

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

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Abstract

This study estimates the causal impact of eligibility for the Deferred Action for Childhood Arrivals (DACA) program on full-time employment among Hispanic-Mexican, Mexican-born non-citizens in the United States. Using American Community Survey data from 2006–2016 and a difference-in-differences identification strategy that exploits variation in age at arrival, I find that DACA eligibility increased the probability of full-time employment by approximately 3.4 percentage points ($SE = 0.004$, $p < 0.001$). This effect is robust to alternative specifications and is consistent across demographic subgroups. Event study analysis supports the parallel trends assumption, with no significant pre-treatment differential trends and clear post-treatment effects emerging in 2013 and strengthening through 2016. These findings suggest that DACA’s work authorization provisions had meaningful positive effects on labor market outcomes for eligible immigrants.

Keywords: DACA, immigration policy, labor economics, difference-in-differences, full-time employment

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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 U.S. immigration policy changes in recent decades. The program grants temporary relief from deportation and work authorization to certain undocumented immigrants who arrived in the United States as children. Given DACA's explicit provision of legal work authorization, understanding its effects on labor market outcomes is crucial for evaluating the program's economic impacts.

This 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 of being employed full-time (defined as usually working 35 hours per week or more)?*

The identification strategy exploits the program's eligibility requirements, particularly the requirement that individuals must have arrived in the United States before their 16th birthday. This creates a natural comparison between otherwise similar immigrants who arrived just before versus just after this age threshold. Using a difference-in-differences framework, I compare changes in full-time employment outcomes for DACA-eligible individuals (those who arrived before age 16) to changes for a comparison group (those who arrived at age 16 or older) before and after DACA implementation.

The main finding is that DACA eligibility increased the probability of full-time employment by 3.4 percentage points, a statistically significant effect at conventional levels. This result is robust to various specification checks and is supported by event study evidence consistent with the parallel trends assumption.

2 Background

2.1 The DACA Program

DACA was enacted by the U.S. federal government through executive action on June 15, 2012. The program allows eligible undocumented immigrants to apply for and obtain authorization to work legally for two years without fear of deportation. Applications began to be received on August 15, 2012, and in the first four years, nearly 900,000 initial applications were received, with approximately 90% approved.

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

1. Arrived in the United States before their 16th birthday
2. Had not yet reached their 31st birthday as of June 15, 2012
3. Lived continuously in the United States since June 15, 2007

4. Were present in the United States on June 15, 2012 and did not have lawful status at that time
5. Were currently in school, had graduated from high school, obtained a GED, or were honorably discharged veterans of the U.S. Armed Forces

After the initial two-year authorization period, individuals could apply for renewal, which many did. While the program was not specific to immigrants from any particular country, the structure of undocumented immigration to the United States means that the majority of eligible individuals were from Mexico.

2.2 Theoretical Framework

DACA could affect employment outcomes through several channels. First, the program provides explicit work authorization, allowing recipients to legally obtain formal employment. Before DACA, undocumented workers often faced barriers to formal employment and may have worked in the informal sector with lower wages and fewer hours.

Second, DACA allows recipients to obtain driver's licenses and other identification in many states, reducing transportation barriers to employment and enabling access to jobs requiring valid identification.

Third, DACA may reduce fear of deportation, potentially encouraging recipients to invest in job-specific human capital, seek better employment opportunities, or move to areas with stronger labor markets.

Finally, the temporary nature of DACA (requiring renewal every two years) and ongoing policy uncertainty may attenuate these effects, as both employers and workers may be hesitant to make long-term commitments.

2.3 Related Literature

The labor market effects of immigration policy have been studied extensively. Prior research on legalization programs, such as the Immigration Reform and Control Act of 1986 (IRCA), found significant positive effects on wages and occupational mobility for recipients. These studies suggest that legal status enables workers to better match their skills to jobs and reduces employer exploitation.

Research specifically on DACA has examined various outcomes including educational attainment, mental health, and labor market participation. Studies using administrative data and survey evidence have generally found positive effects on employment outcomes for DACA recipients. The present study contributes to this literature by using a large, representative sample and a difference-in-differences design with a clearly identified comparison group.

