Replication Report: The Effect of DACA Eligibility on Full-Time Employment Among Hispanic-Mexican Immigrants

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Abstract

This study estimates the causal effect 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 a difference-in-differences design that compares individuals ages 26–30 at DACA implementation (treatment group) to those ages 31–35 (control group), I find that DACA eligibility is associated with a statistically significant 4.7 percentage point increase in the probability of full-time employment. This effect represents approximately a 7.5% increase relative to the pre-DACA baseline and is robust to various specification checks including alternative age bandwidths, logistic regression, and placebo tests. The event study analysis suggests that effects strengthened over time, with the largest impact observed in 2016. These findings are consistent with the hypothesis that legal work authorization improves labor market outcomes for undocumented immigrants.

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1 Introduction

1.1 Background and Motivation

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 provided temporary relief from deportation and work authorization to undocumented immigrants who arrived in the United States as children. This study examines whether DACA eligibility affected the probability of full-time employment among the eligible population.

Understanding the labor market effects of DACA is important for several reasons. First, employment outcomes directly affect the economic well-being of DACA-eligible individuals and their families. Second, the labor market integration of immigrants has broader implications for fiscal policy and economic growth. Third, evidence on DACA's effects can inform ongoing policy debates about immigration reform. Fourth, from a scientific perspective, DACA provides a natural experiment that can help us understand the general effects of legal work authorization on immigrant employment outcomes.

Prior to DACA, undocumented immigrants faced substantial barriers to formal employment. Without legal work authorization, they could not be legally employed by most firms and lacked access to many labor market opportunities. This legal status fundamentally shaped their employment possibilities, often relegating them to informal sector work, self-employment, or employment with unscrupulous employers willing to violate immigration law.

1.2 Research Question

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 DACA on the probability that the eligible person is employed full-time, defined as usually working 35 hours per week or more?

1.3 Preview of Findings

Using American Community Survey (ACS) data from 2006–2016, I estimate the effect of DACA eligibility on full-time employment using a difference-in-differences (DiD) research design. The treatment group consists of Hispanic-Mexican, Mexican-born, non-citizen individuals who were ages 26–30 at the time of DACA implementation and who meet other

eligibility criteria. The control group consists of individuals who would have been eligible except that they were too old (ages 31–35 at implementation).

The main finding is that DACA eligibility increased the probability of full-time employment by approximately 4.7 percentage points (95% CI: 2.9 to 6.4 percentage points). This effect is statistically significant at conventional levels and robust to various specification checks.

1.4 Outline

The remainder of this report is organized as follows. Section 2 provides background on the DACA program and its expected effects on employment. Section 3 describes the data and sample construction. Section 4 presents the empirical strategy. Section 5 reports the main results and robustness checks. Section 6 discusses the findings and their implications. Section 7 concludes.

2 Background

2.1 The DACA Program

DACA was announced by the Obama administration on June 15, 2012, and began accepting applications on August 15, 2012. The program allows eligible individuals to request deferred action on their deportation for a period of two years, renewable. Importantly for labor market outcomes, DACA recipients also receive work authorization through an Employment Authorization Document (EAD).

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

- Arrived in the United States before their 16th birthday
- Had not yet had their 31st birthday as of June 15, 2012
- Lived continuously in the United States since June 15, 2007
- Were present in the United States on June 15, 2012
- Did not have lawful status (citizenship or legal residency) at that time
- Were in school, had graduated from high school, had obtained a GED, or were an honorably discharged veteran of the Coast Guard or Armed Forces
- Had 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. While DACA was not restricted to any particular na-

tional origin, the structure of undocumented immigration to the United States meant that the great majority of eligible individuals were from Mexico.

2.2 Program Implementation and Uptake

The implementation of DACA occurred in phases. Applications began being accepted on August 15, 2012, with initial processing requiring several months. By late 2012 and early 2013, the first cohort of DACA recipients had received their work authorization documents. The program allowed for renewal after the initial two-year period, which many recipients pursued.

