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

Replication Study 28

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 American Community Survey data from 2006-2016 and a difference-in-differences research design, I compare employment outcomes between individuals aged 26-30 (eligible for DACA) and those aged 31-35 (ineligible due to age) at the time of DACA implementation on June 15, 2012. The analysis reveals that DACA eligibility is associated with a statistically significant 4.6 percentage point increase in the probability of full-time employment (defined as working 35 or more hours per week). This effect is robust to the inclusion of demographic controls, year fixed effects, and state fixed effects. Heterogeneity analysis indicates that the effect is present for both males and females, with somewhat larger effects for females. A placebo test using pre-treatment data provides support for the parallel trends assumption underlying the difference-in-differences design.

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

Contents

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 offered temporary relief from deportation and work authorization to undocumented immigrants who arrived in the United States as children. Given that DACA provides legal work authorization, it is natural to expect that the program would affect labor market outcomes among eligible individuals.

This study investigates the causal impact of DACA eligibility on full-time employment among the largest group of potential beneficiaries: Hispanic-Mexican individuals born in Mexico. Specifically, I examine whether individuals who became eligible for DACA experienced an increase in full-time employment (defined as usually working 35 or more hours per week) relative to similar individuals who were ineligible solely due to the program's age restrictions.

The research design exploits the age cutoff built into DACA's eligibility criteria. To be eligible, individuals must not have reached their 31st birthday as of June 15, 2012. This creates a natural comparison group of slightly older individuals who would otherwise have been eligible. I implement a difference-in-differences (DiD) strategy comparing individuals aged 26-30 (the treatment group) to those aged 31-35 (the control group) before and after DACA implementation.

The analysis yields several key findings. First, DACA eligibility is associated with a statistically significant increase in full-time employment of approximately 4.6 percentage points. Second, this effect is robust across multiple model specifications, including controls for demographic characteristics, year fixed effects, and state fixed effects. Third, heterogeneity analysis reveals positive effects for both males and females. Fourth, a placebo test using only pre-treatment data provides support for the parallel trends assumption underlying the DiD design.

2 Background

2.1 The DACA Program

DACA was announced by the Obama administration on June 15, 2012, and applications began to be accepted on August 15, 2012. The program allows qualifying undocumented immigrants to request deferred action on deportation and obtain work authorization for renewable two-year periods.

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

1. Were under the age of 31 as of June 15, 2012
2. Came to the United States before reaching their 16th birthday
3. Have continuously resided in the United States since June 15, 2007
4. Were physically present in the United States on June 15, 2012
5. Were in the United States without lawful status on June 15, 2012
6. Are currently in school, have graduated from high school, have obtained a GED, or are honorably discharged veterans
7. Have not been convicted of a felony, significant misdemeanor, or three or more other misdemeanors

In the first four years of the program, nearly 900,000 initial applications were received, with approximately 90% approved. The vast majority of DACA recipients are of Mexican origin, reflecting the composition of undocumented immigration to the United States.

2.2 Theoretical Mechanisms

DACA eligibility could affect full-time employment through several channels:

Work Authorization: The most direct mechanism is that DACA provides legal work authorization, allowing recipients to work legally and obtain jobs that require documentation. This opens access to formal sector employment, which is more likely to offer full-time positions.

Driver's Licenses: DACA recipients can obtain driver's licenses in many states, which expands the geographic range of job opportunities and enables commuting to full-time positions that may not be accessible via public transportation.

Reduced Fear of Deportation: The deferred action component of DACA reduces the risk of deportation, potentially encouraging recipients to seek more visible employment rather than working in the informal economy.

Human Capital Investment: With temporary protection and work authorization, DACA recipients may invest more in education and training, improving their labor market prospects.

2.3 Prior Literature

Several studies have examined the labor market effects of DACA using various identification strategies. The general finding in the literature is that DACA has positive effects on employment and earnings among eligible individuals. However, estimates vary depending on the specific methodology, comparison group, and outcome measures used.

3 Data

3.1 Data Source

The data for this analysis come from the American Community Survey (ACS) as provided by IPUMS USA. The ACS is a nationally representative survey conducted annually by the U.S. Census Bureau, collecting demographic, social, economic, and housing information from approximately 3.5 million addresses each year.

I use the 1-year ACS files from 2006 through 2016, providing data from six years before DACA implementation (2006-2011) and four years after (2013-2016). The year 2012 is excluded from the analysis because DACA was implemented mid-year (June 15, 2012), and the ACS does not record the month of data collection, making it impossible to distinguish pre- and post-treatment observations within that year.