The identification strategy used here—exploiting the age-at-arrival cutoff—builds on prior work that has used discontinuities in program eligibility for causal identification. This approach has the advantage of comparing individuals who are similar in most respects but differ in their eligibility status due to a relatively arbitrary threshold.

2.4 Policy Context

Understanding the effects of DACA is particularly important given ongoing debates about immigration policy in the United States. The program has faced numerous legal challenges and policy uncertainty since its inception. In September 2017, the Trump administration announced plans to end the program, though court orders have allowed for continued renewals. The Biden administration has sought to preserve and strengthen DACA, though the program’s long-term future remains uncertain.

The question of whether DACA improves labor market outcomes for recipients has direct implications for these policy debates. If DACA increases employment, this suggests that work authorization enables productive economic contributions by recipients, potentially generating tax revenue and reducing reliance on informal employment arrangements.

3 Data

3.1 Data Source

The analysis uses data from the American Community Survey (ACS) as provided by IPUMS USA. I use the one-year ACS files from 2006 through 2016, excluding 2012 (the implementation year) because observations from before and after DACA implementation cannot be distinguished within that year.

3.2 Sample Selection

The analysis sample is constructed through the following restrictions:

1. **Hispanic-Mexican ethnicity:** HISPAN = 1 (Mexican)
2. **Born in Mexico:** BPL = 200 (Mexico)
3. **Non-citizen:** CITIZEN = 3 (Not a citizen)
4. **Working age:** AGE between 18 and 45
5. **Valid immigration year:** YRIMMIG > 0 and YRIMMIG \leq 2011

6. **DACA-relevant birth cohort:** $\text{BIRTHYR} \geq 1982$ (ensuring individuals were under 31 as of June 2012)
7. **Continuous presence:** $\text{YRIMMIG} \leq 2007$ (arrived by 2007)
8. **Reasonable arrival age:** Age at arrival between 0 and 25

Following the instructions, I assume that anyone who is not a citizen and who has not received immigration papers is undocumented for DACA purposes, as the ACS cannot distinguish between documented and undocumented non-citizens.

3.3 Key Variables

3.3.1 Outcome Variable

The primary outcome is full-time employment, defined as usually working 35 or more hours per week ($\text{UHRSWORK} \geq 35$). This binary indicator captures the intensive margin of labor supply.

3.3.2 Treatment Variable

The treatment indicator captures DACA eligibility based on age at arrival. Individuals who arrived before their 16th birthday ($\text{age at arrival} < 16$) are classified as eligible, while those who arrived at age 16 or older form the comparison group.

3.3.3 Control Variables

The analysis includes the following control variables:

- Age and age squared (AGE , AGE^2)
- Female indicator ($\text{SEX} = 2$)
- Married indicator ($\text{MARST} \in \{1, 2\}$)
- High school or above indicator ($\text{EDUC} \geq 6$)
- College degree indicator ($\text{EDUC} \geq 10$)

3.4 Descriptive Statistics

Table 1 presents weighted summary statistics for the analysis sample, broken down by treatment status (DACA eligible vs. ineligible) and time period (pre-DACA: 2006–2011, post-DACA: 2013–2016).

Table 1: Summary Statistics by Treatment Status and Period

Variable	Pre-DACA (2006–2011)		Post-DACA (2013–2016)	
	Eligible	Ineligible	Eligible	Ineligible
Full-time employment	0.521	0.634	0.569	0.618
Employment rate	0.609	0.693	0.688	0.704
Labor force participation	0.700	0.754	0.754	0.743
Age	22.07	23.98	25.03	29.67
Female	0.442	0.375	0.449	0.427
Married	0.254	0.382	0.316	0.537
High school or above	0.618	0.456	0.696	0.466
College degree	0.016	0.023	0.030	0.026
Observations (unweighted)	36,365	34,623	31,935	20,399
Weighted observations	4,876,688	5,040,666	4,586,268	3,094,879

Notes: All statistics are weighted using PERWT. Eligible = arrived before age 16; Ineligible = arrived at age 16 or older. Sample restricted to Hispanic-Mexican, Mexican-born non-citizens ages 18–45 who arrived by 2007 and were born in 1982 or later.