DACA uptake was substantial but not universal among the eligible population. Estimates suggest that approximately 60–70% of immediately eligible individuals applied for and received DACA. The remaining eligible population may not have applied for various reasons, including fear of providing information to the government, inability to meet the educational requirements, or disqualification due to criminal history.

2.3 Expected Effects on Employment

DACA could affect employment outcomes through several theoretical channels:

Direct Work Authorization Effect: Most directly, DACA provides legal work authorization through the Employment Authorization Document (EAD), allowing recipients to work in the formal labor market. Prior to DACA, undocumented individuals faced significant barriers to formal employment and were often limited to informal or cash-based work arrangements.

Identification Effect: DACA recipients can obtain state-issued identification, including driver's licenses in most states. This facilitates job search, commuting to work, and verification of employment eligibility.

Reduced Deportation Fear: The protection from deportation may reduce job search frictions and allow individuals to invest in job-specific human capital. Workers protected by DACA may be more willing to pursue better job matches without fear that job changes could increase their visibility to immigration authorities.

Employer Matching: With legal work authorization, DACA recipients can access a broader set of employers, including larger firms and those in regulated industries that conduct employment verification. This improved matching may lead to better employment outcomes.

Human Capital Investment: The two-year renewable protection provided by DACA may encourage recipients and potential recipients to invest in education and job training, which could improve employment prospects.

Based on these mechanisms, we expect DACA eligibility to increase employment rates and, specifically, the probability of full-time employment, which typically indicates more stable and higher-quality employment relationships.

2.4 Prior Literature

Several studies have examined the effects of DACA on various outcomes. Research has generally found positive effects on employment, earnings, educational attainment, and mental health among DACA recipients. However, methodological approaches vary, and estimates differ across studies.

This replication study contributes to this literature by providing an independent estimate using a well-defined research design. The analysis focuses specifically on full-time employment as the outcome variable and uses the age-based discontinuity in eligibility to identify causal effects.

3 Data

3.1 Data Source

The analysis uses data from the American Community Survey (ACS) provided by IPUMS USA. The ACS is a nationally representative survey conducted annually by the U.S. Census Bureau, providing detailed demographic, social, economic, and housing information on approximately 3.5 million households per year.

I use the one-year ACS files from 2006 through 2016. The pre-treatment period includes years 2006–2011, and the post-treatment period includes years 2013–2016. I exclude 2012 because DACA was implemented mid-year (June 15), and the ACS does not identify the month of interview, making it impossible to distinguish observations from before and after DACA implementation within that year.

The ACS is a repeated cross-section rather than a panel dataset. This means that different individuals are surveyed each year, and we cannot track the same individuals over time. The difference-in-differences design relies on comparing average outcomes for different cohorts of individuals who share the same eligibility characteristics.

3.2 Key Variables

3.2.1 Eligibility Determination Variables

The following variables from the ACS are used to determine DACA eligibility:

- **YEAR**: Survey year (2006–2016)
- **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

3.2.2 Outcome Variable

- **UHRSWORK**: Usual hours worked per week

The primary outcome is an indicator for full-time employment, defined as usually working 35 or more hours per week:

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

3.2.3 Control Variables

- **SEX**: Sex (1 = Male, 2 = Female)
- **MARST**: Marital status
- **EDUC**: Educational attainment
- **STATEFIP**: State FIPS code
- **PERWT**: Person weight for survey weighting

3.3 Sample Selection

The sample is restricted based on the following criteria to identify individuals who were DACA-eligible or would have been eligible but for their age:

1. **Hispanic-Mexican ethnicity** (HISPAN = 1): The sample is restricted to individuals who identify as Hispanic-Mexican. This restriction focuses on the population most likely to be affected by DACA, given that the vast majority of DACA applicants were of Mexican origin.

2. **Born in Mexico** (BPL = 200): The sample is further restricted to individuals born in Mexico. Combined with the Hispanic-Mexican ethnicity restriction, this identifies Mexican immigrants rather than later-generation Mexican Americans.

3. **Non-citizen** (CITIZEN = 3): The sample is restricted to individuals who report not being U.S. citizens. This serves as a proxy for undocumented status, as we cannot directly distinguish documented from undocumented non-citizens in the ACS. This likely includes some legal permanent residents or visa holders, which would attenuate our estimates.

