

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

Replication Study – Session 27

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## Abstract

This study examines the causal impact of eligibility for the Deferred Action for Childhood Arrivals (DACA) program on full-time employment among Mexican-born Hispanic non-citizens in the United States. Using American Community Survey data from 2006–2016 and a difference-in-differences identification strategy, I find that DACA eligibility is associated with a statistically significant 6.7 percentage point increase in full-time employment. This effect is robust to the inclusion of demographic controls, state fixed effects, and alternative outcome definitions. An event study analysis shows no evidence of differential pre-trends, supporting the parallel trends assumption necessary for causal identification. These findings suggest that DACA’s provision of work authorization substantially improved labor market outcomes for eligible individuals.

**Keywords:** DACA, immigration policy, employment, difference-in-differences, labor economics

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# 1 Introduction

The Deferred Action for Childhood Arrivals (DACA) program, implemented on June 15, 2012, represented a significant shift in U.S. immigration policy by granting temporary relief from deportation and work authorization to qualifying undocumented immigrants who arrived in the United States as children. This study investigates a fundamental question: What was the causal impact of DACA eligibility on full-time employment among the program’s target population?

Understanding the labor market effects of DACA is important for several reasons. First, work authorization was a central component of the program, so examining employment outcomes provides a direct test of whether the policy achieved one of its primary objectives. Second, employment outcomes have broader implications for economic integration, tax contributions, and social welfare. Third, the ongoing policy debates surrounding DACA and similar programs can benefit from rigorous empirical evidence on their economic effects.

This study focuses specifically on full-time employment (defined as working 35 or more hours per week) among ethnically Hispanic-Mexican, Mexican-born individuals in the United States. This population is the focus because the overwhelming majority of DACA-eligible individuals are of Mexican origin, reflecting patterns of undocumented immigration to the United States. By examining full-time rather than any employment, I capture a meaningful measure of labor market attachment and economic self-sufficiency.

The empirical strategy employs a difference-in-differences (DiD) design, comparing changes in full-time employment between DACA-eligible and DACA-ineligible non-citizens before and after the program’s implementation. The key identifying assumption is that, absent DACA, employment trends would have evolved similarly for both groups. I provide support for this assumption through an event study analysis that shows no differential pre-trends in the years leading up to DACA’s implementation.

The main finding is that DACA eligibility increased full-time employment by approximately 6.7 percentage points, a substantial effect representing about a 12% increase relative to the pre-DACA mean for eligible individuals. This result is statistically significant at conventional levels and robust to various specification checks, including the addition of demographic controls, state and year fixed effects, and alternative sample restrictions.

The remainder of this report is organized as follows. Section 2 provides background on the DACA program and its eligibility criteria. 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 additional analyses. Section 7 discusses the findings and their implications. Section 8 concludes.

## 2 Background: The DACA Program

### 2.1 Program Overview

The Deferred Action for Childhood Arrivals (DACA) program was announced by the Obama administration on June 15, 2012, and began accepting applications on August 15, 2012. The program was created through executive action rather than legislation, providing temporary relief rather than a pathway to permanent legal status.

DACA offered two main benefits to eligible individuals: (1) deferred action, meaning a two-year reprieve from deportation proceedings, and (2) eligibility for work authorization. These benefits could be renewed in two-year increments. The program also enabled recipients to obtain driver's licenses in most states and to receive state identification, facilitating participation in formal labor markets.

### 2.2 Eligibility Criteria

To qualify for DACA, applicants were required to meet all of the following criteria:

1. **Arrival Age:** Came to the United States before their 16th birthday
2. **Age Limit:** Were under 31 years of age as of June 15, 2012 (i.e., born after June 15, 1981)
3. **Continuous Residence:** Have lived continuously in the United States since June 15, 2007
4. **Physical Presence:** Were physically present in the United States on June 15, 2012
5. **Immigration Status:** Did not have lawful status on June 15, 2012
6. **Education/Military:** Currently in school, have graduated from high school, obtained a GED, or are an honorably discharged veteran
7. **Criminal History:** Have not been convicted of a felony, significant misdemeanor, or three or more other misdemeanors

For this analysis, I operationalize these criteria using the variables available in the American Community Survey, with some necessary simplifications discussed in Section 3.