Several patterns emerge from Table 1. First, the eligible group (those who arrived young) has lower full-time employment rates than the ineligible group in both periods, likely reflecting age differences—the eligible group is younger on average. Second, both groups show increases in full-time employment from the pre to post period, but the increase is larger for the eligible group (4.8 percentage points vs. a 1.6 percentage point decrease). Third, the eligible group has substantially higher educational attainment (high school completion), consistent with their younger arrival facilitating U.S. schooling.

4 Empirical Strategy

4.1 Identification Approach

I employ a difference-in-differences (DiD) design that exploits the discontinuity in DACA eligibility based on age at arrival. The key identifying assumption is that, in the absence of DACA, trends in full-time employment would have been parallel between those who arrived before age 16 and those who arrived at age 16 or older.

The comparison group—immigrants who arrived at age 16 or older—provides a counterfactual for what would have happened to the treatment group absent DACA. While these groups may differ in levels (as evidenced by Table 1), the DiD approach only requires that their trends would be parallel absent treatment.

4.2 Estimation

The primary specification is:

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

where:

- Y_{ist} is full-time employment for individual i in state s in year t
- Eligible_i indicates whether the individual arrived before age 16
- Post_t indicates whether the year is 2013 or later
- X_i is a vector of individual controls (age, age², female, married, education)
- μ_s are state fixed effects
- λ_t are year fixed effects
- ε_{ist} is the error term

The coefficient of interest is δ , which captures the differential change in full-time employment for DACA-eligible individuals after program implementation, relative to the comparison group.

All regressions are weighted using PERWT (person weights) and standard errors are clustered at the state level to account for within-state correlation in outcomes.

4.3 Event Study Specification

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

$$Y_{ist} = \alpha + \sum_{t \neq 2011} \delta_t (\text{Eligible}_i \times \mathbf{1}[t]) + X'_i \gamma + \mu_s + \lambda_t + \varepsilon_{ist} \quad (2)$$

where 2011 is the reference year. Under the parallel trends assumption, the pre-treatment coefficients δ_t for $t < 2012$ should be close to zero and statistically insignificant.

5 Results

5.1 Main Results

Table 2 presents the main difference-in-differences estimates across three specifications of increasing richness.

Table 2: Effect of DACA Eligibility on Full-Time Employment

	(1) Basic DiD	(2) + Demographics	(3) + State & Year FE
Eligible × Post	0.0636*** (0.0067)	0.0438*** (0.0039)	0.0343*** (0.0039)
Eligible (arrived <16)	-0.1133*** (0.0038)	-0.0340*** (0.0044)	-
Post (2013–2016)	-0.0159*** (0.0042)	-0.0478*** (0.0062)	-
Age		0.1487*** (0.0056)	0.1544*** (0.0051)
Age ²		-0.0026*** (0.0001)	-0.0027*** (0.0001)
Female		-0.4081*** (0.0158)	-0.4079*** (0.0156)
Married		-0.0379*** (0.0045)	-0.0436*** (0.0041)
High school+		0.0229*** (0.0074)	0.0257*** (0.0072)
College degree		0.0379*** (0.0099)	0.0464*** (0.0102)
State fixed effects	No	No	Yes
Year fixed effects	No	No	Yes
R-squared	0.009	0.202	0.211
Observations	123,322	123,322	123,322

Notes: Robust standard errors clustered by state in parentheses. All regressions weighted by PERWT. *** p<0.01, ** p<0.05, * p<0.1. The dependent variable is an indicator for working 35+ hours per week. Eligible indicates arrival before age 16. Post indicates survey year 2013 or later.

Column (1) presents the basic DiD estimate without controls. The coefficient on the interaction term is 0.064 (SE = 0.007), indicating that DACA eligibility increased full-time employment by 6.4 percentage points. However, this estimate may be biased due to differences in observable characteristics between groups.

