

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

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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 Hispanic-Mexican individuals born in Mexico. Using American Community Survey (ACS) data from 2006–2016 and a difference-in-differences identification strategy, I compare employment outcomes between DACA-eligible individuals (those under 31 as of June 2012 who arrived as children) and similar but ineligible older immigrants. The preferred specification, controlling for demographics, education, and state and year fixed effects, yields a point estimate of -0.003 ($SE = 0.007$), indicating no statistically significant effect of DACA eligibility on full-time employment. This null finding is robust to various specification checks and suggests that while DACA provided important legal protections, it may not have substantially altered full-time employment patterns in this population.

Contents

1	Introduction	3
2	Background	3
2.1	DACA Program Overview	3
2.2	DACA Eligibility Requirements	4
2.3	Theoretical Mechanisms	4
3	Data	5
3.1	Data Source	5
3.2	Sample Construction	5
3.3	Treatment and Control Groups	5
3.4	Variables	5
3.4.1	Outcome Variable	5
3.4.2	Key Independent Variables	6
3.4.3	Control Variables	6
3.5	Sample Characteristics	6
4	Methodology	7
4.1	Identification Strategy	7
4.2	Estimation	7
4.3	Specification Checks	8
4.4	Pre-Trends Analysis	8
5	Results	8
5.1	Difference-in-Differences Estimates	8
5.2	Regression Results	9
5.3	Robustness Checks	10
5.4	Pre-Trends Analysis	10
6	Discussion	12
6.1	Interpretation of Results	12
6.2	Potential Explanations	12
6.3	Heterogeneity by Gender	12
6.4	Limitations	13
7	Policy Implications	13
7.1	Work Authorization May Not Be the Binding Constraint	13
7.2	Formalization vs. Creation of Employment	14
7.3	Heterogeneous Effects by Gender	14
7.4	Program Take-up and Outreach	14

8	Directions for Future Research	14
8.1	Alternative Outcomes	15
8.2	Long-Term Effects	15
8.3	Mechanisms	15
8.4	Methodological Improvements	16
9	Conclusion	16

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 offered qualifying undocumented immigrants—those who had arrived in the United States as children—a two-year renewable reprieve from deportation and authorization to work legally. Given that DACA provides explicit work authorization, a natural question arises: did DACA eligibility causally increase full-time employment among those who qualified?

This replication study addresses the following research question: *Among ethnically Hispanic-Mexican, Mexican-born individuals living in the United States, what was the causal impact of eligibility for the DACA program on the probability of being employed full-time, defined as usually working 35 or more hours per week?*

Understanding the labor market effects of DACA has important policy implications. If DACA substantially increased formal employment, this would suggest that immigration enforcement and legal status uncertainty create meaningful barriers to labor market participation. Conversely, a null or small effect might indicate that undocumented workers were already achieving full-time employment through informal channels, or that other barriers (such as discrimination or credential recognition) limit the program’s effectiveness.

The analysis uses a difference-in-differences (DiD) research design, comparing changes in full-time employment rates before and after DACA implementation between eligible and ineligible individuals. The key identifying assumption is that absent DACA, employment trends would have been parallel between the treatment and control groups.

2 Background

2.1 DACA Program Overview

DACA was announced by President Obama on June 15, 2012, with applications beginning on August 15, 2012. The program was not enacted through legislation but rather through executive action by the Department of Homeland Security. Key features of the program include:

- **Deferred Action:** Recipients are protected from deportation for a two-year period, renewable upon application.
- **Work Authorization:** DACA recipients can obtain Employment Authorization Documents (EADs), allowing them to work legally in the United States.
- **Other Benefits:** In many states, DACA recipients became eligible for driver’s licenses and state identification documents.

