

**The Effect of DACA Eligibility on Full-Time  
Employment**

**Among Mexican-Born Hispanic Immigrants:**

**A Difference-in-Differences Analysis**

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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 Mexican-born Hispanic immigrants in the United States. Using a difference-in-differences design that compares individuals ages 26–30 at the time of DACA implementation (treatment group) to those ages 31–35 (control group), I analyze data from the American Community Survey (ACS) for years 2006–2016, excluding 2012. The analysis finds that DACA eligibility is associated with a statistically significant 2.28 percentage point increase in the probability of full-time employment (defined as usually working 35 or more hours per week). This effect is robust across multiple model specifications including year fixed effects, state fixed effects, and demographic controls. The results suggest that DACA’s provision of legal work authorization increased formal labor market participation among eligible individuals. Heterogeneity analysis reveals that the effect is concentrated among males, with no statistically significant effect found for females.

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# 1 Introduction

The Deferred Action for Childhood Arrivals (DACA) program, implemented on June 15, 2012, represents one of the most significant immigration policy changes in recent U.S. history. The program provided eligible undocumented immigrants who arrived in the United States as children with temporary relief from deportation and authorization to work legally. Understanding the labor market effects of this program is crucial for informing immigration policy debates and assessing the economic integration of immigrant populations.

This replication study addresses the following research question: *Among ethnically Hispanic-Mexican Mexican-born people 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?* Full-time employment is defined as usually working 35 hours per week or more.

The identification strategy relies on a natural experiment created by the age eligibility cutoff for DACA. The program required applicants to have been under 31 years of age as of June 15, 2012. This creates a comparison between individuals just below the age cutoff (who were eligible) and those just above (who were ineligible despite otherwise meeting all requirements). Specifically, I compare individuals who were ages 26–30 at the time of implementation (treatment group) to those who were ages 31–35 (control group).

The analysis uses data from the American Community Survey (ACS) one-year samples from 2006 through 2016, excluding the year 2012 (when DACA was implemented in June, making it impossible to distinguish pre- and post-treatment observations within that year). The sample is restricted to individuals who are Hispanic-Mexican, born in Mexico, and non-citizens—the last criterion serving as a proxy for undocumented status, which cannot be directly observed in the data.

The main finding is that DACA eligibility increased the probability of full-time employment by approximately 2.28 percentage points among the treated population. This effect is statistically significant at conventional levels and robust to various model specifications.

## 2 Background

### 2.1 The DACA Program

DACA was announced by the Obama administration on June 15, 2012, and applications began being accepted on August 15, 2012. The program offered eligible individuals a two-year period of deferred action on deportation and the ability to apply for work authorization. Recipients could apply to renew their status for additional two-year periods.

Eligibility requirements for DACA included:

- Arrived in the United States before their 16th birthday
- Had not yet turned 31 as of June 15, 2012
- Lived continuously in the U.S. since June 15, 2007
- Were present in the U.S. on June 15, 2012
- Did not have lawful immigration status on June 15, 2012

In the first four years of the program, nearly 900,000 initial applications were received, with approximately 90% approval rates. The vast majority of DACA recipients have been from Mexico, reflecting the demographics of unauthorized immigration to the United States.

### 2.2 Theoretical Mechanisms

DACA could affect employment outcomes through several channels. First, and most directly, the program provided legal work authorization, allowing recipients to seek formal employment without fear of employer sanctions. Prior to DACA, undocumented immigrants faced significant barriers to formal employment and were often relegated to informal, lower-paying jobs.

Second, DACA allowed recipients to obtain drivers' licenses and state identification in many states, facilitating job search and commuting to work. Third, the temporary protection

from deportation may have encouraged recipients to invest in human capital and pursue longer-term employment opportunities.

However, the effect of DACA on employment is theoretically ambiguous. Many undocumented immigrants were already employed, albeit often informally. DACA might have shifted employment from informal to formal sectors rather than increasing overall employment. Additionally, the temporary nature of DACA status (requiring renewal every two years) and ongoing policy uncertainty may have limited its 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 large, nationally representative survey conducted by the U.S. Census Bureau that collects detailed demographic, social, and economic information on the U.S. population. I use the one-year ACS samples from 2006 through 2016.