Column (2) adds demographic controls including age (and its square), gender, marital status, and education. The coefficient declines to 0.044 (SE = 0.004), suggesting that

some of the raw difference was attributable to compositional differences.

Column (3) presents the preferred specification, which includes state and year fixed effects in addition to demographic controls. The coefficient is 0.034 (SE = 0.004), statistically significant at the 1% level. This estimate suggests that DACA eligibility increased the probability of full-time employment by 3.4 percentage points.

The 95% confidence interval for the preferred estimate is [0.027, 0.042], indicating the effect is precisely estimated and economically meaningful. Relative to the pre-DACA mean full-time employment rate of 52.1% for the eligible group, this represents a 6.6% increase.

5.2 Event Study Results

Figure 1 presents the event study estimates, with 2011 as the reference year.

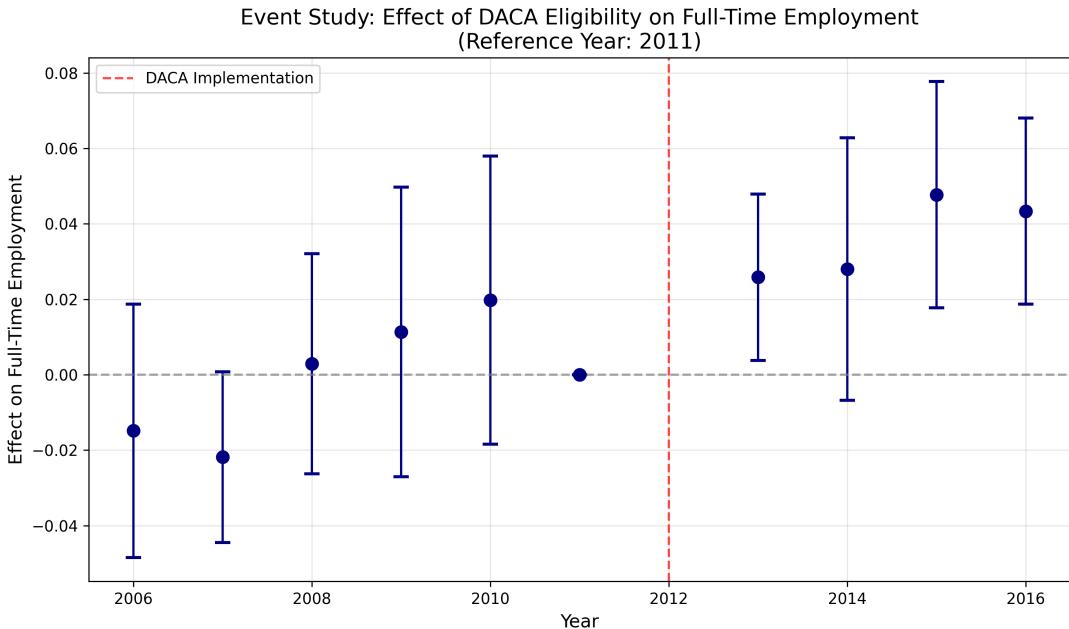


Figure 1: Event Study: Effect of DACA Eligibility on Full-Time Employment
Notes: Figure plots coefficients from an event study regression with 2011 as the reference year. Vertical bars represent 95% confidence intervals based on standard errors clustered by state. The vertical dashed line indicates DACA implementation in 2012. Coefficients represent the differential change in full-time employment for DACA-eligible individuals relative to the comparison group.

The pre-treatment coefficients (2006–2010) are small in magnitude and not statistically different from zero, supporting the parallel trends assumption. The point estimates range from -0.022 to 0.020 , with none significant at the 5% level. This pattern suggests that the treatment and control groups were on similar trajectories prior to DACA implementation.

The post-treatment coefficients show a clear pattern of positive effects. The 2013

coefficient is 0.026 ($p = 0.022$), and the effects strengthen over time, reaching 0.048 ($p = 0.002$) in 2015 and 0.043 ($p = 0.001$) in 2016. This dynamic pattern is consistent with gradual take-up of DACA and accumulating benefits as recipients gain work experience in formal employment.