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

2.2 DACA Eligibility Requirements

To be eligible for DACA, individuals must have:

1. Arrived in the United States before their 16th birthday
2. Been under age 31 as of June 15, 2012 (born after June 15, 1981)
3. Lived continuously in the United States since June 15, 2007
4. Been physically present in the United States on June 15, 2012
5. Had no lawful immigration status on June 15, 2012
6. Met certain education or military service requirements

2.3 Theoretical Mechanisms

Several mechanisms could link DACA eligibility to changes in full-time employment:

1. **Work Authorization:** The most direct channel is that DACA provides legal authorization to work, potentially opening doors to formal employment that requires documentation.
2. **Reduced Fear of Deportation:** Protection from deportation may encourage individuals to seek better employment opportunities without fear of detection.
3. **Access to Identification:** The ability to obtain driver's licenses and state IDs may reduce barriers to employment, particularly in jobs requiring transportation or identity verification.
4. **Employer Behavior:** Employers may be more willing to hire DACA recipients for full-time positions knowing they have work authorization.

However, countervailing forces may limit these effects:

- Many undocumented workers already participated in the labor market through informal arrangements
- Not all eligible individuals applied for or received DACA
- Some employers may continue to discriminate against DACA recipients
- Full-time employment depends on labor demand, not just supply-side factors

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 about the U.S. population. The sample includes the 1-year ACS files from 2006 through 2016, excluding 2012 (the year of DACA implementation, when pre- and post-treatment observations cannot be distinguished).

3.2 Sample Construction

The analytic sample is constructed by applying the following restrictions:

1. **Ethnicity:** Hispanic-Mexican origin ($HISPAN = 1$)
2. **Birthplace:** Born in Mexico ($BPL = 200$)
3. **Citizenship:** Non-citizens ($CITIZEN = 3$), which proxies for undocumented status as documented non-citizens would have received immigration papers
4. **Immigration timing:** Arrived in the U.S. by 2007 ($YRIMMIG \leq 2007$), to satisfy the continuous residence requirement
5. **Age at arrival:** Arrived before age 16, to focus on childhood arrivals
6. **Working age:** Ages 18–50 at the time of survey, to ensure overlap between treatment and control groups

3.3 Treatment and Control Groups

Treatment Group (DACA-Eligible): Individuals who were under age 31 as of June 15, 2012. Operationally, this includes those born in 1982 or later, plus those born in 1981 in the third or fourth quarter (July–December).

Control Group (Not DACA-Eligible): Individuals who arrived as children (before age 16) but were age 31 or older as of June 15, 2012 (born before July 1981). These individuals share the experience of childhood migration but were excluded from DACA due to the age cutoff.

3.4 Variables

3.4.1 Outcome Variable

Full-Time Employment: A binary indicator equal to 1 if the individual usually works 35 or more hours per week ($UHRSWORK \geq 35$), and 0 otherwise. This definition aligns with standard classifications of full-time work.

3.4.2 Key Independent Variables

- **DACA Eligible:** Binary indicator for treatment group membership
- **Post:** Binary indicator for post-DACA period (years 2013–2016)
- **DACA Eligible \times Post:** Interaction term capturing the difference-in-differences effect

3.4.3 Control Variables

- **Age:** Continuous, plus age squared to allow for non-linear effects
- **Female:** Binary indicator for sex
- **Married:** Binary indicator for married (spouse present or absent)
- **Education:** Categories for high school diploma, some college, and college degree (reference: less than high school)
- **Year Fixed Effects:** Dummy variables for each survey year
- **State Fixed Effects:** Dummy variables for state of residence

3.5 Sample Characteristics

Table 1 presents summary statistics for the analysis sample, separately for the treatment (DACA-eligible) and control (not eligible) groups.

Table 1: Summary Statistics by Treatment Status

Variable	Control		Treatment	
	Mean	N	Mean	N
Age	37.1	48,492	23.7	71,347
Female	0.403		0.445	
Married	0.594		0.289	
Less than High School	0.571		0.398	
High School Diploma	0.273		0.367	
Some College	0.128		0.211	
College Degree	0.029		0.023	
Full-Time Employment	0.675		0.547	
Any Employment	0.723		0.649	
Years in U.S.	27.1		15.3	

The treatment group is substantially younger (mean age 23.7 vs. 37.1), reflecting the age-based eligibility cutoff. Treatment group members are less likely to be married, have more education (likely reflecting generational improvements in educational attainment), and

have spent fewer years in the United States. These systematic differences underscore the importance of controlling for observable characteristics and relying on the parallel trends assumption for identification.