4. **Arrived before age 16**: Calculated using year of immigration (YRIMMIG) and birth year (BIRTHYR). Only individuals whose age at immigration was less than 16 are included, consistent with the DACA requirement.

5. **Arrived by 2007**: The sample is restricted to individuals with YRIMMIG $\leq$ 2007 to satisfy the continuous residence requirement that eligible individuals must have resided in the U.S. since June 15, 2007.

6. **Age at DACA implementation**: Age at June 15, 2012 is calculated as 2012 minus birth year, with adjustment for birth quarter. Individuals in birth quarters 3–4 (July–December) are assumed not to have had their birthday yet as of June 15, 2012, so their age is reduced by one year.

Table 1 shows the sample size at each stage of the sample selection process.

Table 1: Sample Construction

Selection Criterion	Observations
Full ACS 2006–2016	33,851,424
Hispanic-Mexican (HISPAN = 1)	2,945,521
Born in Mexico (BPL = 200)	991,261
Non-citizen (CITIZEN = 3)	701,347
Ages 26–35 at DACA implementation	181,229
Arrived before age 16	47,418
Arrived by 2007	47,418
Excluding 2012	43,238

3.4 Treatment and Control Groups

- **Treatment Group**: Individuals who were ages 26–30 at DACA implementation (born approximately 1982–1986, with adjustment for birth quarter). These individuals meet the age requirement for DACA eligibility.

- **Control Group**: Individuals who were ages 31–35 at DACA implementation (born approximately 1977–1981, with adjustment for birth quarter). These individuals meet all DACA criteria except the age requirement—they were too old to qualify for DACA.

The control group provides a counterfactual for what would have happened to the treatment group in the absence of DACA. The key assumption is that, absent the program, the treatment and control groups would have experienced similar trends in full-time employment.

3.5 Summary Statistics

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

Table 2: Summary Statistics by Treatment Status and Period

	Control (Ages 31–35)		Treatment (Ages 26–30)	
	Pre-DACA	Post-DACA	Pre-DACA	Post-DACA
Outcome Variable				
Full-time Employment Rate	0.646	0.614	0.615	0.634
Demographics				
Mean Age (in survey year)	29.9	35.9	24.7	30.7
Proportion Female	0.434	0.452	0.438	0.441
Proportion Married	0.553	0.571	0.414	0.512
Education				
Mean Education Level	4.76	4.66	5.11	5.06
High School or Higher (%)	42.3	40.1	51.2	50.8
Some College or Higher (%)	8.2	7.9	12.1	11.8
Sample Size				
Unweighted N	11,683	6,085	16,694	8,776
Weighted N (thousands)	1,631	845	2,280	1,244

Notes: Pre-DACA period is 2006–2011; Post-DACA period is 2013–2016. Education level is coded using IPUMS EDUC variable where higher values indicate more education. Weighted N uses ACS person weights (PERWT).

The summary statistics reveal several important patterns:

First, the treatment group has a lower baseline full-time employment rate than the control group (61.5% vs. 64.6%). This may reflect age differences, as younger workers generally have lower employment rates, or cohort effects.

Second, the treatment group shows an increase in full-time employment after DACA (from 61.5% to 63.4%), while the control group shows a decrease (from 64.6% to 61.4%). This divergent pattern is consistent with a positive effect of DACA on employment.

Third, the treatment group has slightly higher education levels on average, with about 51% having completed high school or higher compared to 42% in the control group.

Fourth, there are notable differences in marital status, with the control group having higher marriage rates, consistent with their older average age.

4 Empirical Strategy

4.1 Identification Strategy

The primary identification strategy is a difference-in-differences (DiD) design that compares changes in full-time employment for the treatment group (DACA-eligible ages 26–30) relative to the control group (ineligible ages 31–35) before and after DACA implementation.

The DiD approach addresses the fundamental problem of causal inference: we cannot observe the same individual both receiving and not receiving DACA. Instead, we use the control group—individuals who were similar to the treatment group but just above the age cutoff—to approximate what would have happened to the treatment group absent DACA.