The raw data file contains 33,851,424 observations across 54 variables. After applying sample restrictions, the final analysis sample contains 162,283 observations representing an estimated 23.6 million person-years (weighted).

### 3.2 Sample Construction

The analysis sample is constructed by applying the following restrictions:

1. **Hispanic-Mexican ethnicity:** Individuals must have HISPAN = 1 (Mexican Hispanic origin). This reduces the sample from 33,851,424 to 2,945,521 observations.
2. **Born in Mexico:** Individuals must have BPL = 200 (birthplace is Mexico). This reduces the sample to 991,261 observations.

3. **Non-citizen status:** Individuals must have CITIZEN = 3 (not a citizen). This serves as a proxy for undocumented status, though it includes some documented non-citizens as well. This reduces the sample to 701,347 observations.
4. **Age group restriction:** Individuals must have birth years between 1977 and 1986, corresponding to ages 26–35 on June 15, 2012. This reduces the sample to 178,376 observations.
5. **Exclude 2012:** The year 2012 is excluded because DACA was implemented mid-year, making it impossible to distinguish pre- and post-treatment observations. This yields the final sample of 162,283 observations.

Table 1 summarizes the sample construction process.

Table 1: Sample Construction

Step	Observations	Reduction
Full ACS data (2006–2016)	33,851,424	—
Hispanic-Mexican (HISPAN = 1)	2,945,521	30,905,903
Born in Mexico (BPL = 200)	991,261	1,954,260
Non-citizen (CITIZEN = 3)	701,347	289,914
Birth years 1977–1986	178,376	522,971
Exclude year 2012	162,283	16,093

Notes: Table shows sequential sample restrictions applied to construct the analysis sample.

### 3.3 Variable Definitions

#### 3.3.1 Treatment and Control Groups

The treatment group consists of individuals born between 1982 and 1986, who were ages 26–30 on June 15, 2012, and thus eligible for DACA. The control group consists of individuals

born between 1977 and 1981, who were ages 31–35 on June 15, 2012, and thus ineligible due to the age cutoff despite otherwise meeting eligibility criteria.

### 3.3.2 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 ( $\text{UHRSWORK} \geq 35$ ) and 0 otherwise. As a robustness check, I also examine employment status ( $\text{EMPSTAT} = 1$ ).

### 3.3.3 Covariates

Demographic controls include:

- Female: Binary indicator for female sex ( $\text{SEX} = 2$ )
- Married: Binary indicator for married status ( $\text{MARST} \in \{1, 2\}$ )

Fixed effects include:

- Year fixed effects: Indicators for each survey year
- State fixed effects: Indicators for each state ( $\text{STATEFIP}$ )

### 3.3.4 Survey Weights

All analyses use the IPUMS person weights ( $\text{PERWT}$ ) to produce nationally representative estimates.

## 4 Methodology

### 4.1 Identification Strategy

The identification strategy relies on a difference-in-differences (DiD) design that exploits the age-based eligibility cutoff for DACA. The key identifying assumption is that, in the absence

of DACA, trends in full-time employment would have been parallel between the treatment and control groups.

This assumption is plausible because individuals just above and just below the age cutoff are likely to be similar in unobservable characteristics that affect employment. The five-year birth cohort window (26–30 vs. 31–35) balances the tradeoff between having enough observations for statistical power and maintaining comparability between groups.

## 4.2 Estimation

The main estimating equation is:

$$Y_{ist} = \alpha + \beta_1 \text{Treat}_i + \beta_2 \text{Post}_t + \beta_3 (\text{Treat}_i \times \text{Post}_t) + X'_i \gamma + \delta_t + \theta_s + \varepsilon_{ist} \quad (1)$$

where:

- $Y_{ist}$  is the full-time employment indicator for individual  $i$  in state  $s$  in year  $t$
- $\text{Treat}_i$  is a binary indicator equal to 1 for the treatment group (birth years 1982–1986)
- $\text{Post}_t$  is a binary indicator equal to 1 for post-treatment years (2013–2016)
- $X_i$  is a vector of demographic controls
- $\delta_t$  represents year fixed effects
- $\theta_s$  represents state fixed effects
- $\varepsilon_{ist}$  is the error term

The coefficient of interest is  $\beta_3$ , which captures the differential change in full-time employment for the treatment group relative to the control group after DACA implementation.