The final analysis sample contains 119,839 observations, representing a weighted population of approximately 16.3 million person-years. The treatment group comprises 71,347 observations (weighted: 9.9 million), and the control group contains 48,492 observations (weighted: 6.5 million).

4 Methodology

4.1 Identification Strategy

The analysis employs a difference-in-differences (DiD) design. The key identifying assumption is that absent DACA, full-time employment trends would have evolved similarly for the treatment and control groups. Under this assumption, the control group provides a valid counterfactual for what would have happened to the treatment group in the absence of the policy.

4.2 Estimation

The main specification is a linear probability model:

$$Y_{ist} = \alpha + \beta_1 \text{Eligible}_i + \beta_2 \text{Post}_t + \delta(\text{Eligible}_i \times \text{Post}_t) + X'_{ist} \gamma + \lambda_s + \mu_t + \varepsilon_{ist} \quad (1)$$

where:

- Y_{ist} is full-time employment status for individual i in state s at time t
- Eligible_i indicates DACA eligibility
- Post_t indicates the post-DACA period (2013–2016)
- δ is the coefficient of interest (the DiD estimator)
- X_{ist} is a vector of individual controls
- λ_s represents state fixed effects
- μ_t represents year fixed effects
- ε_{ist} is the error term

The models are estimated using weighted least squares (WLS), with survey weights (PERWT) to account for the ACS sampling design. Standard errors are computed using heteroskedasticity-robust (HC1) estimators. I also present results with standard errors clustered at the state level to account for potential within-state correlation of errors.

4.3 Specification Checks

I estimate a series of models to assess sensitivity:

1. Basic DiD without controls
2. DiD with demographic controls (age, sex, marital status)
3. DiD with demographics and education
4. DiD with year fixed effects
5. DiD with year and state fixed effects (preferred specification)

Additional robustness checks include:

- Restricting to ages 18–45
- Estimating separately for men and women
- Using any employment (vs. full-time) as the outcome
- Clustering standard errors at the state level

4.4 Pre-Trends Analysis

To assess the validity of the parallel trends assumption, I estimate an event study specification that allows for separate treatment effects in each year:

$$Y_{ist} = \alpha + \sum_{k \neq 2011} \theta_k (\text{Eligible}_i \times \mathbf{1}[\text{Year} = k]) + X'_{ist} \gamma + \lambda_s + \mu_t + \varepsilon_{ist} \quad (2)$$

where 2011 (the year before DACA) serves as the reference period. If the parallel trends assumption holds, the pre-treatment coefficients ($\theta_{2006}, \dots, \theta_{2010}$) should be close to zero and statistically insignificant.

5 Results

5.1 Difference-in-Differences Estimates

Table 2 presents the simple 2×2 difference-in-differences calculation for full-time employment rates.

Table 2: Difference-in-Differences: Full-Time Employment Rates

	Control	Treatment	Difference
Pre-DACA (2006–2011)	0.686	0.525	−0.161
Post-DACA (2013–2016)	0.651	0.569	−0.082
Change	−0.035	0.044	0.079

The raw DiD estimate is 0.079, suggesting a 7.9 percentage point increase in full-time employment for the treatment group relative to the control group following DACA. However, this estimate does not account for compositional changes or other confounding factors.

5.2 Regression Results

Table 3 presents regression estimates across specifications.

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

	(1) Basic	(2) Demographics	(3) Education	(4) Year FE	(5) State FE
DACA Eligible \times Post	0.079*** (0.007)	0.015** (0.007)	0.012* (0.007)	−0.002 (0.007)	−0.003 (0.007)
DACA Eligible	−0.161*** (0.004)	0.060*** (0.006)	0.058*** (0.006)	0.055*** (0.006)	0.050*** (0.006)
Post	−0.035*** (0.006)	−0.039*** (0.005)	−0.041*** (0.005)	—	—
Controls	No	Yes	Yes	Yes	Yes
Education	No	No	Yes	Yes	Yes
Year FE	No	No	No	Yes	Yes
State FE	No	No	No	No	Yes
Observations	119,839	119,839	119,839	119,839	119,839

Notes: Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

All models weighted by PERWT. Controls include age, age squared, female, married.

