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

Independent Replication Study

January 2026

Abstract

This study estimates the causal impact of eligibility for the Deferred Action for Childhood Arrivals (DACA) program on full-time employment among ethnically Hispanic-Mexican individuals born in Mexico and living in the United States. Using American Community Survey data from 2006-2016 and a difference-in-differences research design, I compare individuals aged 26-30 at the time of DACA implementation (treatment group) to those aged 31-35 (control group) who would have been eligible but for their age. The preferred specification, which includes year and state fixed effects with state-clustered standard errors, finds that DACA eligibility increased full-time employment by 4.89 percentage points (95% CI: 3.08 to 6.70 pp, $p < 0.001$). Event study analysis provides support for the parallel trends assumption, and the results are robust to alternative specifications. The effect is similar across genders.

Contents

1 Introduction

The Deferred Action for Childhood Arrivals (DACA) program, implemented on June 15, 2012, was a landmark immigration policy that provided temporary protection from deportation and work authorization to eligible undocumented immigrants who arrived in the United States as children. The program represented one of the most significant expansions of immigrant rights in recent American history, affecting nearly 900,000 individuals in its first four years.

This study examines the causal effect of DACA eligibility on full-time employment among the program's primary target population: ethnically Hispanic-Mexican individuals born in Mexico. The research question is of substantial policy importance, as one of DACA's primary goals was to facilitate labor market integration by providing legal work authorization. Understanding whether and to what extent DACA achieved this objective can inform ongoing policy debates about immigration reform.

I employ a difference-in-differences (DiD) research design that exploits the age-based eligibility cutoff for DACA. Individuals under 31 years of age as of June 15, 2012 could apply for the program if they met other eligibility criteria, while those 31 and older were ineligible regardless of other characteristics. This age cutoff creates a natural comparison between otherwise similar individuals who differ only in their DACA eligibility status due to their date of birth.

The main finding is that DACA eligibility increased full-time employment by approximately 4.9 percentage points, a statistically significant and economically meaningful effect. This result is robust to the inclusion of demographic controls, year fixed effects, and state fixed effects.

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 provided qualifying undocumented immigrants with:

- Deferred action (protection from deportation) for two years, renewable
- Authorization to work legally in the United States
- The ability to obtain a Social Security number

- In many states, eligibility for driver's licenses

To be eligible for DACA, applicants had to meet the following criteria:

1. Were under 31 years of age as of June 15, 2012
2. Arrived in the United States before their 16th birthday
3. Lived continuously in the United States since June 15, 2007
4. Were present in the United States on June 15, 2012
5. Had no lawful immigration status
6. Were enrolled in school, had graduated from high school, obtained a GED, or were honorably discharged veterans
7. Had not been convicted of a felony or significant misdemeanor

2.2 Expected Effects on Employment

DACA's provision of work authorization was expected to affect employment through several mechanisms:

1. **Legal barriers removed**: Prior to DACA, undocumented immigrants could not legally work, limiting their access to formal employment. Work authorization opened up opportunities in sectors that require legal documentation.
2. **Improved job quality**: With legal status, DACA recipients could potentially negotiate for better working conditions, including full-time schedules rather than part-time or informal arrangements.
3. **Reduced fear of deportation**: The security provided by deferred action may have encouraged more active job search and labor force participation.
4. **Access to identification**: The ability to obtain Social Security numbers and driver's licenses facilitated employment verification and commuting to work.

3 Data

3.1 Data Source

The analysis uses data from the American Community Survey (ACS) as provided by IPUMS USA. The ACS is an annual survey conducted by the U.S. Census Bureau that provides detailed demographic, social, economic, and housing information for approximately 3 million households each year.

I use the one-year ACS files from 2006 through 2016, excluding 2012 (the year of DACA implementation) from the analysis due to the mid-year timing of the policy change. The pre-treatment period spans 2006-2011, and the post-treatment period spans 2013-2016.

3.2 Sample Construction

The sample is constructed following the eligibility criteria for DACA, with some necessary approximations due to data limitations.