I estimate several specifications with progressively more controls:

1. Basic DiD with only treatment, post, and interaction terms
2. DiD with year fixed effects
3. DiD with year fixed effects and demographic controls
4. DiD with year and state fixed effects
5. Full specification with year fixed effects, state fixed effects, and demographic controls

All models are estimated using weighted least squares (WLS) with person weights (PERWT).

### 4.3 Event Study

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

$$Y_{ist} = \alpha + \sum_{k \neq 2011} \beta_k (\text{Treat}_i \times \mathbf{1}[\text{Year}_t = k]) + \delta_t + \varepsilon_{ist} \quad (2)$$

where  $\mathbf{1}[\text{Year}_t = k]$  is an indicator for year  $k$  and 2011 serves as the reference year. The coefficients  $\beta_k$  trace out the year-by-year treatment effects relative to the year before DACA implementation.

## 5 Results

### 5.1 Descriptive Statistics

Table 2 presents descriptive statistics for the analysis sample by treatment group and time period.

Table 2: Descriptive Statistics by Group and Period

	Control (Ages 31–35)		Treatment (Ages 26–30)	
	Pre	Post	Pre	Post
Full-time employment rate	0.6426	0.6108	0.6309	0.6299
Employment rate	0.6961	0.6983	0.6863	0.7118
N (unweighted)	54,133	32,837	46,371	28,942
N (weighted)	7,975,867	4,753,661	6,603,659	4,273,299

Notes: Pre-treatment period is 2006–2011; post-treatment period is 2013–2016.

Full-time employment is defined as usually working 35+ hours per week. All statistics use person weights (PERWT).

The raw data show interesting patterns. In the pre-treatment period, the control group had a slightly higher full-time employment rate (64.26%) compared to the treatment group (63.09%). In the post-treatment period, the control group's full-time employment rate declined to 61.08%, while the treatment group's rate remained essentially unchanged at 62.99%.

The simple difference-in-differences calculation yields:

$$\begin{aligned}
 \text{DiD} &= (Y_{\text{treat},\text{post}} - Y_{\text{treat},\text{pre}}) - (Y_{\text{control},\text{post}} - Y_{\text{control},\text{pre}}) \\
 &= (0.6299 - 0.6309) - (0.6108 - 0.6426) \\
 &= -0.0010 - (-0.0318) \\
 &= 0.0308
 \end{aligned}$$

This simple calculation suggests that DACA eligibility increased full-time employment by approximately 3.08 percentage points.

## 5.2 Main Results

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

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

	(1)	(2)	(3)	(4)	(5)
	Basic	Year FE	Year FE	Year +	Full
	DiD		+ Demo	State FE	Spec
Treat × Post	0.0308*** (0.0049)	0.0285*** (0.0049)	0.0231*** (0.0043)	0.0283*** (0.0049)	0.0228*** (0.0043)
95% CI	[0.021, 0.040]	[0.019, 0.038]	[0.015, 0.031]	[0.019, 0.038]	[0.014, 0.031]
Year FE	No	Yes	Yes	Yes	Yes
State FE	No	No	No	Yes	Yes
Demographics	No	No	Yes	No	Yes
Observations	162,283	162,283	162,283	162,283	162,283

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Standard errors in parentheses. All models estimated using WLS with person weights. Demographics include female and married indicators. The dependent variable is full-time employment (working 35+ hours per week).

The results are consistent across specifications. The basic DiD estimate (Column 1) shows a 3.08 percentage point increase in full-time employment, statistically significant at the 1% level. Adding year fixed effects (Column 2) slightly reduces the estimate to 2.85 percentage points. The preferred specification (Column 5), which includes year fixed effects, state fixed effects, and demographic controls, yields an estimate of 2.28 percentage points with a standard error of 0.43 percentage points. The 95% confidence interval is [1.44, 3.12]

percentage points.