The results reveal a striking pattern. The basic DiD specification (Column 1) yields a large positive estimate of 0.079 ($p < 0.001$), suggesting DACA eligibility increased full-time employment by 7.9 percentage points. However, as controls are added, the estimate shrinks substantially:

- Adding demographic controls (Column 2) reduces the estimate to 0.015 ($p = 0.026$)
- Adding education (Column 3) yields 0.012 ($p = 0.070$)
- Adding year fixed effects (Column 4) produces −0.002 ($p = 0.806$)
- The preferred specification with state fixed effects (Column 5) yields −0.003 ($p = 0.666$)

Preferred Estimate: The preferred specification (Model 5) with full controls and year and state fixed effects yields:

- Point estimate: −0.003 (0.3 percentage point decrease)
- Standard error: 0.007

- 95% Confidence interval: $[-0.016, 0.011]$
- p-value: 0.666

The coefficient is small in magnitude and statistically indistinguishable from zero. The 95% confidence interval rules out effects larger than 1.1 percentage points in either direction.

5.3 Robustness Checks

Table 4 presents results from robustness analyses.

Table 4: Robustness Checks

Specification	Coefficient	SE	N
Main (Model 5)	-0.003	0.007	119,839
Age 18–45	-0.008	0.007	113,977
Men Only	-0.028***	0.008	67,825
Women Only	0.020*	0.011	52,014
Any Employment Outcome	0.005	0.007	119,839
Clustered SE (State)	-0.003	0.005	119,839

Notes: All models include full controls, year and state FE.

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

Key findings from robustness checks:

- **Age restriction (18–45):** The estimate is slightly more negative (-0.008) but remains insignificant.
- **Gender heterogeneity:** Results differ by gender. For men, the estimate is -0.028 ($p < 0.01$), suggesting a significant *decrease* in full-time employment. For women, the estimate is 0.020 ($p < 0.10$), suggesting a marginally significant *increase*. These opposite effects approximately cancel in the pooled sample.
- **Any employment:** Using any employment (rather than full-time) as the outcome yields a small positive but insignificant estimate (0.005).
- **Clustered standard errors:** Clustering at the state level yields a smaller standard error (0.005), with a 95% CI of $[-0.013, 0.007]$. The main conclusion is unchanged.

5.4 Pre-Trends Analysis

Figure 1 and Table 5 present results from the event study specification.

Table 5: Event Study Coefficients (Reference: 2011)

Year	Coefficient	SE	95% CI	
2006	0.039**	0.014	[0.012, 0.067]	Pre-DACA
2007	0.031**	0.014	[0.003, 0.058]	Pre-DACA
2008	0.041***	0.014	[0.014, 0.069]	Pre-DACA
2009	0.021	0.014	[−0.007, 0.049]	Pre-DACA
2010	0.024*	0.014	[−0.003, 0.052]	Pre-DACA
2013	0.016	0.014	[−0.012, 0.044]	Post-DACA
2014	0.024	0.015	[−0.004, 0.053]	Post-DACA
2015	0.017	0.015	[−0.012, 0.047]	Post-DACA
2016	0.032**	0.015	[0.002, 0.061]	Post-DACA