3.2 Sample Construction

The analysis sample is constructed by applying the following restrictions to identify the target population of DACA-eligible individuals:

1. **Hispanic-Mexican ethnicity:** HISPAN = 1 (Mexican origin)
2. **Born in Mexico:** BPL = 200 (birthplace is Mexico)
3. **Non-citizen:** CITIZEN = 3 (not a U.S. citizen)
4. **Age at immigration:** Calculated age at immigration ¡ 16 (arrived before 16th birthday)
5. **Continuous residence:** YRIMMIG $\leq$ 2007 (arrived before June 15, 2007)

Note that the ACS does not distinguish between documented and undocumented non-citizens. Following the research instructions, I assume that non-citizens who have not naturalized are undocumented for purposes of DACA eligibility determination.

3.3 Treatment and Control Groups

The treatment group consists of individuals who were ages 26-30 as of June 15, 2012. These individuals satisfy the age requirement for DACA eligibility (under 31 as of June 15, 2012).

The control group consists of individuals who were ages 31-35 as of June 15, 2012. These individuals would have been eligible for DACA except for having passed the age cutoff.

Age as of June 15, 2012 is calculated using the birth year (BIRTHYR) and birth quarter (BIRTHQTR) variables from the ACS. Birth quarters are converted to approximate birth months, and age is adjusted accordingly.

3.4 Outcome Variable

The primary outcome variable is an indicator for full-time employment, defined as usually working 35 or more hours per week. This is constructed from the UHRSWORK variable, which records the usual number of hours worked per week:

$$\text{FullTime}_i = \mathbf{1}[\text{UHRSWORK}_i \geq 35]$$

3.5 Control Variables

The analysis includes several control variables to improve precision and address potential confounding:

- **Female:** Indicator for female sex (SEX = 2)
- **Married:** Indicator for married with spouse present (MARST = 1)
- **High school education:** Indicator for high school completion or higher (EDUC $\geq$ 6)
- **Year fixed effects:** Indicators for each survey year
- **State fixed effects:** Indicators for state of residence (STATEFIP)

3.6 Sample Weights

All analyses use the person-level survey weights (PERWT) provided by IPUMS to ensure nationally representative estimates.

4 Empirical Strategy

4.1 Difference-in-Differences Design

The primary identification strategy is a difference-in-differences (DiD) design that exploits the age discontinuity in DACA eligibility. The DiD approach compares the change in outcomes for the treatment group (ages 26-30) relative to the change for the control group (ages 31-35) before versus after DACA implementation.

The basic DiD model is:

$$Y_{it} = \beta_0 + \beta_1 \text{Treat}_i + \beta_2 \text{Post}_t + \beta_3 (\text{Treat}_i \times \text{Post}_t) + \varepsilon_{it} \tag{1}$$

where:

- Y_{it} is the full-time employment indicator for individual i in year t
- Treat_i is an indicator for being in the treatment group (ages 26-30)
- Post_t is an indicator for the post-DACA period (2013-2016)
- β_3 is the coefficient of interest, representing the DiD estimate of the DACA effect

4.2 Extended Models

I estimate several increasingly saturated specifications:

Model 1: Basic DiD (equation 1)

Model 2: DiD with demographic controls

$$Y_{it} = \beta_0 + \beta_1 \text{Treat}_i + \beta_2 \text{Post}_t + \beta_3 (\text{Treat}_i \times \text{Post}_t) + X_i' \gamma + \varepsilon_{it} \tag{2}$$

where X_i includes indicators for female, married, and high school education.

Model 3: DiD with year fixed effects

$$Y_{it} = \beta_1 \text{Treat}_i + \beta_3 (\text{Treat}_i \times \text{Post}_t) + X_i' \gamma + \mu_t + \varepsilon_{it} \tag{3}$$

where μ_t represents year fixed effects. Note that the Post indicator is absorbed by the year fixed effects.

Model 4: Full model with state fixed effects

$$Y_{it} = \beta_1 \text{Treat}_i + \beta_3 (\text{Treat}_i \times \text{Post}_t) + X_i' \gamma + \mu_t + \lambda_s + \varepsilon_{it} \tag{4}$$

where λ_s represents state fixed effects.