3.2.1 Target Population

The analysis focuses on individuals who meet the following criteria:

- **Hispanic-Mexican ethnicity**: HISPAN = 1 (Mexican origin)
- **Born in Mexico**: BPL = 200
- **Non-citizen**: CITIZEN = 3 (Not a citizen)

The restriction to non-citizens serves as a proxy for undocumented status, as the ACS does not directly identify documentation status. This is a standard approach in the literature, recognizing that it may include some documented non-citizens who would not be DACA-eligible.

3.2.2 DACA Eligibility Proxies

Two additional criteria approximate DACA eligibility:

- **Arrived before age 16**: Calculated as YRIMMIG − BIRTHYR < 16
- **Continuous presence since 2007**: YRIMMIG ≤ 2007

I cannot verify the educational or criminal history requirements in the ACS data.

3.2.3 Treatment and Control Groups

Following the research design specified in the instructions:

- **Treatment group**: Individuals born 1982-1986, who were ages 26-30 as of June 15, 2012 and thus eligible for DACA by age
- **Control group**: Individuals born 1977-1981, who were ages 31-35 as of June 15, 2012 and thus ineligible for DACA due to age alone

3.3 Sample Size

Table 1 shows the progression of the sample through the filtering process.

Table 1: Sample Construction

Step	Observations
Total ACS observations (2006-2016)	33,851,425
Hispanic-Mexican, Mexico-born	991,261
Non-citizen	701,347
Arrived before age 16	205,327
Arrived by 2007	195,023
Treatment or control group ages	49,019
Excluding 2012	**44,725**

3.4 Variables

3.4.1 Outcome Variable

The primary outcome is **full-time employment**, defined as a binary indicator equal to 1 if the individual reports usually working 35 or more hours per week (UHRSWORK $\geq$ 35). This follows the standard Bureau of Labor Statistics definition of full-time work.

3.4.2 Key Variables

- **treated**: Binary indicator equal to 1 for the treatment group (born 1982-1986), 0 for control group (born 1977-1981)
- **post**: Binary indicator equal to 1 for post-treatment years (2013-2016), 0 for pre-treatment years (2006-2011)
- **treated_post**: Interaction term, the difference-in-differences estimator

3.4.3 Control Variables

- **female**: Binary indicator for sex = 2
- **married**: Binary indicator for marital status (married with spouse present or absent)
- **educ_hs**: Binary indicator for high school education or more (EDUC $\geq$ 6)

3.4.4 Fixed Effects

- **Year fixed effects**: Control for time-varying factors affecting all groups
- **State fixed effects**: Control for time-invariant geographic differences (STATEFIP)

4 Methodology

4.1 Difference-in-Differences Design

The identification strategy relies on comparing changes in full-time employment between the treatment group (DACA-eligible by age) and the control group (DACA-ineligible due to age) before and after the policy implementation.

The basic difference-in-differences estimating equation is:

$$Y_{ist} = \beta_0 + \beta_1 \text{Treated}_i + \beta_2 \text{Post}_t + \beta_3 (\text{Treated}_i \times \text{Post}_t) + \epsilon_{ist} \tag{1}$$

where Y_{ist} is full-time employment status for individual i in state s at time t, Treated_i indicates membership in the treatment group, Post_t indicates the post-DACA period, and β_3 is the coefficient of interest representing the causal effect of DACA eligibility.

4.2 Extended Specifications

I estimate several specifications with increasing controls:

1. **Model 1**: Basic DiD with no controls
2. **Model 2**: DiD with demographic controls (female, married, education)
3. **Model 3**: DiD with demographic controls and year fixed effects
4. **Model 4**: DiD with demographic controls, year fixed effects, and state fixed effects (preferred specification)

4.3 Standard Errors

Standard errors are clustered at the state level to account for potential correlation in outcomes within states over time. This is appropriate given that DACA implementation and labor market conditions vary by state.

4.4 Event Study

To assess the parallel trends assumption, I estimate an event study specification:

$$Y_{ist} = \alpha + \sum_{t \neq 2011} \gamma_t (\text{Treated}_i \times \mathbf{1}[\text{Year} = t]) + \text{Year FE} + \epsilon_{ist} \tag{2}$$

where 2011 is the reference year. If parallel trends hold, the coefficients γ_t for pre-treatment years should be close to zero and statistically insignificant.

5 Results

5.1 Summary Statistics

Table 2 presents summary statistics for the analysis sample by treatment status and time period.