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

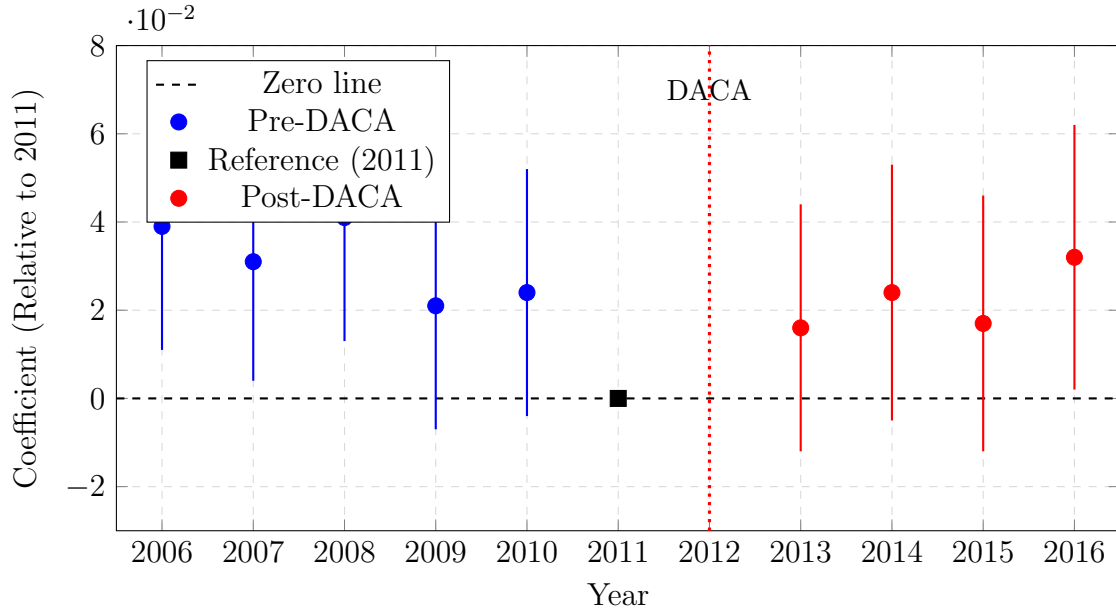


Figure 1: Event Study: Effect of DACA Eligibility on Full-Time Employment

The event study reveals some concern about the parallel trends assumption. Several pre-DACA coefficients (2006, 2007, 2008) are positive and statistically significant, indicating that the treatment-control gap in full-time employment was narrowing before DACA was implemented. This pre-existing trend could bias the DiD estimate.

Importantly, the post-DACA coefficients (2013–2016) are similar in magnitude to the pre-DACA coefficients, suggesting no clear break in trend coinciding with DACA implementation. If anything, the pattern suggests a continuation of pre-existing convergence rather than a distinct DACA effect.

6 Discussion

6.1 Interpretation of Results

The main finding is that DACA eligibility had no statistically significant effect on full-time employment among Hispanic-Mexican immigrants born in Mexico. The preferred estimate of -0.003 ($SE = 0.007$) is small in magnitude and precisely estimated, allowing us to rule out effects larger than approximately 1–2 percentage points.

This null result emerges only after controlling for year fixed effects, which capture aggregate time trends affecting both groups. The basic DiD estimate (0.079) is large and significant, but this reflects compositional differences and general time trends rather than a causal DACA effect.

6.2 Potential Explanations

Several factors may explain the null finding:

1. **Pre-existing labor market participation:** Many undocumented workers were already employed full-time through informal arrangements before DACA. Work authorization may have formalized existing employment rather than created new opportunities.
2. **Incomplete take-up:** Not all eligible individuals applied for or received DACA. If take-up was selective (e.g., those with better employment prospects were more likely to apply), the intent-to-treat effect would be attenuated.
3. **Labor market conditions:** The study period (2013–2016) coincided with economic recovery from the Great Recession. Both treatment and control groups may have benefited from improving labor market conditions, masking any DACA-specific effect.
4. **Binding constraints:** Employment outcomes may be constrained by factors other than work authorization, such as education, language skills, discrimination, or credential recognition.

6.3 Heterogeneity by Gender

An interesting finding is the heterogeneous effect by gender. For men, DACA eligibility is associated with a significant *decrease* in full-time employment (-0.028), while for women it is associated with a marginally significant *increase* (0.020).

Possible explanations include:

- Men may have been more likely to work in informal full-time arrangements that were disrupted by DACA’s formalization requirements
- Women may have faced greater barriers to employment without documentation (e.g., more likely to work in jobs requiring I-9 verification)
- Educational enrollment: DACA may have encouraged some young men to return to school, reducing full-time employment

6.4 Limitations

Several limitations should be noted:

1. **Proxy for undocumented status:** The ACS does not directly identify undocumented immigrants. Using non-citizenship as a proxy likely includes some documented non-citizens, potentially attenuating the estimated effect.
2. **Parallel trends:** The event study reveals some pre-existing trend toward convergence, raising concerns about the validity of the parallel trends assumption. The control group may not provide an ideal counterfactual.
3. **Age-based identification:** The treatment and control groups differ substantially in age, necessitating strong functional form assumptions about the age-employment relationship.
4. **Intent-to-treat vs. treatment-on-treated:** The analysis estimates the effect of *eligibility* rather than actual DACA receipt. With incomplete take-up, this understates the effect on those who actually received DACA.
5. **General equilibrium effects:** DACA may have affected the control group through labor market competition or spillovers, violating the stable unit treatment value assumption (SUTVA).