4.3 Event Study Specification

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

$$Y_{it} = \alpha + \sum_{k \neq 2011} \delta_k (\text{Treat}_i \times \mathbf{1}[t = k]) + X_i' \gamma + \mu_t + \varepsilon_{it} \tag{5}$$

where 2011 serves as the reference year. The coefficients δ_k trace out the treatment effect over time, with pre-treatment coefficients providing a test of parallel trends and post-treatment coefficients showing the evolution of the effect.

4.4 Identification Assumptions

The key identifying assumption for the DiD design is that, in the absence of DACA, employment trends would have been parallel between the treatment and control groups. While this assumption cannot be directly tested, several pieces of evidence support its plausibility:

1. The treatment and control groups are similar in observable characteristics
2. The groups differ only slightly in age (5-10 years)
3. A placebo test using pre-treatment data does not reject the null of parallel trends
4. Event study estimates show no significant pre-trends

5 Results

5.1 Sample Description

Table 1 presents the sample sizes by treatment group and time period. The final analysis sample contains 43,238 observations, with 25,470 in the treatment group and 17,768 in the control group. The pre-period (2006-2011) contains 28,377 observations, while the post-period (2013-2016) contains 14,861 observations.

Table 1: Sample Sizes by Treatment Group and Time Period

	Pre-Period (2006-2011)		Post-Period (2013-2016)	
	Treatment	Control	Treatment	Control
Sample Size	16,694	11,683	8,776	6,085

Notes: Treatment group consists of individuals aged 26-30 as of June 15, 2012. Control group consists of individuals aged 31-35 as of June 15, 2012. Sample restricted to Hispanic-Mexican individuals born in Mexico who are non-citizens, arrived before age 16, and arrived by 2007.

5.2 Summary Statistics

Table 2 presents summary statistics for key variables by treatment status and time period. The weighted full-time employment rate in the treatment group increased from 63.1% pre-DACA to 66.0% post-DACA, a gain of 2.9 percentage points. The control group experienced a decline from 67.3% to 64.3%, a decrease of 3.0 percentage points. The simple difference-in-differences is thus 2.9 - (-3.0) = 5.9 percentage points.

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

	Pre-Period	Post-Period	Change
Treatment Group (Ages 26-30)	0.631	0.660	+0.029
Control Group (Ages 31-35)	0.673	0.643	-0.030
Difference (Treat - Control)	-0.042	+0.017	
Difference-in-Differences			**+0.059**

Notes: Employment rates calculated using person weights (PERWT). Full-time employment defined as usually working 35+ hours per week.

5.3 Main Regression Results

Table 3 presents the main difference-in-differences regression results. Across all specifications, the DiD coefficient (Treat × Post) is positive and statistically significant at the 1% level.

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

	(1) Basic DiD	(2) With Controls	(3) Year FE	(4) State FE
Treat × Post	0.0590***	0.0475***	0.0459***	0.0452***
	(0.0098)	(0.0090)	(0.0090)	(0.0090)
Treat	-0.0426***	-0.0412***	-0.0406***	-0.0398***
	(0.0058)	(0.0054)	(0.0054)	(0.0054)
Post	-0.0299***	-0.0162**	–	–
	(0.0075)	(0.0069)		
Female		-0.3729***	-0.3728***	-0.3721***
		(0.0043)	(0.0043)	(0.0043)
Married		-0.0073*	-0.0071	-0.0056
		(0.0043)	(0.0043)	(0.0043)
High School		0.0594***	0.0607***	0.0622***
		(0.0043)	(0.0043)	(0.0043)
Year Fixed Effects	No	No	Yes	Yes
State Fixed Effects	No	No	No	Yes
Observations	43,238	43,238	43,238	43,238

Notes: All regressions weighted by person weights (PERWT). Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10. The dependent variable is an indicator for full-time employment (35+ hours/week).

The baseline DiD estimate (Model 1) indicates that DACA eligibility increased the probability of full-time employment by 5.9 percentage points. Adding demographic controls (Model 2) reduces the estimate slightly to 4.8 percentage points, primarily because the control variables explain some variation in employment. Including year fixed effects (Model 3, the preferred specification) yields an estimate of 4.6 percentage points. Adding state fixed effects (Model 4) produces a virtually identical estimate of 4.5 percentage points.

The preferred estimate from Model 3 implies that DACA eligibility increased full-time employment by 4.6 percentage points (95% CI: 2.8 to 6.4 percentage points). This represents a 7.3% increase relative to the pre-period treatment group mean of 63.1%.

5.4 Heterogeneity by Sex

Table 4 presents results separately by sex. The effect is statistically significant for both males and females, though somewhat larger for females (5.3 percentage points) than for males (3.5 percentage points).

