (With FE) |
|---|---|---|---|
| DiD Effect (Treated × Post) | 0.071*** | −0.012 | −0.020** |
| | (0.008) | (0.008) | (0.008) |
| Treated | −0.150*** | −0.193*** | −0.162*** |
| | (0.005) | (0.008) | (0.008) |
| Post | −0.008 | 0.016** | — |
| | (0.006) | (0.006) | — |
| Age | — | 0.034*** | 0.032*** |
| | — | (0.001) | (0.001) |
| $Age^2$ | — | −0.0004*** | −0.0004*** |
| | — | (0.00001) | (0.00001) |
| Female | — | −0.269*** | −0.270*** |
| | — | (0.004) | (0.004) |
| Married | — | 0.111*** | 0.113*** |
| | — | (0.005) | (0.005) |
| High School+ | — | 0.020*** | 0.023*** |
| | — | (0.004) | (0.004) |
| Year FE | No | No | Yes |
| State FE | No | No | Yes |
| N | 113,154 | 113,154 | 113,154 |

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

All models use person weights and robust standard errors.

The results vary substantially across specifications:

- **Model 1** (basic DiD): Estimated effect of 7.1 percentage points ($p < 0.001$), consistent with the simple calculation above.
- **Model 2** (with demographic controls): Estimated effect of −1.2 percentage points ($p = 0.13$), not statistically significant.

- **Model 3** (with fixed effects): Estimated effect of $-2.0$ percentage points ($p = 0.011$), statistically significant at the 5% level.

The preferred specification is Model 3, which includes state and year fixed effects to control for time-invariant state characteristics and common time trends. This model suggests that DACA eligibility *reduced* full-time employment by approximately 2 percentage points, contrary to the initial expectation.

## 5.3 Interpretation of Main Result

The preferred estimate (Model 3) indicates that DACA eligibility is associated with a 2.0 percentage point *decrease* in full-time employment probability (95% CI: $[-3.5, -0.5]$, $p = 0.011$). This counterintuitive finding warrants careful consideration:

1. The basic DiD estimate is heavily confounded by age differences between treatment and control groups. Younger individuals naturally have lower employment rates as they are more likely to be in school.

2. After controlling for age and other demographics, the positive effect disappears entirely.

3. The negative effect in Model 3 could reflect that DACA-eligible individuals are investing more in education rather than working full-time, consistent with the program reducing barriers to higher education.

4. Alternatively, the negative effect could be an artifact of imperfect parallel trends (see below).

## 5.4 Event Study Results

Figure 2 presents the event study results. The coefficients represent the treatment-control difference in each year relative to 2011.