4.2 Identifying Assumption

The key identifying assumption is the **parallel trends assumption**: absent DACA, the treatment and control groups would have experienced parallel trends in full-time employment. Formally:

$$E[Y_{it}^0 - Y_{it'}^0 | T_i = 1] = E[Y_{it}^0 - Y_{it'}^0 | T_i = 0]$$

where Y^0 denotes potential outcomes without treatment, T_i indicates treatment group membership, and t' and t are pre- and post-treatment periods.

This assumption cannot be directly tested because we do not observe potential outcomes without treatment for the treatment group in the post-period. However, I provide evidence on its plausibility through:

1. **Pre-trend analysis**: Examining whether treatment and control groups had similar trends before DACA

2. **Event study**: Testing for differential trends year-by-year

3. **Placebo tests**: Estimating effects of a "fake" treatment in the pre-period

4.3 Estimation Equations

The basic DiD model is:

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

where:

- Y_{it} is an indicator for full-time employment
- Treated_i indicates membership in the treatment group (ages 26–30)
- Post_t indicates the post-DACA period (2013–2016)
- $\text{Treated}_i \times \text{Post}_t$ is the DiD interaction term

The coefficient of interest is β_3, which captures the differential change in full-time employment for the treatment group relative to the control group after DACA implementation. Under the parallel trends assumption, β_3 identifies the average treatment effect on the treated (ATT):

$$\beta_3 = E[Y^1 - Y^0 | \text{Treated} = 1, \text{Post} = 1]$$

The preferred specification augments the basic model with demographic controls:

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

where $\mathbf{X}_{it}$ includes indicators for:

- Female (SEX = 2)
- Married (MARST = 1 or 2)
- High school completion or higher (EDUC $\geq$ 6)
- Some college or higher (EDUC $\geq$ 10)

4.4 Event Study Specification

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

$$Y_{it} = \alpha + \sum_{k \neq 2011} \delta_k (\text{Treated}_i \times \mathbf{1}[\text{Year}_t = k]) + \lambda_k \mathbf{1}[\text{Year}_t = k] + \mathbf{X}_{it}' \gamma + \varepsilon_{it} \tag{3}$$

where the year 2011 (immediately before DACA) serves as the reference period. The coefficients δ_k for $k < 2012$ test for differential pre-trends, while δ_k for $k > 2012$ capture the dynamic treatment effects.

Under the parallel trends assumption, we expect:

- $\delta_k \approx 0$ for $k < 2012$ (no pre-trends)
- $\delta_k > 0$ for $k > 2012$ (positive treatment effects)

4.5 Estimation Details

All models are estimated using weighted least squares (WLS) with ACS person weights (PERWT) to ensure nationally representative estimates. The person weights adjust for differential sampling probabilities and non-response.

Standard errors are clustered at the state level to account for potential correlation in outcomes within states. This clustering is appropriate because DACA implementation was a federal policy, but state-level policies and labor market conditions may affect outcomes within states.

The linear probability model (LPM) is used as the primary specification because it provides easily interpretable coefficients and is standard in the DiD literature. Logistic regression is used as a robustness check.

5 Results

5.1 Main Results

Table 3 presents the main difference-in-differences estimates across various specifications.

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

	(1) Basic	(2) Weighted	(3) Controls	(4) Year FE	(5) Clustered
Treated × Post	0.0516***	0.0590***	0.0466***	0.0449***	0.0466***
	(0.0100)	(0.0098)	(0.0090)	(0.0090)	(0.0090)
Treated	−0.0314***	−0.0426***	−0.0416***	−0.0400***	−0.0416***
	(0.0058)	(0.0058)	(0.0053)	(0.0053)	(0.0050)
Post	−0.0324***	−0.0299***	−0.0159**	—	−0.0159
	(0.0076)	(0.0075)	(0.0069)	—	(0.0104)
Female	—	—	−0.3734***	−0.3728***	−0.3734***
			(0.0043)	(0.0043)	(0.0136)
Married	—	—	−0.0148***	−0.0127***	−0.0148***
			(0.0043)	(0.0043)	(0.0051)
High School+	—	—	0.0545***	0.0535***	0.0545***
			(0.0043)	(0.0043)	(0.0066)
Some College+	—	—	0.0841***	0.0863***	0.0841***
			(0.0124)	(0.0124)	(0.0121)
Survey Weights	No	Yes	Yes	Yes	Yes
Year Fixed Effects	No	No	No	Yes	No
Clustered SE	No	No	No	No	Yes
Observations	43,238	43,238	43,238	43,238	43,238
R-squared	0.001	0.001	0.154	0.158	0.154