Table 4: Heterogeneous Effects by Sex

	Males	Females
Treat × Post	0.0351***	0.0529***
	(0.0107)	(0.0150)
Observations	24,243	18,995

Notes: Models include controls for married status and high school education. Standard errors in parentheses. *** p<0.01.

The larger effect for females is consistent with the hypothesis that DACA may have particularly expanded labor market opportunities for women, who may face greater barriers to formal employment without work authorization.

5.5 Robustness Checks

5.5.1 Alternative Age Window

As a robustness check, I re-estimate the model using a narrower age window: ages 27-29 for the treatment group and ages 32-34 for the control group. This specification reduces the sample size but ensures closer comparability between groups.

Table 5: Robustness: Narrower Age Window

	Main Sample (Ages 26-30 vs 31-35)	Narrow Window (Ages 27-29 vs 32-34)
Treat × Post	0.0475***	0.0381***
	(0.0090)	(0.0117)
Observations	43,238	25,606

Notes: Both models include controls for female, married, and high school education. Standard errors in parentheses. *** p<0.01.

The estimate with the narrower age window (3.8 percentage points) is somewhat smaller but remains statistically significant and qualitatively similar to the main estimate.

5.5.2 Placebo Test

To assess the validity of the parallel trends assumption, I conduct a placebo test using only pre-DACA data (2006-2011). I artificially assign the treatment timing to 2009 (i.e., classifying 2006-2008 as "pre" and 2009-2011 as "post") and re-estimate the DiD model.

Table 6: Placebo Test: Pre-Period Only

	Placebo DiD (2006-2008 vs 2009-2011)
Treat × Fake Post	-0.0025
	(0.0106)
p-value	0.815
Observations	28,377

Notes: Placebo test using only pre-DACA years (2006-2011), with 2009 as the artificial treatment date. Model includes controls for female, married, and high school education.

The placebo DiD coefficient is small (-0.25 percentage points) and not statistically significant (p = 0.815), providing support for the parallel trends assumption.

5.6 Event Study Results

Figure **??** reports the event study coefficients, which trace out the treatment effect year by year relative to 2011 (the omitted reference year).

Table 7: Event Study Estimates

Year	Coefficient	Std. Error	p-value
2006	0.0058	0.0182	0.749
2007	-0.0315	0.0185	0.089
2008	0.0078	0.0187	0.678
2009	-0.0091	0.0188	0.627
2010	-0.0136	0.0189	0.472
2011 (reference)	*0*	–	–
2013	0.0349	0.0194	0.072
2014	0.0370	0.0196	0.059
2015	0.0201	0.0201	0.316
2016	0.0665	0.0203	0.001

Notes: Coefficients represent the interaction between treatment status and year indicators, relative to 2011. Model includes controls for female, married, and high school education.

The pre-treatment coefficients (2006-2010) are all small and statistically insignificant, providing evidence against differential pre-trends between the treatment and control groups. The post-treatment coefficients are consistently positive, with the largest effect appearing in 2016 (6.7 percentage points, p = 0.001). This pattern is consistent with a gradual take-up of DACA benefits and accumulation of labor market experience among recipients.

6 Discussion

6.1 Interpretation of Results

The main finding of this study is that DACA eligibility is associated with a 4.6 percentage point increase in full-time employment among Hispanic-Mexican, Mexican-born individuals. This effect is statistically significant and robust across multiple specifications.

Several aspects of the results deserve discussion:

Magnitude: The estimated effect of 4.6 percentage points represents a meaningful increase in full-time employment. Relative to the pre-period employment rate of 63.1% in the treatment group, this represents a 7.3% relative increase.

Heterogeneity: The larger effects for females (5.3 pp) compared to males (3.5 pp) suggest that DACA may have been particularly beneficial for women, possibly because barriers to formal employment are higher for undocumented women.

Timing: The event study results show that the effect emerged gradually after 2012 and

was largest in 2016. This timing is consistent with the gradual rollout of DACA benefits and the accumulation of labor market experience.

Parallel Trends: The placebo test and event study pre-trend coefficients support the identifying assumption that treatment and control groups would have followed parallel employment trends absent DACA.

6.2 Mechanisms

The results are consistent with multiple mechanisms through which DACA could affect employment:

1. **Work Authorization:** DACA provides legal work authorization, enabling recipients to work in jobs that require documentation and are more likely to be full-time.

2. **Access to Better Jobs:** With work authorization, recipients can access formal sector employment with better wages and more hours.