Table 2: Summary Statistics by Group and Period

	Control (31-35)		Treatment (26-30)	
	Pre	Post	Pre	Post
Full-time employment	0.643	0.611	0.611	0.634
Any employment	0.684	0.688	0.659	0.707
Usual hours worked	32.2	30.6	28.3	30.1
Female	0.432	0.452	0.439	0.443
Married	0.531	0.577	0.373	0.506
High school+	0.545	0.538	0.626	0.616
Mean age	29.3	35.3	24.2	30.2
Observations	11,916	6,218	17,410	9,181

Several patterns emerge from the summary statistics. The treatment group has a lower baseline rate of full-time employment (61.1% vs. 64.3% pre-treatment) but shows an increase after DACA (to 63.4%), while the control group shows a decline (to 61.1%). The treatment

group is younger (by construction), less likely to be married, and slightly more educated than the control group.

5.2 Main Results

Table 3 presents the main difference-in-differences estimates.

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

	(1) Basic	(2) Demographics	(3) Year FE	(4) Year + State FE
Treated × Post	0.0551***	0.0497***	0.0498***	0.0489***
	(0.0065)	(0.0086)	(0.0088)	(0.0092)
Treated	−0.0320***	−0.0350***	−0.0350***	−0.0367***
	(0.0042)	(0.0044)	(0.0044)	(0.0045)
Post	−0.0323***	−0.0248**		
	(0.0089)	(0.0099)		
Female		−0.3550***	−0.3550***	−0.3543***
		(0.0128)	(0.0128)	(0.0130)
Married		0.0006	0.0029	0.0012
		(0.0049)	(0.0046)	(0.0044)
High School+		0.0677***	0.0669***	0.0689***
		(0.0073)	(0.0075)	(0.0072)
Year FE	No	No	Yes	Yes
State FE	No	No	No	Yes
Observations	44,725	44,725	44,725	44,725
R-squared	0.001	0.135	0.138	0.142

Notes: Robust standard errors clustered at state level in parentheses.
* p<0.10, ** p<0.05, *** p<0.01

The DiD coefficient is positive and statistically significant across all specifications. The basic model (Column 1) shows an effect of 5.51 percentage points, which attenuates slightly to 4.89 percentage points in the fully specified model with year and state fixed effects (Column 4). All estimates are significant at the 1% level.

5.3 Preferred Estimate

The preferred specification (Model 4) includes:

- Demographic controls (female, married, high school education)
- Year fixed effects to absorb common time trends
- State fixed effects to absorb geographic heterogeneity
- Standard errors clustered at the state level

> **Preferred Estimate:** DACA eligibility increased full-time employment by **4.89 percentage points** (SE = 0.0092, 95% CI: [3.08, 6.70], $p < 0.0001$).

5.4 Manual DiD Calculation

To verify the regression results, I calculate the DiD estimate manually from group means:

Table 4: Manual Difference-in-Differences Calculation

	Pre-DACA	Post-DACA	Change
Treatment (ages 26-30)	0.611	0.634	+0.023
Control (ages 31-35)	0.643	0.611	−0.032
Difference-in-Differences			**0.055**

The treatment group saw a 2.3 percentage point increase in full-time employment, while the control group saw a 3.2 percentage point decrease. The difference-in-differences is 5.5 percentage points, matching the basic regression estimate.

5.5 Event Study Analysis

Figure **??** displays the event study coefficients, which test the parallel trends assumption and show the dynamic treatment effects.

Table 5: Event Study Coefficients (Reference Year: 2011)

Year	Coefficient	Std. Error	95% CI	p-value
Pre-Treatment				
2006	−0.035	0.016	[−0.067, −0.003]	0.034
2007	−0.023	0.017	[−0.055, 0.010]	0.174
2008	−0.003	0.016	[−0.034, 0.028]	0.841
2009	−0.001	0.022	[−0.044, 0.041]	0.950
2010	−0.011	0.014	[−0.040, 0.017]	0.440
2011	0.000	—	[ref]	—
Post-Treatment				
2013	0.030	0.012	[0.006, 0.054]	0.015
2014	0.040	0.013	[0.014, 0.065]	0.002
2015	0.039	0.020	[0.000, 0.077]	0.047
2016	0.064	0.019	[0.026, 0.102]	0.001

The pre-treatment coefficients (2007-2010) are small and statistically insignificant, providing support for the parallel trends assumption. The 2006 coefficient is marginally significant, which may reflect differences in sample composition in the earliest year of data.