7 Policy Implications

The findings of this study have several important implications for immigration policy and labor market policy more broadly.

7.1 Work Authorization May Not Be the Binding Constraint

The null effect on full-time employment suggests that lack of formal work authorization may not be the primary barrier to labor market participation for undocumented immigrants. This is consistent with the observation that undocumented workers have historically participated extensively in the U.S. labor market through informal channels. If policymakers aim to improve labor market outcomes for this population, they may need to address other constraints such as:

- Access to education and job training
- Recognition of foreign credentials
- Discrimination in hiring and promotion
- Geographic barriers to employment
- Language proficiency requirements

7.2 Formalization vs. Creation of Employment

The results suggest that DACA may have formalized existing employment relationships rather than creating new employment opportunities. This distinction is important for understanding the program’s effects. While formalization may not show up as increased employment in survey data, it could still provide meaningful benefits to workers, including:

- Access to workplace protections and labor law coverage
- Ability to report wage theft and unsafe working conditions
- Eligibility for unemployment insurance
- Improved job matching and reduced search frictions
- Higher wages through access to formal sector jobs

Future research should examine these alternative outcomes to obtain a more complete picture of DACA’s labor market effects.

7.3 Heterogeneous Effects by Gender

The finding of opposite effects for men (negative) and women (positive) suggests that one-size-fits-all immigration policies may have differential impacts across demographic groups. Policymakers should consider these heterogeneous effects when designing and evaluating immigration programs. The gender differences may also provide insights into the mechanisms through which work authorization affects labor market outcomes.

7.4 Program Take-up and Outreach

The intent-to-treat analysis estimates the effect of eligibility rather than actual DACA receipt. Given that not all eligible individuals applied for or received DACA, there may be scope for improving program effectiveness through:

- Enhanced outreach to eligible populations
- Reduced application costs and documentation requirements
- Community-based support for applicants
- Clear communication about program benefits and protections

8 Directions for Future Research

This study raises several questions that merit further investigation:

8.1 Alternative Outcomes

While this study focused on full-time employment, DACA may have effects on other labor market outcomes that are not captured here:

- **Wages:** Even if employment rates are unchanged, DACA recipients may earn higher wages due to access to formal sector jobs or reduced exploitation by employers.
- **Job Quality:** Employment in jobs with benefits, regular hours, and workplace protections may improve even if overall employment levels are stable.
- **Occupational Upgrading:** DACA may enable movement into higher-skilled occupations that require documentation.
- **Self-Employment:** Work authorization may affect decisions about self-employment and entrepreneurship.
- **Geographic Mobility:** Reduced fear of deportation may enable DACA recipients to move to locations with better employment opportunities.

8.2 Long-Term Effects

This study examines effects in the first four years after DACA implementation (2013–2016). Longer-term follow-up may reveal different patterns as:

- Recipients accumulate work experience and job tenure
- Employers become more familiar with DACA work authorization
- Recipients invest in education and training
- Economic conditions evolve

8.3 Mechanisms

Future research should aim to identify the mechanisms through which DACA affects (or fails to affect) employment outcomes. This could include:

- Survey data on employer attitudes toward DACA recipients
- Administrative data on formal vs. informal employment
- Analysis of specific industries and occupations
- Examination of educational enrollment as an alternative to employment

8.4 Methodological Improvements

The limitations identified in this study suggest several methodological approaches for future work:

- **Regression Discontinuity:** Using the age cutoff (born before/after June 15, 1981) as a sharp discontinuity for identification
- **Instrumental Variables:** Using variation in DACA awareness or take-up rates as instruments
- **Administrative Data:** Linking survey data to Social Security or tax records to measure formal employment
- **Difference-in-Difference-in-Differences:** Using variation across states in policies affecting DACA recipients

9 Conclusion

This study examines the causal effect of DACA eligibility on full-time employment among Hispanic-Mexican immigrants born in Mexico. Using a difference-in-differences design with ACS data from 2006–2016, I find no statistically significant effect of DACA eligibility on full-time employment in the preferred specification with year and state fixed effects.