Notes: * p<0.10, ** p<0.05, *** p<0.01. Standard errors in parentheses. Column (5) reports standard errors clustered at the state level. The outcome variable is an indicator for full-time employment (working 35+ hours per week).

The main finding is that DACA eligibility is associated with a statistically significant increase in full-time employment. The preferred specification (Column 5) indicates that DACA eligibility increased the probability of full-time employment by **4.66 percentage points** (SE = 0.90, p < 0.001). The 95% confidence interval is [2.89, 6.43] percentage points.

The effect is robust across specifications:

- Column (1): Basic unweighted DiD yields 5.16 pp
- Column (2): Adding survey weights increases to 5.90 pp
- Column (3): Adding demographic controls reduces to 4.66 pp
- Column (4): Adding year fixed effects yields 4.49 pp

- Column (5): Clustering standard errors at state level (preferred) yields 4.66 pp with SE = 0.90

The positive effect of DACA on employment is consistent with the theoretical expectation that legal work authorization improves labor market outcomes.

5.2 Simple Difference-in-Differences Calculation

The DiD estimate can be computed directly from group means:

Table 4: Simple Difference-in-Differences Calculation

	Pre-DACA	Post-DACA	Difference
Treatment (Ages 26–30)	0.6147	0.6339	+0.0192
Control (Ages 31–35)	0.6461	0.6136	−0.0324
Difference-in-Differences			**0.0516**

The treatment group experienced a 1.92 percentage point increase in full-time employment after DACA, while the control group experienced a 3.24 percentage point decrease. The DiD estimate of 5.16 percentage points represents the differential improvement for the treatment group.

The control group's decline in full-time employment may reflect general labor market trends affecting this population, including the slow recovery from the Great Recession and secular trends in employment for less-educated workers. The DiD approach accounts for these common trends by differencing them out.

5.3 Covariate Effects

The demographic control variables have expected effects:

- **Female**: Women have a 37.3 percentage point lower probability of full-time employment than men. This large gender gap likely reflects both labor supply differences (women may choose part-time work for caregiving reasons) and labor demand factors.
- **Married**: Being married is associated with a 1.5 percentage point *lower* probability of full-time employment, which is somewhat counterintuitive. This may reflect compositional differences or the effect of spousal income on labor supply.
- **Education**: Both high school completion (+5.5 pp) and some college (+8.4 pp) are positively associated with full-time employment, consistent with human capital theory.

5.4 Event Study Results

Table 5 presents the event study estimates.

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

Year	Coefficient	Standard Error	p-value
Pre-DACA Period			
2006	0.0069	0.0272	0.799
2007	−0.0314**	0.0160	0.049
2008	0.0080	0.0207	0.700
2009	−0.0084	0.0221	0.704
2010	−0.0134	0.0246	0.586
2011 (Reference)	0	—	—
Post-DACA Period			
2013	0.0348	0.0227	0.126
2014	0.0356**	0.0170	0.036
2015	0.0206	0.0177	0.244
2016	0.0652***	0.0208	0.002

Notes: * p<0.10, ** p<0.05, *** p<0.01. Reference year is 2011. Standard errors clustered at the state level. All models include demographic controls and survey weights.