### 5.3 Event Study Results

Figure ?? presents the event study estimates, showing the year-by-year treatment effects relative to 2011 (the year before DACA implementation).

Table 4: Event Study Estimates

Year	Coefficient	Std. Error	95% CI Lower	95% CI Upper
2006	-0.0283***	0.0106	-0.0492	-0.0075
2007	-0.0146	0.0105	-0.0352	0.0060
2008	-0.0099	0.0106	-0.0307	0.0109
2009	0.0024	0.0107	-0.0187	0.0234
2010	0.0003	0.0106	-0.0205	0.0211
2011	0.0000	—	—	—
2013	0.0205*	0.0107	-0.0004	0.0415
2014	0.0245**	0.0108	0.0034	0.0456
2015	0.0125	0.0108	-0.0087	0.0337
2016	0.0228**	0.0109	0.0015	0.0442

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Reference year is 2011. Estimates from regression including treatment indicator, year-treatment interactions, and year fixed effects.

The event study results provide support for the parallel trends assumption. In the years immediately preceding DACA implementation (2009–2011), the treatment-control differences are small and statistically insignificant, suggesting that the two groups were on similar trajectories before the policy change.

The coefficient for 2006 is statistically significant and negative, suggesting some diver-

gence in the earlier pre-treatment period. However, the convergence of trends from 2009–2011 suggests this early divergence may be due to cohort-specific factors rather than a violation of parallel trends in the period immediately before treatment.

After DACA implementation, the coefficients become positive, with statistically significant effects in 2014 and 2016. The somewhat variable year-to-year effects in the post-period may reflect the rolling nature of DACA implementation (as applications were processed over time) and annual fluctuations in the data.

## 5.4 Robustness Checks

### 5.4.1 Alternative Outcome: Employment

Table 5 presents results using employment (any work hours) as an alternative outcome.

Table 5: Robustness Check: Alternative Outcome

	Full-Time Employment (35+ hours)	Employment (Any hours)
Treat × Post	0.0283*** (0.0049)	0.0228*** (0.0047)
Year FE	Yes	Yes
State FE	Yes	Yes
Observations	162,283	162,283

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Standard errors in parentheses. Models include year and state fixed effects.

The effect on overall employment (2.28 percentage points) is similar in magnitude to the effect on full-time employment, suggesting that DACA increased both extensive and

intensive margin labor supply.

#### 5.4.2 Heterogeneity by Sex

Table 6 presents results separately for males and females.

Table 6: Heterogeneity by Sex

	Males	Females
Treat × Post	0.0343*** (0.0051)	-0.0068 (0.0073)
Year FE	Yes	Yes

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Standard errors in parentheses.

There is substantial heterogeneity by sex. The effect for males is positive and highly statistically significant (3.43 percentage points,  $p < 0.001$ ), while the effect for females is small, negative, and not statistically significant ( $-0.68$  percentage points,  $p = 0.35$ ). This pattern may reflect gender differences in labor force participation patterns and the types of jobs affected by work authorization.

## 6 Discussion

### 6.1 Interpretation of Results

The main finding is that DACA eligibility increased full-time employment by approximately 2.28 percentage points among Mexican-born Hispanic non-citizens. This represents a meaningful effect: relative to the pre-treatment mean full-time employment rate of approximately

63% for the treatment group, the effect represents roughly a 3.6% increase.

The positive effect is consistent with the theoretical expectation that legal work authorization would facilitate formal labor market participation. Before DACA, undocumented immigrants faced barriers to formal employment due to employer sanctions and the inability to provide work authorization documents. DACA removed these barriers for eligible individuals, allowing them to compete for formal sector jobs.

The finding that effects are concentrated among males is noteworthy. This may reflect several factors:

- Men have higher baseline labor force participation rates in this population
- The types of jobs most affected by work authorization (e.g., formal sector jobs requiring documentation) may employ more men
- Women's employment decisions may be more strongly influenced by childcare and family responsibilities

## 6.2 Limitations

Several limitations should be noted:

**Proxy for undocumented status:** The analysis uses non-citizen status as a proxy for being undocumented, which is imperfect. The control group may include some documented non-citizens who were not eligible for DACA but whose employment was unaffected by the policy. This would tend to bias the estimates toward zero, suggesting the true effect may be larger.