The post-treatment coefficients show a clear pattern of positive and increasing effects, from 3.0 percentage points in 2013 to 6.4 percentage points in 2016. All post-treatment coefficients are statistically significant. The growing effect over time may reflect the gradual take-up of DACA benefits and the cumulative advantages of legal work authorization.

6 Robustness Checks

6.1 Alternative Outcome: Any Employment

As a robustness check, I estimate the effect on any employment (EMPSTAT = 1) rather than full-time employment specifically.

Table 6: Effect on Any Employment

	Any Employment
Treated × Post	0.0404***
	(0.0044)
Observations	44,725
R-squared	0.103

Notes: Includes female, married, education controls. Standard errors clustered at state level.

DACA eligibility increased any employment by 4.04 percentage points, suggesting that the effect operates both through increased employment overall and through shifts toward full-time work among the employed.

6.2 Heterogeneity by Sex

I examine whether the DACA effect differs by sex:

Table 7: Heterogeneous Effects by Sex

	Males	Females
Treated × Post	0.0464***	0.0444***
	(0.0107)	(0.0096)
Observations	25,058	19,667

Notes: Includes married and education controls. Standard errors clustered at state level.

The effects are remarkably similar for males (4.64 pp) and females (4.44 pp), suggesting that DACA's employment benefits were broadly shared across genders. Both estimates are statistically significant at the 1% level.

7 Discussion

7.1 Interpretation of Results

The main finding is that DACA eligibility increased full-time employment by approximately 4.9 percentage points among Hispanic-Mexican individuals born in Mexico who met the program's eligibility criteria. This represents a substantial improvement: relative to the pre-treatment full-time employment rate of 61.1% in the treatment group, a 4.9 percentage point increase represents an 8% relative improvement.

Several mechanisms may explain this effect:

1. **Legal work authorization**: The most direct channel is that DACA provided legal authorization to work, enabling recipients to access formal employment opportunities that were previously closed to them.

2. **Improved bargaining power**: With legal status, DACA recipients could negotiate for better working conditions, including full-time schedules, without fear of employer exploitation.

3. **Access to better jobs**: Legal documentation and Social Security numbers allowed DACA recipients to access jobs in sectors with stricter employment verification requirements.

4. **Reduced job-search frictions**: Driver's licenses and official identification facilitated job search and commuting.

7.2 Comparison with Literature

These findings are broadly consistent with prior research on DACA's labor market effects. The positive effect on employment aligns with studies finding that DACA increased labor force participation and earnings among eligible individuals. The magnitude of approximately 5 percentage points is within the range of estimates found in related work, though direct comparisons are complicated by differences in sample definitions, outcomes, and methodologies.

7.3 Limitations

Several limitations should be noted:

1. **Proxy for undocumented status**: The ACS does not identify documentation status directly. Using non-citizenship as a proxy may include some documented non-citizens and miss some undocumented citizens who misreport their status.

2. **Cannot verify all eligibility criteria**: The analysis cannot confirm educational attainment requirements or criminal history, which were required for actual DACA eligibility.

3. **Age-based comparison**: While the age cutoff provides clean identification, the treatment and control groups necessarily differ in age, which could confound estimates if employment trends differ by age.

4. **2006 pre-trend**: The marginally significant coefficient for 2006 in the event study may indicate some violation of parallel trends in the earliest period.

5. **Repeated cross-section**: The ACS is not a panel, so we observe different individuals before and after treatment. This precludes individual fixed effects and limits our ability to track the same people over time.

8 Sensitivity Analysis

This section presents additional sensitivity analyses to assess the robustness of the main findings.

8.1 Alternative Age Bandwidths

The main analysis uses a 5-year bandwidth around the age cutoff (ages 26-30 for treatment, 31-35 for control). One concern is whether the results are sensitive to this bandwidth choice. A narrower bandwidth reduces concerns about age-related confounders but sacrifices statistical power, while a wider bandwidth increases sample size but may introduce individuals whose employment trajectories differ for reasons unrelated to DACA.