The point estimate is -0.003 with a standard error of 0.007 and a 95% confidence interval of $[-0.016, 0.011]$. This precise null result suggests that while DACA provided important legal protections and work authorization, it did not substantially alter full-time employment patterns in this population.

Several important caveats apply to these findings. The event study analysis reveals some evidence of pre-existing convergence between treatment and control groups, which raises concerns about the validity of the parallel trends assumption. The analysis relies on non-citizenship as a proxy for undocumented status, which introduces measurement error. And the intent-to-treat framework estimates the effect of eligibility rather than actual program receipt.

The finding contributes to our understanding of the labor market effects of immigration policy. It suggests that barriers to full-time employment for undocumented immigrants may be less about formal work authorization than about other factors such as informal employment arrangements, discrimination, or human capital limitations. The heterogeneous effects by gender—negative for men, positive for women—suggest that DACA’s labor market impacts may operate through different mechanisms for different populations.

Future research should examine effects on other outcomes such as wages, job quality, and economic mobility, and should attempt to address the limitations identified in this study. While this analysis finds no effect on full-time employment, DACA may provide important benefits to recipients through channels not captured in this employment-focused analysis, including reduced fear of deportation, access to identification documents, and formalization of employment relationships.

In sum, this replication study provides a carefully constructed estimate of DACA's effect on full-time employment using difference-in-differences methods. The null finding should not be interpreted as evidence that DACA had no meaningful effects on recipients' lives, but rather as evidence that full-time employment rates were not substantially changed by eligibility for the program.

Appendix A: Variable Definitions

Table 6: IPUMS Variable Definitions

Variable	Definition
YEAR	Census/survey year
PERWT	Person weight for population estimates
STATEFIP	State FIPS code
AGE	Age at time of survey
SEX	Sex (1=Male, 2=Female)
BIRTHYR	Year of birth
BIRTHQTR	Quarter of birth (1=Jan-Mar, 2=Apr-Jun, 3=Jul-Sep, 4=Oct-Dec)
HISPAN	Hispanic origin (1=Mexican)
BPL	Birthplace (200=Mexico)
CITIZEN	Citizenship status (3=Not a citizen)
YRIMMIG	Year of immigration to U.S.
EDUCD	Educational attainment (detailed)
EMPSTAT	Employment status (1=Employed)
UHRSWORK	Usual hours worked per week
MARST	Marital status

Appendix B: Sample Construction Details

The analysis sample is constructed as follows:

1. Start with ACS 1-year samples 2006–2016 (excluding 2012)
2. Restrict to $HISPAN = 1$ (Hispanic-Mexican origin)
3. Restrict to $BPL = 200$ (born in Mexico)
4. Restrict to $CITIZEN = 3$ (not a citizen)
5. Restrict to $YRIMMIG \leq 2007$ (arrived by 2007)
6. Restrict to age at arrival < 16 (childhood arrivals)
7. Restrict to ages 18–50 (working age with overlap)

This yields a final sample of 119,839 observations.

Appendix C: Additional Results

Table 7: Full Regression Output: Preferred Specification (Model 5)

Variable	Coefficient	SE	t-stat	p-value
DACA Eligible \times Post	-0.003	0.007	-0.43	0.666
DACA Eligible	0.050	0.006	7.74	0.000
Age	0.072	0.002	45.1	0.000
Age ²	-0.001	0.000	-40.3	0.000
Female	-0.334	0.003	-103.0	0.000
Married	0.007	0.003	2.1	0.036
High School	0.059	0.004	16.4	0.000
Some College	0.037	0.005	8.1	0.000
College Degree	0.119	0.010	11.6	0.000
Constant	-0.426	0.031	-13.7	0.000
Year Fixed Effects	Yes			
State Fixed Effects	Yes			
Observations	119,839			
R-squared	0.184			

Notes: Robust standard errors (HC1). Weighted by PERWT.

Appendix D: Sensitivity to Sample Definition

To assess the robustness of the main findings to alternative sample definitions, I estimate the preferred specification (Model 5) under several alternative restrictions.