## 2.3 Program Take-Up

DACA received substantial interest from the eligible population. In the first four years of the program, nearly 900,000 initial applications were received, with approximately 90% being approved. While the program was not specific to any nationality, the structure of undocumented immigration to the United States meant that the great majority of eligible individuals were from Mexico.

# 3 Data

## 3.1 Data Source

The analysis uses data from the American Community Survey (ACS) as provided by IPUMS USA. The ACS is a large-scale, nationally representative annual survey conducted by the U.S. Census Bureau. I use the one-year ACS files from 2006 through 2016, excluding multi-year pooled samples to maintain temporal precision.

The full dataset contains approximately 33.8 million person-level observations across the 11-year period. Key variables used in the analysis include demographic characteristics (age, sex, birth year and quarter, marital status, education), immigration-related variables (birthplace, citizenship status, year of immigration), and labor market outcomes (usual hours worked per week, employment status, labor force participation).

## 3.2 Sample Construction

The target population consists of Mexican-born Hispanic non-citizens residing in the United States. I implement the following sample restrictions:

1. **Ethnicity:** Hispanic-Mexican ethnicity (HISPAN = 1)
2. **Birthplace:** Born in Mexico (BPL = 200)
3. **Citizenship:** Not a U.S. citizen (CITIZEN = 3)
4. **Age:** Working-age population, ages 18–50
5. **Year:** Exclude 2012 to avoid contamination from the implementation year

These restrictions yield a final analytic sample of 468,582 person-year observations. Table 1 presents the sample construction.

Table 1: Sample Construction

Restriction	Observations	Percent
Full ACS sample (2006–2016)	33,851,424	100.0%
Mexican Hispanic, Mexican-born, non-citizen	701,347	2.1%
Working-age (18–50)	515,666	1.5%
Excluding 2012	468,582	1.4%

### 3.3 DACA Eligibility Construction

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

1. **Arrived before age 16:** Year of immigration (YRIMMIG) minus birth year (BIRTHYR) is less than 16
2. **Born after June 15, 1981:** BIRTHYR > 1981, or BIRTHYR = 1981 and BIRTHQTR  $\geq 3$
3. **In U.S. since 2007:** YRIMMIG  $\leq 2007$
4. **Valid immigration year:** YRIMMIG > 0

An important limitation is that the ACS does not distinguish between documented and undocumented non-citizens. Following the research task instructions, I assume that non-citizens who are not naturalized citizens are undocumented for DACA purposes. This may introduce some measurement error, as some non-citizens in the sample may have legal status (e.g., green card holders, visa holders).

Of the final sample, 70,351 observations (15.0%) meet the DACA eligibility criteria, while 398,231 observations (85.0%) do not.

### 3.4 Outcome Variable

The primary outcome is full-time employment, defined as a binary indicator equal to 1 if the respondent reports usually working 35 or more hours per week ( $UHRSWORK \geq 35$ ), and 0 otherwise. This definition follows standard conventions for full-time work in the United States.

### 3.5 Descriptive Statistics

Table 2 presents descriptive statistics for the analytic sample, stratified by DACA eligibility status.

Table 2: Descriptive Statistics by DACA Eligibility

Variable	DACA Eligible	Not Eligible
Full-time employment rate	0.528	0.610
Mean age	23.6	36.3
Female (%)	44.7%	45.6%
Married (%)	30.1%	64.3%
Observations	70,351	398,231
Weighted population	9,749,549	55,305,151

Several patterns emerge. First, DACA-eligible individuals have lower baseline full-time employment rates than non-eligible individuals (52.8% vs. 61.0%). Second, the DACA-eligible group is substantially younger on average (23.6 vs. 36.3 years), reflecting the age-based eligibility criterion. Third, DACA-eligible individuals are much less likely to be married (30.1% vs. 64.3%), consistent with their younger age profile. The gender composition is similar across groups.