5.4.1 Pre-Trends Analysis

The event study results provide mixed evidence on the parallel trends assumption. Most pre-period coefficients are small and statistically insignificant:

- 2006: +0.69 pp (p = 0.80)
- 2008: +0.80 pp (p = 0.70)
- 2009: −0.84 pp (p = 0.70)
- 2010: −1.34 pp (p = 0.59)

However, the coefficient for 2007 is negative and statistically significant (−3.14 pp, p = 0.049). This raises some concern about pre-existing differential trends. The 2007 coefficient suggests that the treatment group had lower employment growth than the control group in that year relative to 2011.

However, several factors suggest this may not invalidate the analysis:

1. The 2007 coefficient is an outlier—other pre-period coefficients are small and insignificant

2. The pattern is not monotonic, which would be expected if there were systematic pre-trends

3. The placebo test (discussed below) shows no significant effect

5.4.2 Post-DACA Effects

The post-DACA coefficients show a general pattern of positive effects, with estimates ranging from 2.1 to 6.5 percentage points:

- 2013: +3.48 pp (p = 0.13)
- 2014: +3.56 pp (p = 0.04)**
- 2015: +2.06 pp (p = 0.24)
- 2016: +6.52 pp (p = 0.002)***

The largest and most precisely estimated effect is in 2016 (6.52 percentage points, $p < 0.01$). This pattern suggests that DACA's effects may have strengthened over time. This is plausible given that:

1. It takes time for eligible individuals to apply for and receive DACA

2. Labor market adjustment may be gradual as workers find better matches

3. The stock of DACA recipients grew over time as more people applied

4. Renewals began in 2014, potentially reinforcing effects

5.5 Robustness Checks

Table 6 presents results from several robustness checks.

Table 6: Robustness Checks

Specification	Estimate	SE	p-value	N
Main Estimate (LPM)	0.0466	0.0090	<0.001	43,238
Logit (Marginal Effect)	0.0514	0.0105	<0.001	43,238
Narrower Bandwidth (27–29 vs. 32–34)	0.0374	0.0187	0.045	25,606
Placebo Test (2009 as treatment)	−0.0028	0.0103	0.785	28,377
Males Only	0.0367	0.0096	<0.001	24,243
Females Only	0.0505	0.0157	0.001	18,995

Notes: All specifications include demographic controls and use survey weights with standard errors clustered at the state level. LPM = Linear Probability Model.

5.5.1 Logit Model

Estimating the model using logistic regression and computing marginal effects at the mean yields an estimate of 5.14 percentage points (SE = 1.05), very close to the linear probability model estimate of 4.66 percentage points. This suggests that the LPM provides a good approximation to the underlying nonlinear model.

5.5.2 Narrower Bandwidth

Restricting the sample to ages 27–29 (treatment) versus 32–34 (control) reduces the age gap between groups and may reduce potential bias from individuals far from the eligibility cutoff. This specification yields an estimate of 3.74 percentage points (SE = 1.87, p = 0.045).

The narrower bandwidth estimate is smaller than the main specification but remains statistically significant and positive. The larger standard error reflects the reduced sample size (25,606 vs. 43,238 observations).

5.5.3 Placebo Test

Using 2009 as a placebo treatment year (within the pre-DACA period) tests whether the main results could be driven by pre-existing differential trends. If the parallel trends assumption holds, we should see no effect of the "fake" treatment.

The placebo estimate is -0.28 percentage points (SE = 1.03, p = 0.785), which is very small and statistically insignificant. This provides reassurance that the main results are not driven by pre-existing differential trends.

5.5.4 Effects by Gender

Estimating separate models by gender reveals that the effect is positive and statistically significant for both:

- Males: 3.67 pp (SE = 0.96, $p < 0.001$, N = 24,243)
- Females: 5.05 pp (SE = 1.57, p = 0.001, N = 18,995)

The point estimate is larger for females (5.05 pp vs. 3.67 pp), though the difference is not statistically significant given the standard errors. The larger effect for women could reflect that DACA had a greater impact on women's labor force participation, possibly by enabling formal sector employment that was previously inaccessible.

6 Discussion

6.1 Interpretation of Results

The main finding is that DACA eligibility increased full-time employment by approximately 4.7 percentage points among the eligible population. This represents a meaningful improvement in labor market outcomes.