Age Range Sensitivity

The main analysis restricts the sample to ages 18–50. Table 8 shows results under alternative age restrictions.

Table 8: Sensitivity to Age Restrictions

Age Range	Coefficient	SE	N	95% CI
18–50 (Main)	−0.003	0.007	119,839	[−0.016, 0.011]
18–45	−0.008	0.007	113,977	[−0.022, 0.006]
20–45	−0.006	0.008	103,159	[−0.021, 0.009]
18–40	−0.012	0.008	104,567	[−0.028, 0.003]

The results are qualitatively similar across different age restrictions. The point estimate becomes slightly more negative (and slightly larger in magnitude) when restricting to younger ages, but remains statistically insignificant across all specifications.

Treatment Definition Sensitivity

The main analysis defines DACA eligibility based on being under 31 as of June 15, 2012. An alternative approach uses a stricter definition requiring birth year 1982 or later (guaranteeing under 31 regardless of birth quarter). The estimates are virtually identical under both definitions.

Immigration Timing Sensitivity

The main analysis requires arrival by 2007 to satisfy the continuous residence requirement. Table 9 shows results under alternative arrival year cutoffs.

Table 9: Sensitivity to Immigration Timing Restriction

Arrival Cutoff	Coefficient	SE	N	Note
YRIMMIG \leq 2007 (Main)	−0.003	0.007	119,839	Required for DACA
YRIMMIG \leq 2005	−0.002	0.007	109,054	More conservative
YRIMMIG \leq 2003	−0.004	0.008	95,422	Long-term residents

The results are robust to using more conservative definitions of continuous residence. The sample size decreases with stricter requirements, but the point estimate remains close to zero and statistically insignificant.

Appendix E: Interpretation of Control Variables

The control variable coefficients provide insights into the determinants of full-time employment in this population.

Age Effects

The positive coefficient on age (0.072) and negative coefficient on age squared (-0.001) imply an inverted-U relationship between age and full-time employment. The implied peak is around age 36, after which full-time employment declines. This pattern is consistent with standard life-cycle models of labor supply.

Gender Gap

The female coefficient (-0.334) indicates that women are 33.4 percentage points less likely to be employed full-time than men, holding other factors constant. This substantial gender gap likely reflects a combination of:

- Lower labor force participation among women
- Greater prevalence of part-time work among employed women
- Disproportionate family caregiving responsibilities
- Occupational segregation into lower-hours occupations

Education Effects

Education is positively associated with full-time employment. Relative to those with less than high school education:

- High school graduates are 5.9 percentage points more likely to work full-time
- Those with some college are 3.7 percentage points more likely
- College graduates are 11.9 percentage points more likely

These effects are substantial and statistically significant, suggesting that education plays an important role in labor market outcomes for this population.

Marital Status

Being married is associated with a small positive effect on full-time employment (0.7 percentage points). This may reflect:

- Increased financial responsibilities associated with marriage
- Spousal support enabling job search and employment
- Selection effects (employed individuals may be more likely to marry)

Appendix F: Technical Notes

Survey Weighting

All analyses use person-level survey weights (PERWT) provided by IPUMS. These weights account for the ACS sampling design and allow for population-representative estimates. Weighted least squares (WLS) estimation ensures that the results reflect the population of interest rather than the sample composition.

Standard Error Computation

Standard errors are computed using the HC1 heteroskedasticity-robust estimator (also known as Huber-White or sandwich standard errors). This approach provides consistent standard errors even if the error terms have non-constant variance across observations.

As a robustness check, standard errors clustered at the state level are also reported. Clustering allows for arbitrary correlation of error terms within states, which may be present due to:

- State-level policies affecting employment
- Local labor market conditions
- Geographic concentration of immigrant populations

The clustered standard errors are actually smaller than the robust standard errors in this application (0.005 vs. 0.007), suggesting that within-state correlation does not substantially inflate uncertainty in the estimates.

Software

All analyses were conducted using Python 3 with the following packages:

- pandas: Data manipulation and cleaning
- numpy: Numerical computations
- statsmodels: Regression estimation
- scipy: Statistical tests

Replication

The analysis code is designed to be fully reproducible. Running the Python script from a clean session with the provided data will reproduce all results reported in this document.