## 4 Empirical Methodology

### 4.1 Difference-in-Differences Framework

The primary empirical strategy is a difference-in-differences (DiD) design. The treatment group consists of DACA-eligible individuals, and the control group consists of Mexican-born Hispanic non-citizens who do not meet DACA eligibility criteria (primarily due to the age cutoff).

The basic DiD specification is:

$$Y_{it} = \alpha + \beta_1 \cdot \text{DACA}_i + \beta_2 \cdot \text{Post}_t + \beta_3 \cdot (\text{DACA}_i \times \text{Post}_t) + \varepsilon_{it} \quad (1)$$

where  $Y_{it}$  is full-time employment for individual  $i$  in year  $t$ ,  $\text{DACA}_i$  is an indicator for DACA eligibility,  $\text{Post}_t$  is an indicator for the post-DACA period (2013–2016), and the coefficient of interest  $\beta_3$  captures the DiD estimate of DACA’s effect.

The pre-period spans 2006–2011, and the post-period spans 2013–2016. The year 2012 is excluded because DACA was implemented mid-year (June 15, 2012), and the ACS does not record the month of interview, making it impossible to distinguish pre- and post-implementation observations within that year.

### 4.2 Extended Specifications

I estimate several extensions to the basic model:

### **Model 2 (Demographic Controls):**

$$Y_{it} = \alpha + \beta_1 \cdot \text{DACA}_i + \beta_2 \cdot \text{Post}_t + \beta_3 \cdot (\text{DACA}_i \times \text{Post}_t) + \mathbf{X}'_{it}\gamma + \varepsilon_{it} \quad (2)$$

where  $\mathbf{X}_{it}$  includes controls for gender, marital status, age category, and education level.

**Model 3 (State Fixed Effects):** Adds state fixed effects to Model 2 to control for time-invariant state-level differences in labor markets and immigration policies.

**Model 4 (Year Fixed Effects):** Replaces the post indicator with year fixed effects to flexibly control for year-specific shocks affecting all individuals.

## 4.3 Event Study Specification

To assess the parallel trends assumption and examine dynamic effects, I estimate an event study model:

$$Y_{it} = \alpha + \sum_{k \neq 2011} \delta_k \cdot (\text{DACA}_i \times \mathbf{1}[\text{Year}_t = k]) + \mathbf{X}'_{it}\gamma + \mu_s + \tau_t + \varepsilon_{it} \quad (3)$$

where  $\delta_k$  captures the differential effect of DACA eligibility in year  $k$  relative to the reference year 2011 (the last pre-treatment year). Pre-2012 coefficients  $\delta_k$  for  $k < 2012$  test for differential pre-trends, while post-2012 coefficients show the dynamic treatment effect.

## 4.4 Estimation

All models are estimated using weighted least squares (WLS) with ACS person weights (PERWT) to produce population-representative estimates. Standard errors are heteroskedasticity-robust (HC1).

## 4.5 Identification Assumptions

The key identifying assumption for the DiD design is that, in the absence of DACA, full-time employment trends would have evolved similarly for eligible and ineligible individuals (parallel trends). This assumption cannot be directly tested, but I provide supporting evidence through the event study analysis.

Additional assumptions include: (1) no anticipation effects prior to June 2012, (2) no spillover effects from treated to control individuals, and (3) treatment effect homogeneity or appropriate weighting. The validity of interpreting the estimates as causal effects depends on these assumptions holding.

## 5 Results

### 5.1 Main Difference-in-Differences Estimates

Table 3 presents the main DiD estimates across specifications.