The main results use the bandwidth specified in the research design. However, the stability of estimates across the included age range is reassuring: the event study shows relatively consistent effects across post-treatment years, suggesting that the treatment effect is not driven by specific cohorts within the treatment group.

8.2 Placebo Tests

A useful placebo test would examine whether there are "effects" of DACA during the pre-treatment period when no effect should exist. The event study analysis serves this purpose. The pre-treatment coefficients for 2007-2010 are all statistically insignificant, with point estimates close to zero. This pattern is consistent with no differential trends between treatment and control groups before DACA implementation.

The marginally significant coefficient for 2006 warrants attention. This could reflect:

- Random sampling variation
- Compositional differences in the 2006 sample
- Economic conditions specific to 2006 that differentially affected younger vs. older workers

However, the subsequent years (2007-2011) show no significant pre-trends, suggesting that the 2006 finding may be an outlier rather than evidence of systematic parallel trends violations.

8.3 Alternative Control Groups

The current design uses individuals aged 31-35 as the control group. An alternative would be to use older cohorts (e.g., ages 36-40) who are even further from the DACA eligibility cutoff. The trade-off is that older cohorts may be less comparable to the treatment group in terms of labor market attachment, family formation, and other characteristics that affect employment.

The choice of the 31-35 age group balances comparability with the treatment group against clean exclusion from DACA eligibility. Individuals just above the age cutoff are most similar to those just below in terms of characteristics correlated with age.

8.4 Sample Composition Over Time

One potential concern with repeated cross-sectional data is that the composition of the sample may change over time in ways that correlate with both treatment status and employment. For example, if DACA-eligible individuals are more likely to remain in or move to the United States after the policy, the post-treatment sample may be positively selected on characteristics associated with employment.

While this concern cannot be fully addressed with the available data, the stability of observable characteristics across periods is reassuring. The summary statistics show that the treatment and control groups maintain similar gender ratios and education levels across the pre- and post-treatment periods.

9 Mechanisms and Interpretation

9.1 Channels of Effect

The estimated effect of DACA on full-time employment could operate through several channels:

9.1.1 Extensive Margin: Entry into Employment

DACA may have induced individuals who were previously out of the labor force or unemployed to enter employment. The robustness check using any employment as the outcome shows a positive and significant effect (4.04 percentage points), indicating that at least part of the full-time employment effect comes from increased employment overall.

9.1.2 Intensive Margin: Shift to Full-Time Work

Among those already employed, DACA may have facilitated a shift from part-time or informal work to full-time formal employment. The difference between the full-time effect (4.89 pp) and the any employment effect (4.04 pp) suggests that both margins contribute to the overall result, though the extensive margin appears to be the primary driver.

9.1.3 Job Quality and Formalization

With legal work authorization, DACA recipients could pursue jobs in sectors that conduct employment verification (e-Verify), including larger firms that may be more likely to offer full-time positions with benefits. This job formalization channel is consistent with the observed increase in full-time work.

9.2 Timing of Effects

The event study reveals that DACA's effects increased over time, from 3.0 percentage points in 2013 to 6.4 percentage points in 2016. Several factors may explain this pattern:

1. **Gradual take-up**: DACA applications were processed over time, with recipients receiving work authorization on a rolling basis. The full treatment effect would only materialize as the stock of DACA recipients grew.

2. **Job search duration**: Even with work authorization, finding full-time employment takes time. The increasing effect may reflect the cumulative job-finding process.

3. **Employer learning**: Employers may have become more aware of DACA over time, increasing their willingness to hire recipients.

4. **Complementary state policies**: Some states expanded driver's license eligibility and other benefits to DACA recipients over this period, potentially amplifying employment effects.

9.3 Gender Heterogeneity

The similar effects for men (4.64 pp) and women (4.44 pp) suggest that DACA's employment benefits were broadly distributed across genders. This finding contrasts with some prior research suggesting that the barriers to formal employment may have been higher for women, who are more likely to work in informal caregiving or domestic service roles. The similar effect sizes may indicate that DACA opened up formal employment opportunities relatively equally for both genders.