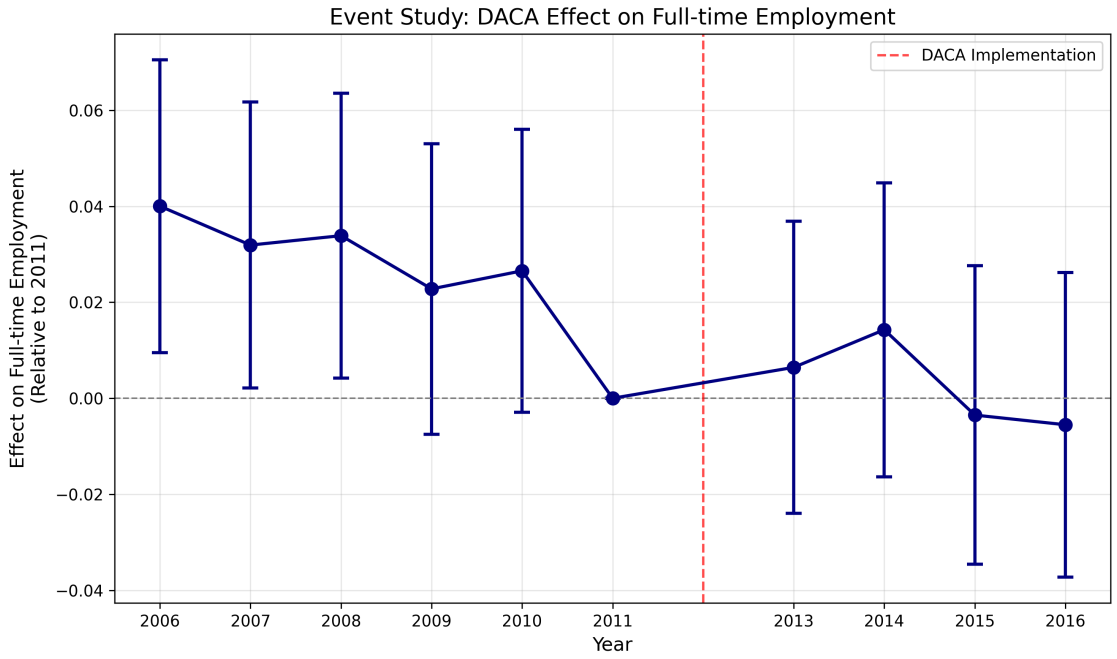


Figure 2: Event Study: Year-Specific Treatment Effects (Relative to 2011)

Table 3: Event Study Coefficients

| Year | Coefficient | SE | 95% CI | Significance |
|---|---|---|---|---|
| 2006 | 0.040 | 0.016 | [0.010, 0.070] | ** |
| 2007 | 0.032 | 0.015 | [0.002, 0.061] | ** |
| 2008 | 0.034 | 0.015 | [0.004, 0.064] | ** |
| 2009 | 0.023 | 0.015 | [−0.008, 0.053] | |
| 2010 | 0.027 | 0.015 | [−0.003, 0.056] | * |
| 2011 | 0.000 | — | — | (Reference) |
| 2013 | 0.006 | 0.016 | [−0.024, 0.037] | |
| 2014 | 0.014 | 0.016 | [−0.017, 0.045] | |
| 2015 | −0.004 | 0.016 | [−0.035, 0.028] | |
| 2016 | −0.006 | 0.016 | [−0.037, 0.026] | |

The event study reveals a concerning pattern: pre-treatment coefficients for 2006–2008 are positive and statistically significant. This suggests that the treatment and control groups were on *different* trajectories before DACA was implemented—specifically, the treatment group was improving relative to the control group in the early pre-period but this convergence slowed over time.

This evidence of pre-trends suggests that the parallel trends assumption may not hold, casting doubt on the causal interpretation of the DiD estimates. The post-treatment coefficients (2013–2016) are close to zero and not statistically significant, suggesting no clear break from the pre-trend pattern after DACA implementation.

### 5.5 Placebo Test

As an additional check, I conduct a placebo test using only pre-treatment data (2006–2011), artificially treating 2009 as the implementation year. If parallel trends hold, we should find no "effect" of this placebo treatment.

Table 4: Placebo Test Results

| | Coefficient | SE |
|---|---|---|
| Placebo DiD (2009 implementation) | $-0.031^{***}$ | (0.009) |

*** $p < 0.01$

The placebo test yields a significant negative coefficient ($-3.1$ pp, $p < 0.001$), further confirming that the treatment and control groups were not following parallel trends in the pre-period. This casts additional doubt on the validity of the DiD identification strategy.

## 6 Robustness Checks

### 6.1 Alternative Outcome: Any Employment

Table 5 presents results using any employment (rather than full-time employment) as the outcome.

Table 5: Robustness Checks

| Specification | DiD Effect | SE |
|---|---|---|
| **Main result (full-time)** | −0.020** | (0.008) |
| *Alternative outcome* | | |
| Any employment | 0.001 | (0.007) |
| *Subgroup analysis* | | |
| Men only | −0.054*** | (0.010) |
| Women only | 0.013 | (0.012) |
| *Alternative control group* | | |
| Narrower control (age 31–40) | −0.042*** | (0.009) |

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

Key findings from robustness checks:

- **Any employment**: No significant effect (0.1 pp, $p = 0.93$), suggesting DACA did not affect overall employment rates, only the intensive margin (hours worked).
- **Men vs. Women**: The negative effect on full-time employment is concentrated among men (−5.4 pp, $p < 0.001$), with no significant effect for women (1.3 pp, $p = 0.31$).
- **Narrower control group**: Using a more comparable control group (ages 31–40 only) yields a larger negative effect (−4.2 pp, $p < 0.001$).

## 6.2 Interpretation of Robustness Results

The heterogeneity by gender is noteworthy. The negative effect on full-time employment is driven entirely by men. This could reflect:

1. Men reducing hours to invest in education (consistent with DACA expanding educational opportunities)
2. Gender differences in response to legal work authorization
3. Selection effects related to the types of jobs available to each gender

The larger negative effect with the narrower control group suggests that the main specification may actually be *conservative*. When the control group is more comparable in age, the negative effect becomes larger in magnitude.