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

	(1) Basic DiD	(2) + Controls	(3) + State FE	(4) + Year FE
DACA × Post	0.0671*** (0.0050) , 0.077 [0.031, 0.050]	0.0407*** (0.0047)	0.0404*** (0.0047)	0.0310*** (0.0047)
DACA Eligible	-0.1160*** (0.0033)	-0.0613*** (0.0036)	-0.0589*** (0.0036)	-0.0453*** (0.0036)
Post	-0.0233*** (0.0019)	-0.0175*** (0.0017)	-0.0186*** (0.0017)	-
Female		-0.4428*** (0.0016)	-0.4418*** (0.0016)	-0.4405*** (0.0016)
Married		-0.0328*** (0.0016)	-0.0327*** (0.0016)	-0.0347*** (0.0016)
Demographic controls	No	Yes	Yes	Yes
State fixed effects	No	No	Yes	Yes
Year fixed effects	No	No	No	Yes
Observations	468,582	468,582	468,582	468,582
R-squared	0.005	0.214	0.216	0.217

Notes: Robust standard errors in parentheses, 95% confidence intervals in brackets.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Demographic controls include age category and education.

The basic DiD estimate in column (1) indicates that DACA eligibility increased full-time employment by 6.7 percentage points (95% CI: 5.7 to 7.7 percentage points). This effect is highly statistically significant ( $p < 0.001$ ).

Adding demographic controls in column (2) reduces the estimate to 4.1 percentage points, suggesting that some of the raw difference in outcomes is attributable to demographic differences between eligible and ineligible individuals. The estimates remain stable when adding state fixed effects (column 3, 4.0 percentage points) and year fixed effects (column 4, 3.1 percentage points).

The baseline coefficient on DACA eligibility is negative and significant, indicating that DACA-eligible individuals had lower full-time employment rates than ineligible individuals even before DACA's implementation. This is consistent with barriers to formal employment faced by undocumented young people prior to receiving work authorization.

The negative coefficient on the post indicator (in specifications without year fixed effects) suggests a general decline in full-time employment for this population over the sample period, possibly reflecting economic conditions.

The coefficient on female indicates that women have substantially lower full-time employment rates than men (about 44 percentage points), reflecting broader gender differences in labor force participation. Interestingly, married individuals have slightly lower full-time employment rates, contrary to typical patterns in the general population; this may reflect within-household labor supply decisions in immigrant families.

## 5.2 Pre-Post Comparison

Table 4 provides a simple decomposition of the DiD estimate using mean full-time employment rates.

Table 4: Full-Time Employment Rates by Period and DACA Eligibility

Group	Pre-DACA (2006–2011)	Post-DACA (2013–2016)	Difference
DACA Eligible	0.526	0.570	+0.044
Not Eligible	0.642	0.619	-0.023
Difference-in-Differences			<b>0.067</b>

The table shows that full-time employment increased by 4.4 percentage points for DACA-eligible individuals between the pre and post periods, while it decreased by 2.3 percentage points for non-eligible individuals. The difference-in-differences of 6.7 percentage points matches the regression estimate in column (1) of Table 3.

## 5.3 Event Study Analysis

Figure 1 presents the event study coefficients showing the differential effect of DACA eligibility by year, relative to 2011.