To put this effect in context:

- Relative to the pre-DACA baseline rate of 61.5% for the treatment group, a 4.7 pp increase represents approximately a **7.5% relative increase** in full-time employment
- The effect is approximately 10% of the gender gap in full-time employment (women are 37 pp less likely to work full-time)
- The effect is comparable to the return to high school completion (+5.5 pp)

6.2 Mechanisms

Several mechanisms may explain the positive effect of DACA on full-time employment:

Direct Work Authorization: DACA provides legal work authorization through the Employment Authorization Document. This allows recipients to work legally in the formal sector, access jobs that require employment verification, and work for larger employers that conduct I-9 verification.

Improved Job Matching: With legal status, DACA recipients can search more broadly for jobs, negotiate for better positions, and change jobs without fear of attracting attention from immigration authorities. This improved matching process may lead to more full-time positions.

Employer Demand: Employers may be more willing to hire and invest in workers with legal status. Full-time positions often come with benefits and training investments that employers may be reluctant to provide to workers with precarious immigration status.

Labor Supply Responses: DACA may increase labor supply by reducing the costs and risks of working. Workers protected by DACA may be willing to accept more hours and may have access to transportation (via driver's licenses) that enables them to take jobs further from home.

6.3 Limitations

Several limitations should be acknowledged:

Parallel Trends: The identifying assumption of parallel trends cannot be directly verified. While the placebo test and most pre-trend coefficients are reassuring, the significant 2007 coefficient raises some concern. However, this appears to be an isolated year effect rather than a systematic trend.

Measurement of Eligibility: The use of non-citizen status as a proxy for undocumented status means the sample likely includes some legal permanent residents or visa holders who would not be DACA-eligible. This measurement error would bias the estimates toward zero (attenuation bias), suggesting that the true effect on the actually eligible population may be larger.

Intent-to-Treat: The estimates capture an intent-to-treat (ITT) effect based on eligibility rather than actual DACA receipt. Not all eligible individuals applied for or received DACA. If approximately 60–70% of eligible individuals received DACA, the effect on actual recipients (the treatment effect on the treated, or TOT) would be approximately 1.4–1.7 times larger than the ITT estimate, or roughly 6.5–8 percentage points.

Intensive vs. Extensive Margin: The analysis cannot distinguish between intensive margin effects (more hours for those already working) and extensive margin effects (employment entry). The outcome variable combines these margins.

General Equilibrium Effects: The analysis assumes partial equilibrium—that DACA did not affect the labor market outcomes of the control group. If DACA increased labor supply, it could have depressed wages or employment for similar workers, which would bias the DiD estimates.

6.4 External Validity

The findings pertain specifically to Hispanic-Mexican, Mexican-born individuals in the United States who met the DACA eligibility criteria. Generalization to other immigrant populations or policy contexts should be done cautiously.

However, the core finding—that legal work authorization improves employment outcomes—is likely to have broader applicability. Similar effects might be expected from other policies that provide work authorization to undocumented immigrants.

7 Conclusion

This study provides evidence that DACA eligibility increased full-time employment among Hispanic-Mexican, Mexican-born individuals in the United States. Using a difference-in-differences design comparing individuals just above and below the age eligibility cutoff, I find

that DACA increased full-time employment by approximately 4.7 percentage points (95% CI: 2.9–6.4 pp). This effect is statistically significant and robust to various specification checks.

The finding that legal work authorization improves employment outcomes has important policy implications. It suggests that pathways to legal status may benefit both immigrants and the broader economy by facilitating labor market participation. The results also highlight the economic stakes of ongoing debates about the future of the DACA program.

From a research perspective, the study demonstrates the value of the difference-in-differences design for evaluating immigration policies with clear eligibility cutoffs. Future research could extend this analysis to examine other outcomes (wages, occupational upgrading, poverty) or examine heterogeneity in treatment effects across subgroups.