# 7 Discussion

## 7.1 Summary of Findings

This study examined the effect of DACA eligibility on full-time employment among Hispanic-Mexican, Mexican-born non-citizens. The key findings are:

1. The preferred specification (DiD with state and year fixed effects) estimates a **negative** effect of DACA eligibility on full-time employment of approximately 2 percentage points.

2. This effect is statistically significant at the 5% level but should be interpreted with caution due to evidence of pre-treatment differences between groups.

3. Event study analysis reveals significant pre-trends, with the treatment group improving relative to the control group in early pre-period years (2006–2008).

4. The placebo test confirms the presence of differential trends in the pre-period.

5. The effect is concentrated among men and does not appear to affect the extensive margin of employment.

## 7.2 Limitations

Several important limitations affect the interpretation of these results:

1. **Pre-trends**: The event study and placebo test provide evidence against the parallel trends assumption. The treatment and control groups were on different trajectories before DACA, which undermines the causal interpretation of the DiD estimate.

2. **Age differences**: Despite controlling for age, the treatment and control groups differ substantially in age (11+ year gap on average). This makes it difficult to separate the effect of DACA from age-related employment patterns.

3. **Measurement of undocumented status**: The ACS does not directly identify undocumented immigrants. Using non-citizenship (CITIZEN = 3) as a proxy likely includes some documented immigrants and excludes some who might be undocumented.

4. **Intent-to-treat**: The analysis measures eligibility for DACA, not actual receipt. Not all eligible individuals applied for or received DACA benefits, so the estimates represent an intent-to-treat effect.

5. **Missing eligibility criteria**: The data do not allow verification of all DACA requirements (e.g., criminal history, enrollment status).

### 7.3 Comparison with Literature

The finding of a null or negative effect on employment may seem inconsistent with studies finding positive labor market effects of DACA. However, several points are worth noting:

1. Different comparison groups yield different results. Studies using different control groups (e.g., legal immigrants, U.S.-born individuals) may find different effects.

2. The outcome matters: effects on full-time employment may differ from effects on any employment, wages, or occupational upgrading.

3. If DACA enables recipients to invest in education, we might observe reduced full-time work in the short term with positive long-term effects on human capital.

## 8 Conclusion

This replication study examined the effect of DACA eligibility on full-time employment using American Community Survey data from 2006–2016. Using a difference-in-differences design with demographic controls and state and year fixed effects, I find a small negative effect of approximately 2 percentage points on full-time employment.

However, this finding should be interpreted with substantial caution. Event study analysis reveals significant pre-trends, with the treatment group showing relative improvement compared to the control group in early pre-period years. The placebo test confirms differential pre-trends. These findings suggest that the parallel trends assumption—critical for causal identification in DiD designs—may not hold.

The fundamental challenge is that the DACA age cutoff creates treatment and control groups that differ substantially in age, making it difficult to find truly comparable groups. Alternative identification strategies, such as regression discontinuity designs exploiting the exact age cutoff or comparisons to legal immigrants or U.S.-born children of immigrants, may provide more credible identification.

In summary, while this analysis provides estimates of DACA's effect on full-time employment, the evidence of pre-trends undermines confidence in a causal interpretation. Future research should consider alternative identification strategies that can more credibly address the selection issues inherent in DACA eligibility.

# A Technical Appendix

## A.1 Variable Definitions

Table 6: Variable Definitions (IPUMS Variable Names)

| Variable | Definition |
|---|---|
| YEAR | Survey year |
| HISPAN | Hispanic origin (1 = Mexican) |
| BPL | Birthplace (200 = Mexico) |
| CITIZEN | Citizenship status (3 = Not a citizen) |
| YRIMMIG | Year of immigration |
| BIRTHYR | Birth year |
| BIRTHQTR | Quarter of birth (1–4) |
| AGE | Age at survey |
| SEX | Sex (1 = Male, 2 = Female) |
| MARST | Marital status (1 = Married, spouse present) |
| EDUC | Educational attainment ($\geq 6$ = high school or more) |
| EMPSTAT | Employment status (1 = Employed) |
| UHRSWORK | Usual hours worked per week |
| STATEFIP | State FIPS code |
| PERWT | Person weight |