3. **Reduced Fear:** Deferred action reduces fear of deportation, potentially encouraging labor force participation and job search.

4. **Driver's Licenses:** Access to driver's licenses expands the geographic range of job opportunities.

6.3 Limitations

Several limitations should be noted:

Selection: The analysis cannot distinguish between documented and undocumented non-citizens in the ACS. The sample may include some legal permanent residents who would not be eligible for or affected by DACA.

External Validity: The effects may differ for other demographic groups or in other time periods.

Attrition: If DACA affected migration patterns, the composition of the treatment and control groups might change differentially over time.

Age Effects: The treatment and control groups are at different ages, and lifecycle employment patterns could confound the estimates. However, the DiD design controls for time-invariant differences between groups.

7 Conclusion

This study provides evidence that DACA eligibility increased full-time employment among Hispanic-Mexican, Mexican-born individuals by approximately 4.6 percentage points. The effect is statistically significant, substantively meaningful, and robust to alternative specifications.

The findings have implications for immigration policy debates. DACA appears to have achieved one of its intended goals: improving labor market outcomes for eligible individuals. The positive employment effects suggest that providing work authorization and temporary protection from deportation can facilitate integration into the formal labor market.

Future research should examine the longer-term effects of DACA on employment, wages, and other outcomes, as well as the impacts on other populations and the general equilibrium effects on labor markets.

Preferred Estimate Summary:

- Effect size: 0.0459 (4.59 percentage points)
- Standard error: 0.0090
- 95% Confidence interval: [0.0282, 0.0635]
- Sample size: 43,238
- p-value: < 0.001

A Additional Tables and Figures

A.1 Variable Definitions

Table 8: Variable Definitions

Variable	Definition
Full-time Employment	Indicator = 1 if UHRSWORK $\geq$ 35
Treatment Group	Indicator = 1 if age 26-30 as of June 15, 2012
Control Group	Indicator = 1 if age 31-35 as of June 15, 2012
Post Period	Indicator = 1 if YEAR $\geq$ 2013
Female	Indicator = 1 if SEX = 2
Married	Indicator = 1 if MARST = 1
High School	Indicator = 1 if EDUC $\geq$ 6
Hispanic-Mexican	HISPAN = 1
Born in Mexico	BPL = 200
Non-citizen	CITIZEN = 3

A.2 Sample Selection Criteria

Table 9: Sample Selection Steps

Selection Criterion	Observations
Raw ACS data (2006-2016)	33,851,424
Hispanic-Mexican ethnicity	2,945,521
Born in Mexico	991,261
Non-citizen	701,347
Ages 26-35 as of June 15, 2012	181,229
Arrived before age 16	47,418
Arrived by 2007	47,418
Excluding 2012	43,238

A.3 Descriptive Statistics by Group

Table 10: Descriptive Statistics by Treatment Group

	Treatment (Ages 26-30)		Control (Ages 31-35)	
Variable	Mean	SD	Mean	SD
Full-time Employment	0.621	0.485	0.633	0.482
Female	0.443	0.497	0.436	0.496
Married	0.547	0.498	0.605	0.489
High School Education	0.507	0.500	0.441	0.496
Age (as of survey)	27.8	2.1	33.6	2.1
Years in US	17.2	4.3	19.8	5.1
N	25,470		17,768	

Notes: Statistics calculated for the analysis sample (excluding 2012). Age and years in US are approximate.

B Technical Notes

B.1 Age Calculation

Age as of June 15, 2012 was calculated using birth year and birth quarter:

- Q1 (Jan-Mar): Assigned approximate birth month of February
- Q2 (Apr-Jun): Assigned approximate birth month of May
- Q3 (Jul-Sep): Assigned approximate birth month of August
- Q4 (Oct-Dec): Assigned approximate birth month of November

If the assigned birth month was after June, the individual was considered to not yet have had their birthday in 2012, and their age was decremented by one.

B.2 Statistical Software

All analyses were conducted in Python using the following packages:

- pandas for data manipulation
- numpy for numerical operations
- statsmodels for regression analysis

Weighted least squares (WLS) regression was used with person weights (PERWT) to obtain nationally representative estimates.

B.3 Replication Files

The following files are provided for replication:

- analysis.py: Main analysis script
- data/data.csv: ACS microdata
- data/acs_data_dict.txt: Data dictionary
- results_summary.csv: Summary of regression results
- sample_statistics.csv: Detailed sample statistics