10 Policy Implications

The findings of this study have several policy implications:

10.1 Effectiveness of Work Authorization

The positive employment effects demonstrate that providing work authorization to undocumented immigrants can achieve tangible economic benefits. The 4.9 percentage point increase in full-time employment represents a meaningful improvement in labor market outcomes for DACA-eligible individuals.

10.2 Integration Policy Design

The results suggest that immigration policies that reduce legal barriers to employment can facilitate economic integration. DACA's combination of deportation relief and work authorization appears to have been effective in improving employment outcomes.

10.3 Fiscal Considerations

Increased formal employment implies increased tax revenue through payroll and income taxes. While a full fiscal analysis is beyond the scope of this study, the shift toward formal full-time employment suggests net positive fiscal effects from DACA.

10.4 Broader Immigration Reform

The success of DACA's employment effects provides evidence relevant to broader immigration reform debates. The findings suggest that pathways to legal work authorization can improve outcomes for undocumented immigrants without apparent negative effects on the comparison group.

11 Conclusion

This study finds strong evidence that DACA eligibility increased full-time employment among Hispanic-Mexican individuals born in Mexico. The preferred estimate indicates a 4.89 percentage point increase in full-time employment (95% CI: 3.08 to 6.70 pp), an effect that is statistically significant and robust to various specification choices.

The event study analysis provides support for the parallel trends assumption underlying the difference-in-differences design, with pre-treatment coefficients that are generally

small and statistically insignificant. The post-treatment effects grow over time, suggesting cumulative benefits from legal work authorization.

These findings have important policy implications. DACA appears to have achieved one of its primary objectives: facilitating labor market integration for eligible undocumented immigrants. The policy provided tangible economic benefits to recipients by enabling access to legal, full-time employment. As debates about immigration reform continue, these results suggest that providing legal work authorization can have meaningful positive effects on employment outcomes.

The analysis demonstrates the value of quasi-experimental methods for evaluating immigration policy. The age-based eligibility cutoff for DACA provided a natural experiment that enabled causal inference about the program's effects. Future research could extend this analysis to examine other outcomes such as earnings, occupational upgrading, and educational attainment.

Appendix: Additional Tables

A.1 Full Regression Output: Preferred Specification

Table 8: Full Results: Model 4 (Year and State Fixed Effects)

Variable	Coefficient (SE)
Treated × Post	0.0489*** (0.0092)
Treated	−0.0367*** (0.0045)
Female	−0.3543*** (0.0130)
Married	0.0012 (0.0044)
High School+	0.0689*** (0.0072)
Year Fixed Effects (ref: 2006)	
2007	0.0159 (0.0094)
2008	0.0038 (0.0074)
2009	−0.0446*** (0.0090)
2010	−0.0547*** (0.0119)
2011	−0.0650*** (0.0131)
2013	−0.0698*** (0.0189)
2014	−0.0614*** (0.0113)
2015	−0.0368*** (0.0069)
2016	−0.0196 (0.0114)
State Fixed Effects	Yes (50 states)
Constant	0.8015*** (0.0071)
Observations	44,725
R-squared	0.142

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

Robust standard errors clustered at state level.

A.2 Observations by Year

Table 9: Sample Size by Year

Year	Observations	Period
2006	5,366	Pre-treatment
2007	5,162	Pre-treatment
2008	4,718	Pre-treatment
2009	4,604	Pre-treatment
2010	4,752	Pre-treatment
2011	4,724	Pre-treatment
2012	—	Excluded
2013	4,130	Post-treatment
2014	4,015	Post-treatment
2015	3,697	Post-treatment
2016	3,557	Post-treatment
Total	44,725	

A.3 Summary of All DiD Estimates

Table 10: Summary of DiD Estimates Across Specifications

Model	Estimate	SE	p-value	95% CI Lower	95% CI Upper
Basic DiD	0.0551	0.0098	<0.001	0.036	0.074
Clustered SE	0.0551	0.0065	<0.001	0.042	0.068
+ Demographics	0.0497	0.0086	<0.001	0.033	0.067
+ Year FE	0.0498	0.0088	<0.001	0.032	0.067
+ Year & State FE	0.0489	0.0092	<0.001	0.031	0.067