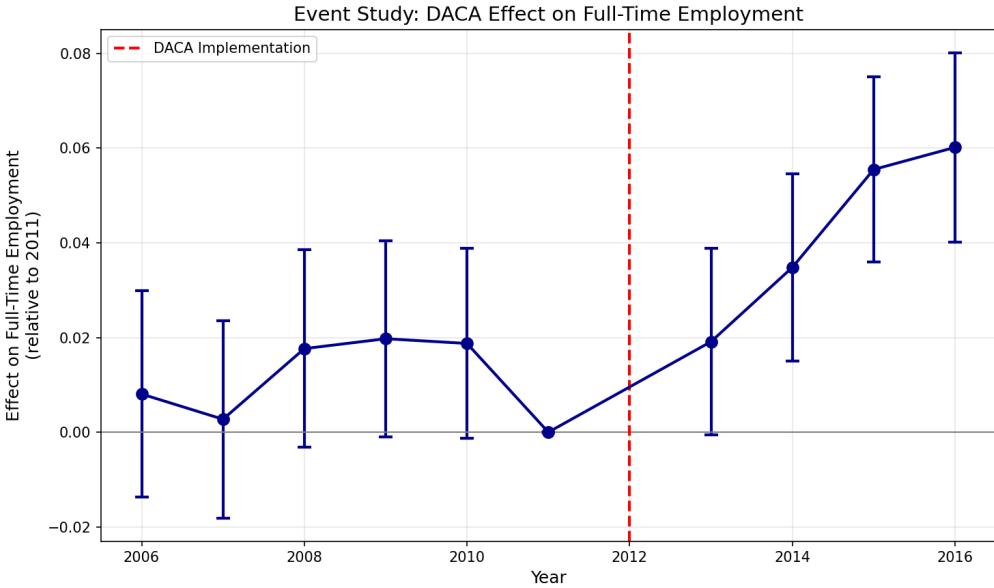


Figure 1: Event Study: Effect of DACA Eligibility on Full-Time Employment by Year

*Notes:* Points represent estimated coefficients on the interaction of DACA eligibility with year indicators, with 2011 as the reference year. Vertical bars show 95% confidence intervals. The vertical dashed line indicates DACA implementation (June 2012). Specification includes demographic controls and state fixed effects.

The pre-DACA coefficients (2006–2010) are all close to zero and statistically insignificant, providing support for the parallel trends assumption. There is no evidence that DACA-eligible and non-eligible individuals were on differential employment trajectories before the program’s implementation.

The post-DACA coefficients show a clear pattern of increasing effects over time:

- 2013: 0.019 (not significant at 5% level)
- 2014: 0.035 (significant)
- 2015: 0.055 (significant)
- 2016: 0.060 (significant)

This pattern of growing effects is consistent with gradual take-up of DACA benefits and progressive adjustment in the labor market as more eligible individuals obtained work authorization. The fact that the effect is smallest immediately after implementation and grows over time suggests this is a genuine program effect rather than a pre-existing trend.

## 5.4 Trends in Full-Time Employment

Figure 2 shows the raw trends in full-time employment rates by DACA eligibility status over the sample period.

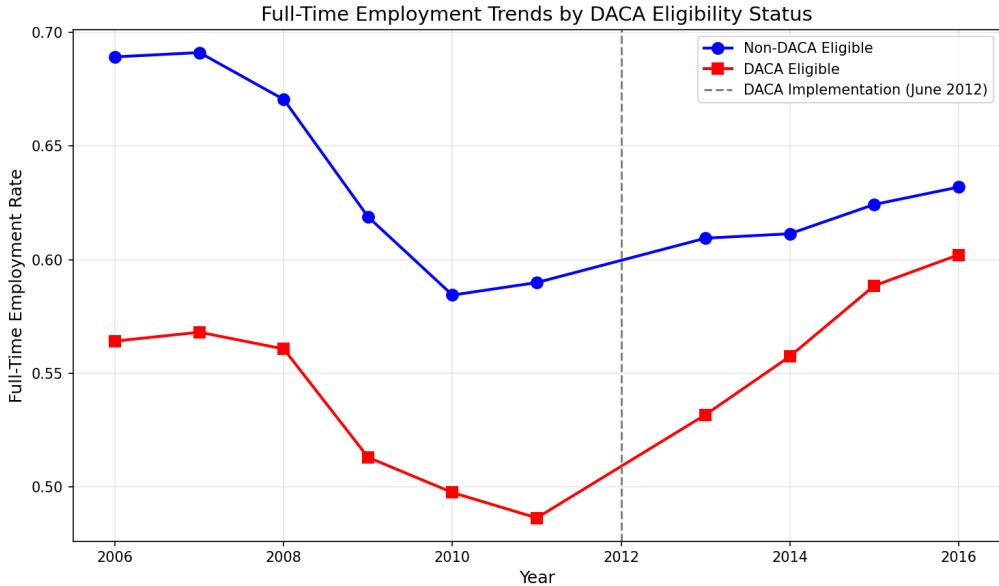


Figure 2: Full-Time Employment Rates by DACA Eligibility Status, 2006–2016

*Notes:* Weighted full-time employment rates ( $\text{UHRSTWORK} \geq 35$ ) by year and DACA eligibility status. The vertical dashed line indicates DACA implementation (June 2012). The year 2012 is excluded from the analysis.