A Variable Definitions

Table 7: Variable Definitions and IPUMS Codes

Variable	IPUMS Name	Definition/Values
Survey Year	YEAR	2006–2016
Birth Year	BIRTHYR	Year of birth
Birth Quarter	BIRTHQTR	1=Jan-Mar, 2=Apr-Jun, 3=Jul-Sep, 4=Oct-Dec
Hispanic Origin	HISPAN	1 = Mexican
Birthplace	BPL	200 = Mexico
Citizenship	CITIZEN	3 = Not a citizen
Year of Immigration	YRIMMIG	Year first entered U.S.
Usual Hours Worked	UHRSWORK	Hours usually worked per week
Sex	SEX	1 = Male, 2 = Female
Marital Status	MARST	1–2 = Married
Education	EDUC	General education level
Person Weight	PERWT	Survey weight
State	STATEFIP	State FIPS code

B Detailed Sample Construction

The final analysis sample was constructed through the following sequential restrictions:

1. **Full ACS Sample**: Start with the complete ACS samples from 2006–2016, comprising 33,851,424 individual observations.

2. **Hispanic-Mexican Ethnicity**: Restrict to individuals coded as HISPAN = 1 (Mexican origin). This reduces the sample to 2,945,521 observations.

3. **Born in Mexico**: Further restrict to individuals born in Mexico (BPL = 200). This reduces the sample to 991,261 observations.

4. **Non-Citizen**: Restrict to individuals who are not U.S. citizens (CITIZEN = 3). This serves as a proxy for undocumented status. Sample size: 701,347 observations.

5. **Treatment/Control Age Groups**: Keep only individuals who were ages 26–35 at the time of DACA implementation (June 15, 2012). Age is calculated as 2012 minus birth year, with adjustment for birth quarter (individuals born in Q3–Q4 are assigned an age one year lower). Sample size: 181,229 observations.

6. **Valid Immigration Year**: Require a valid (non-zero) value for year of immigration. Sample size: 181,229 observations (no change, all had valid values).

7. **Arrived Before Age 16**: Restrict to individuals who arrived before their 16th birthday, calculated as YRIMMIG − BIRTHYR < 16. Sample size: 47,418 observations.

8. **Arrived by 2007**: Restrict to individuals who arrived by 2007 (YRIMMIG ≤ 2007) to satisfy the continuous residence requirement. Sample size: 47,418 observations (no change).

9. **Exclude 2012**: Remove observations from 2012 because DACA was implemented mid-year and we cannot distinguish pre/post observations. Final sample size: 43,238 observations.

C Full Regression Output

C.1 Preferred Specification (Model 5)

Dependent Variable: Full-time Employment (35+ hours/week)
Method: Weighted Least Squares with Clustered Standard Errors

	Coefficient	Std. Error	z	P>|z|	[95% CI]
Intercept	0.8040	0.0116	69.46	0.000	[0.781, 0.827]
Treated	-0.0416	0.0050	-8.32	0.000	[-0.051,-0.032]
Post	-0.0159	0.0104	-1.53	0.125	[-0.036, 0.004]
Treated x Post	0.0466	0.0090	5.15	0.000	[0.029, 0.064]
Female	-0.3734	0.0136	-27.47	0.000	[-0.400,-0.347]
Married	-0.0148	0.0051	-2.92	0.004	[-0.025,-0.005]
High School+	0.0545	0.0066	8.25	0.000	[0.042, 0.067]
Some College+	0.0841	0.0121	6.94	0.000	[0.060, 0.108]
Observations:	43,238				

```
R-squared:           0.154
Clusters (States):   51
Weights:             ACS Person Weights (PERWT)
```

D State-Level Variation

The analysis sample includes individuals from all 50 states plus the District of Columbia. The largest concentrations of the sample population are in:

- California (36% of sample)
- Texas (22% of sample)
- Illinois (6% of sample)
- Arizona (5% of sample)
- Florida (3% of sample)

Standard errors are clustered at the state level to account for potential correlation in outcomes within states due to state-specific labor market conditions and policies.

References

- IPUMS USA, University of Minnesota, www.ipums.org
- U.S. Citizenship and Immigration Services, DACA Program Statistics
- American Community Survey, U.S. Census Bureau