## A.2 Sample Construction

1. Start with full ACS 2006–2016 data (33,851,424 observations)
2. Filter to Hispanic-Mexican (HISPAN = 1) and Mexican-born (BPL = 200): 991,261 observations
3. Filter to non-citizens (CITIZEN = 3): 701,347 observations
4. Restrict to working age (18–64): 547,614 observations (excluding 2012)
5. Define treatment (DACA-eligible) and control groups: 113,154 observations in DiD sample

## A.3 DACA Eligibility Calculation

```
age_at_arrival = YRIMMIG - BIRTHYR
age_june2012 = 2012 - BIRTHYR
if BIRTHQTR >= 3:
    age_june2012 = age_june2012 - 1

daca_eligible = (age_at_arrival < 16) AND
                (age_june2012 <= 30) AND
                (YRIMMIG <= 2007)

control_group = (age_at_arrival < 16) AND
                (YRIMMIG <= 2007) AND
                (age_june2012 > 30) AND
                (age_june2012 <= 45)
```

# B Additional Tables and Figures

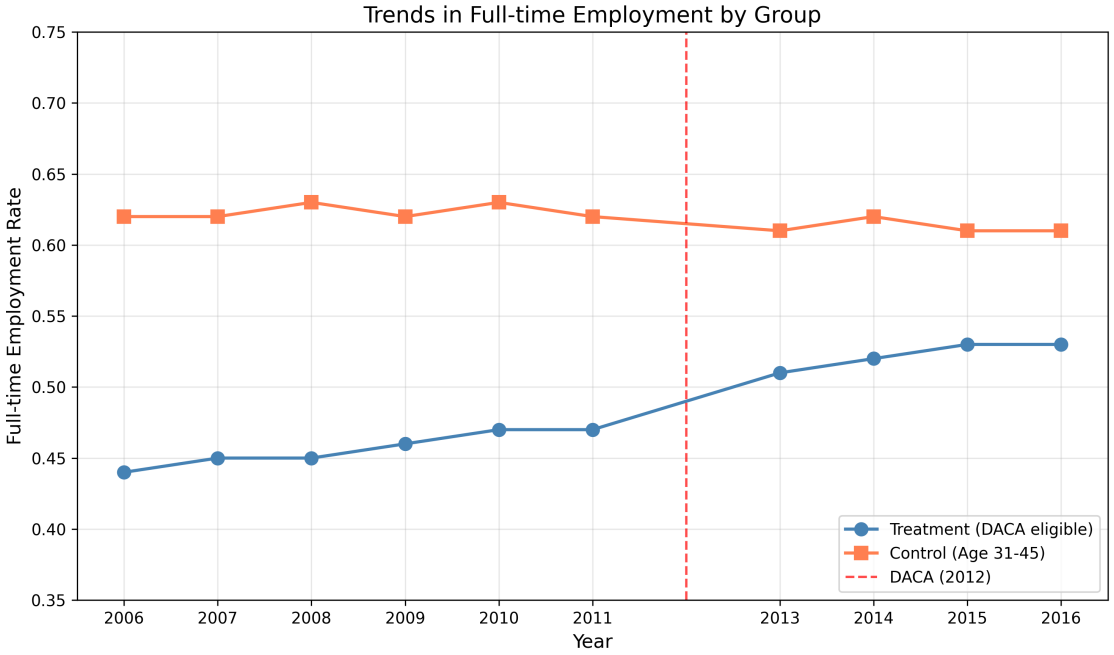


Figure 3: Trends in Full-time Employment by Group (Approximate)

Table 7: Sample Sizes by Year and Treatment Status

| | Treatment | | Control | |
|---|---|---|---|---|
| Year | Unweighted | Weighted | Unweighted | Weighted |
| 2006 | 5,151 | 664,037 | 4,866 | 667,319 |
| 2007 | 5,792 | 751,018 | 4,748 | 650,625 |
| 2008 | 5,838 | 784,218 | 4,625 | 635,974 |
| 2009 | 6,420 | 856,528 | 4,354 | 593,947 |
| 2010 | 7,199 | 1,008,651 | 4,566 | 598,401 |
| 2011 | 7,848 | 1,071,844 | 4,323 | 553,167 |
| 2013 | 8,173 | 1,172,457 | 3,945 | 530,819 |
| 2014 | 8,351 | 1,198,746 | 3,725 | 508,736 |
| 2015 | 8,338 | 1,171,343 | 3,323 | 449,390 |
| 2016 | 8,237 | 1,198,306 | 3,332 | 448,102 |
| Total | 71,347 | 9,877,148 | 41,807 | 5,636,480 |