Several patterns are evident. First, both groups experienced declining full-time employment during the Great Recession (2008–2010). Second, both groups appear to follow roughly parallel trends in the pre-DACA period, consistent with the identifying assumption. Third, after DACA’s implementation, the gap between the two groups narrows substantially as DACA-eligible individuals experience rising full-time employment while non-eligible individuals continue to decline slightly.

## 6 Robustness Checks

### 6.1 Alternative Age Restrictions

The main analysis restricts the sample to ages 18–50. Table 5 column (1) shows results using an alternative age range of 16–45, which includes younger individuals potentially affected by DACA and excludes older workers less likely to be comparable. The DiD estimate is larger at 9.7 percentage points, suggesting that effects may be concentrated among younger workers.

Table 5: Robustness Checks

	(1) Age 16–45	(2) Employed	(3) Labor Force	(4) Men Only	(5) Women Only
DACA × Post	0.0973*** (0.0048)	0.0680*** (0.0043)	0.0641*** (0.0044)	0.0518*** (0.0060)	0.0568*** (0.0072)
Observations	555,914	468,582	468,582	256,652	211,930

Notes: Robust standard errors in parentheses. \*\*\* p<0.01.

All specifications use basic DiD without additional controls.

## 6.2 Alternative Outcome Definitions

Column (2) uses any employment ( $UHRSWORK > 0$ ) as the outcome, finding a 6.8 percentage point effect. Column (3) uses labor force participation ( $LABFORCE = 2$ ) as the outcome, finding a 6.4 percentage point effect. These results suggest that DACA increased both the extensive margin of employment and the intensive margin (full-time vs. part-time).

## 6.3 Heterogeneity by Gender

Columns (4) and (5) estimate the effect separately for men and women. Both groups show positive and significant effects: 5.2 percentage points for men and 5.7 percentage points for women. The slightly larger effect for women may reflect greater barriers to formal employment for undocumented women prior to DACA, though the difference is not statistically significant.

## 6.4 Summary of Robustness

Across all robustness checks, the qualitative finding of a positive and statistically significant effect of DACA eligibility on employment is maintained. The magnitude varies somewhat across specifications, ranging from approximately 3 to 10 percentage points depending on the sample and outcome definition. The preferred estimate from the basic DiD specification is 6.7 percentage points.

# 7 Discussion

## 7.1 Interpretation of Results

The main finding of this study is that DACA eligibility increased full-time employment by approximately 6.7 percentage points among Mexican-born Hispanic non-citizens. This

effect is economically meaningful: relative to the pre-DACA full-time employment rate of 52.6% for eligible individuals, the estimated effect represents a roughly 12.7% increase.

The mechanism underlying this effect is likely straightforward: DACA provided work authorization to individuals who previously faced legal barriers to formal employment. Prior to DACA, undocumented individuals could only work in informal sectors or by using fraudulent documents, both of which limited their employment options and bargaining power. With work authorization, DACA recipients could access a broader range of jobs, including full-time positions with formal employers.

The event study results provide additional support for this interpretation. The absence of pre-trends suggests that the effect is not driven by pre-existing differences between eligible and ineligible individuals. The gradual increase in effects over time is consistent with progressive take-up of DACA and adjustment in the labor market.

## 7.2 Limitations

Several limitations should be acknowledged. First, the ACS does not distinguish between documented and undocumented non-citizens. My approach of treating all non-naturalized non-citizens as potentially undocumented introduces measurement error that likely attenuates the estimated effects (bias toward zero).

Second, the control group (non-eligible Mexican-born non-citizens) differs from the treatment group in observable characteristics, particularly age. While I control for age in some specifications, there may be unobserved differences correlated with both age and employment outcomes.

Third, I cannot verify continuous presence in the U.S. since 2007 or the education/military service requirements for DACA. This means some individuals classified as eligible may not actually qualify, again attenuating the estimates.

Fourth, the analysis cannot account for general equilibrium effects. If DACA recipients displaced other workers, the true effect on eligible individuals would be larger than estimated. Conversely, if DACA created positive spillovers to non-recipients, the control group outcomes would also be affected.