**Age-based selection:** The treatment and control groups differ in age, which could be correlated with employment outcomes for reasons unrelated to DACA. The parallel trends assumption requires that age-related changes in employment would have been similar between groups in the absence of DACA. The event study results support this assumption for the years immediately before implementation.

**Other DACA requirements:** The analysis cannot fully verify that individuals met all DACA requirements (e.g., continuous residence, arrival before age 16). This measurement error in treatment assignment likely biases results toward zero.

**General equilibrium effects:** The analysis estimates partial equilibrium effects and does not account for potential spillovers to non-eligible workers or broader labor market effects.

### 6.3 Comparison with Prior Literature

The estimated effect size is broadly consistent with prior research on DACA’s labor market effects, though direct comparisons are difficult due to differences in sample definitions and outcome measures. The finding that effects are larger for men than women is consistent with patterns observed in other studies of immigrant labor market outcomes.

## 7 Conclusion

This study provides evidence that DACA eligibility increased full-time employment among Mexican-born Hispanic immigrants in the United States. Using a difference-in-differences design that compares individuals just above and below the age eligibility cutoff, I find that DACA eligibility is associated with a 2.28 percentage point increase in the probability of full-time employment.

The results are robust across multiple specifications including year fixed effects, state fixed effects, and demographic controls. Event study analysis supports the parallel trends assumption, with treatment and control groups following similar trajectories in the years immediately before DACA implementation.

The findings suggest that DACA’s provision of legal work authorization had meaningful effects on labor market outcomes for eligible individuals. However, the effects are heterogeneous, with significant positive effects for males but no detectable effect for females.

Future research should investigate the mechanisms underlying this heterogeneity and the longer-term effects of DACA on economic outcomes.

## References

- IPUMS USA, University of Minnesota, [www.ipums.org](http://www.ipums.org)
- U.S. Citizenship and Immigration Services. Deferred Action for Childhood Arrivals (DACA).

## A Appendix: Variable Definitions

Table 7: Variable Definitions from IPUMS ACS

Variable	Definition
YEAR	Census/survey year
PERWT	Person weight for nationally representative estimates
HISPAN	Hispanic origin (1 = Mexican)
BPL	Birthplace (200 = Mexico)
CITIZEN	Citizenship status (3 = Not a citizen)
BIRTHYR	Year of birth
BIRTHQTR	Quarter of birth
SEX	Sex (1 = Male, 2 = Female)
MARST	Marital status (1,2 = Married)
EMPSTAT	Employment status (1 = Employed)
UHRSWORK	Usual hours worked per week
STATEFIP	State FIPS code

## B Appendix: Sample Size by Year

Table 8: Sample Size by Year

Year	Unweighted N	Weighted N
2006	16,706	2,434,860
2007	17,095	2,510,834
2008	16,290	2,423,331
2009	16,408	2,374,170
2010	17,140	2,444,017
2011	16,865	2,392,314
2013	15,888	2,336,612
2014	15,734	2,284,527
2015	15,302	2,232,031
2016	14,855	2,173,790
Total	162,283	23,606,486

## C Appendix: Full Regression Output

Table 9: Full Regression Results: Model 1 (Basic DiD)

Variable	Coefficient	Std. Error	t-statistic	p-value
Intercept	0.6426	0.0021	311.85	0.000
treat	-0.0117	0.0031	-3.83	0.000
post	-0.0318	0.0034	-9.43	0.000
treat × post	0.0308	0.0049	6.23	0.000

## D Appendix: Summary of Key Findings

Table 10: Summary of Preferred Estimate

Statistic	Value
Point estimate	0.0228
Standard error	0.0043
95% Confidence interval	[0.0144, 0.0312]
t-statistic	5.33
p-value	<0.001
Sample size (unweighted)	162,283
Sample size (weighted)	23,606,486