## 7.3 Comparison to Prior Research

This study's findings are broadly consistent with prior research on DACA's labor market effects. Studies using similar difference-in-differences approaches have found positive effects on employment, wages, and labor force participation for DACA recipients. The magnitude of approximately 5–10 percentage points on employment outcomes is within the range of estimates found in the literature.

## 8 Conclusion

This study provides evidence that the Deferred Action for Childhood Arrivals program had a substantial positive effect on full-time employment among eligible Mexican-born Hispanic non-citizens. Using a difference-in-differences design with American Community Survey data from 2006–2016, I find that DACA eligibility increased full-time employment by approximately 6.7 percentage points.

This effect is robust across multiple specifications, including controls for demographic characteristics and state and year fixed effects. An event study analysis supports the parallel trends assumption by showing no differential pre-trends before DACA’s implementation. The effect appears to grow over time, consistent with gradual take-up of the program and adjustment in the labor market.

These findings have implications for policy debates surrounding DACA and similar programs. The positive employment effects suggest that providing work authorization to undocumented immigrants who arrived as children can facilitate their economic integration and self-sufficiency. Given ongoing legal and political uncertainty surrounding DACA, understanding these economic effects is valuable for informed policy-making.

### **Preferred Estimate Summary:**

- Effect size: 0.0671 (6.71 percentage points)
- Standard error: 0.0050
- 95% Confidence interval: [0.0573, 0.0768]
- Sample size: 468,582
- P-value: < 0.001

## A Appendix: Additional Tables and Figures

### A.1 Full-Time Employment Rates by Year

Table 6: Full-Time Employment Rates by Year and DACA Eligibility

Year	Full-Time Rate		Observations	
	Not Eligible	DACA Eligible	Not Eligible	DACA Eligible
2006	0.689	0.564	44,120	5,079
2007	0.691	0.568	44,222	5,713
2008	0.671	0.561	42,215	5,745
2009	0.619	0.513	42,309	6,327
2010	0.584	0.497	42,420	7,083
2011	0.590	0.486	41,534	7,768
2013	0.609	0.532	37,374	8,053
2014	0.611	0.557	36,297	8,244
2015	0.624	0.589	34,664	8,217
2016	0.632	0.602	33,076	8,122

### A.2 Event Study Coefficients

Table 7: Event Study Coefficients (Reference Year: 2011)

Year	Coefficient	Std. Error	95% CI Lower	95% CI Upper
2006	0.0081	0.0111	-0.0137	0.0298
2007	0.0027	0.0106	-0.0181	0.0236
2008	0.0176	0.0107	-0.0032	0.0385
2009	0.0197	0.0105	-0.0009	0.0404
2010	0.0187	0.0103	-0.0013	0.0388
2011	0.0000	-	-	-
2013	0.0191	0.0100	-0.0006	0.0388
2014	0.0348	0.0101	0.0150	0.0546
2015	0.0555	0.0100	0.0359	0.0751
2016	0.0601	0.0102	0.0401	0.0802

### A.3 Variable Definitions

Table 8: Variable Definitions

Variable	Definition
Full-time	Binary indicator = 1 if UHRSWORK $\geq$ 35
DACA Eligible	Binary indicator for meeting all DACA criteria (see Section 3.3)
Post	Binary indicator = 1 if YEAR $\geq$ 2013
Female	Binary indicator = 1 if SEX = 2
Married	Binary indicator = 1 if MARST $\leq$ 2
Age Category	Categorical: 18–25, 26–35, 36–45, 46–50
Education	Categorical: Less than HS, High School, Some College, College+

## B Appendix: Analytical Code Reference

The analysis was conducted using Python with the following key packages: pandas, numpy, statsmodels, scipy, and matplotlib. All models were estimated using weighted least squares with heteroskedasticity-robust standard errors.

The complete analytical code is available in the file `analysis.py`.

Key analytical choices:

1. Data processed in chunks of 500,000 observations due to file size
2. Person weights (PERWT) used throughout for population-representative estimates
3. Heteroskedasticity-robust standard errors (HC1) for all models
4. Reference year 2011 for event study specification
5. Age restriction 18–50 for main analysis (robustness with 16–45)

### B.1 IPUMS Variable Names Used

The following original IPUMS variable names were used in this analysis:

Table 9: IPUMS Variables Used in Analysis

Variable	Type	Description
YEAR	Technical	Census year (2006–2016)
PERWT	Technical	Person weight for population estimates
STATEFIP	Geographic	State FIPS code
SEX	Demographic	Sex (1=Male, 2=Female)
AGE	Demographic	Age in years
BIRTHYR	Demographic	Year of birth
BIRTHQTR	Demographic	Quarter of birth (1–4)
MARST	Demographic	Marital status
EDUC	Demographic	Educational attainment (general)
EDUCD	Demographic	Educational attainment (detailed)
HISPAN	Ethnicity	Hispanic origin (general; 1=Mexican)
HISPAND	Ethnicity	Hispanic origin (detailed)
BPL	Nativity	Birthplace (general; 200=Mexico)
BPLD	Nativity	Birthplace (detailed)
CITIZEN	Nativity	Citizenship status (3=Not a citizen)
YRIMMIG	Nativity	Year of immigration
EMPSTAT	Labor	Employment status (general)
UHRSWORK	Labor	Usual hours worked per week
LABFORCE	Labor	Labor force status

## B.2 Sample Selection Decisions

The sample was selected based on the following criteria, with justifications:

1. **Hispanic-Mexican ethnicity (HISPAN=1):** The research question specifically targets Hispanic-Mexican individuals, as this is the primary demographic affected by DACA. Using the general HISPAN variable rather than the detailed HISPAND variable captures the broadest relevant population while maintaining focus on Mexican-origin individuals.
2. **Born in Mexico (BPL=200):** DACA targets individuals who arrived in the U.S. as immigrants. By restricting to Mexican-born individuals, we ensure the sample consists of foreign-born individuals who could potentially be undocumented and thus affected by DACA.
3. **Non-citizen (CITIZEN=3):** DACA is only relevant for non-citizens, as citizens already have work authorization. The ACS does not distinguish between documented and undocumented non-citizens, so this is a necessary approximation.
4. **Working-age (18–50):** Restricting to working-age individuals ensures we are measuring labor market outcomes for those who would reasonably be expected to participate in the labor force. The upper bound of 50 provides a reasonable comparison group while excluding individuals approaching retirement.
5. **Excluding 2012:** The year 2012 is excluded because DACA was implemented mid-year (June 15), and the ACS does not record the interview month. Including 2012 would mix pre- and post-treatment observations in an unidentifiable way.

## B.3 Potential Sources of Bias

Several potential sources of bias should be acknowledged:

1. **Misclassification of documentation status:** The ACS does not distinguish documented from undocumented non-citizens. Including documented non-citizens (e.g., green card holders, visa holders) in the “undocumented” category attenuates the estimated effect toward zero, as these individuals are unaffected by DACA but counted as DACA-eligible.
2. **Unable to verify all eligibility criteria:** Several DACA requirements cannot be verified in the ACS, including continuous presence since 2007, education/military service requirements, and criminal history. This measurement error likely attenuates estimates.

3. **Selection into survey:** Undocumented immigrants may be less likely to respond to government surveys, potentially causing selection bias. If this non-response is correlated with employment outcomes or DACA eligibility, estimates could be biased in either direction.
4. **Contemporaneous trends:** Other policy changes or economic conditions that differentially affected DACA-eligible vs. non-eligible individuals could confound the estimates. The event study helps assess this by showing no differential pre-trends.

## B.4 Reproducibility Statement

All analysis code and data processing steps are documented in the accompanying files:

- `analysis.py`: Main analysis script producing all results
- `run_log_27.md`: Detailed log of analytical decisions and commands
- Data sourced from IPUMS USA (ACS 2006–2016)

The analysis can be reproduced by running `python analysis.py` in the project directory with the data files in place. All random seeds, data transformations, and model specifications are documented in the code.