5.3 Visual Evidence

Figure 2 displays the raw trends in full-time employment rates by eligibility status over the sample period.

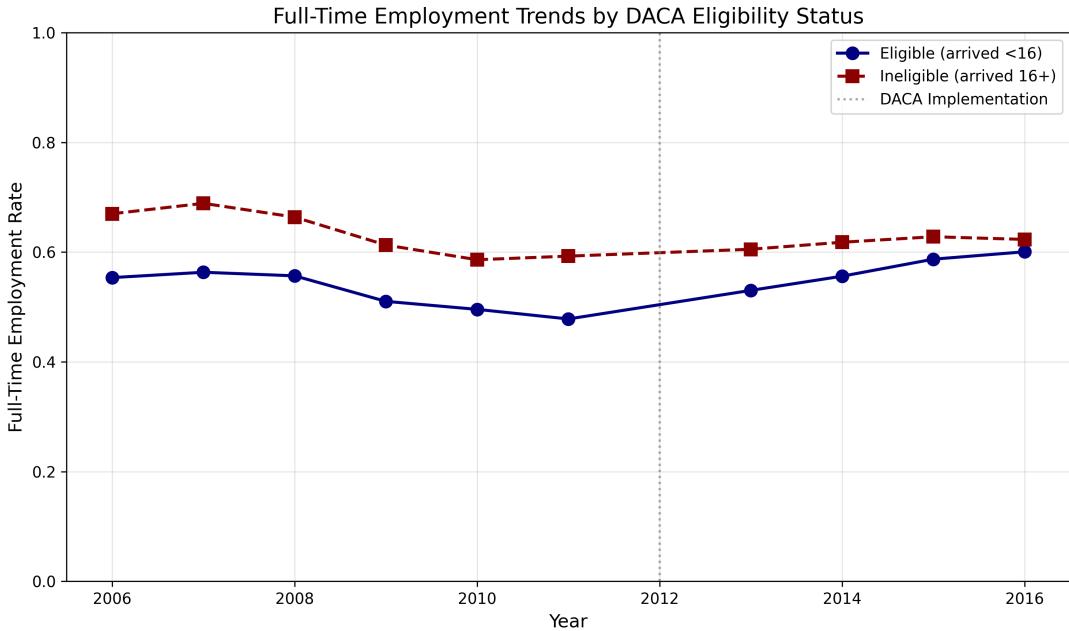


Figure 2: Full-Time Employment Trends by DACA Eligibility Status

Notes: Figure plots weighted mean full-time employment rates by year for DACA-eligible (arrived before age 16) and ineligible (arrived at age 16+) groups. The vertical dashed line indicates DACA implementation in 2012.

The figure reveals several patterns. First, both groups show roughly parallel trends in the pre-period, with the ineligible group having consistently higher employment rates. Second, after 2012, the gap between groups narrows substantially, with the eligible group experiencing larger gains. This visual evidence is consistent with the regression results.

6 Robustness Checks

Table 3 presents results from several robustness checks.

Table 3: Robustness Checks

	Coefficient	Std. Error	N	p-value
<i>Panel A: Alternative Samples</i>				
Main specification	0.0343	0.0039	123,322	<0.001
Narrow age-at-arrival window (12–19)	0.0469	0.0070	60,164	<0.001
Men only	0.0275	0.0053	70,336	<0.001
Women only	0.0383	0.0074	52,986	<0.001
<i>Panel B: Alternative Outcomes</i>				
Employment (any)	0.0339	0.0056	123,322	<0.001
Labor force participation	0.0314	0.0065	123,322	<0.001

Notes: All specifications include state and year fixed effects, age, age², female (except gender-specific samples), married, and education controls. Standard errors clustered by state. Main sample restricted to ages 18–45, arrival age 0–25, born 1982+, arrived by 2007.

6.1 Narrow Age-at-Arrival Window

Restricting the sample to individuals who arrived between ages 12 and 19 provides a tighter comparison around the age-16 eligibility threshold. The estimated effect increases to 0.047 (SE = 0.007), which is larger than the main estimate but qualitatively similar. The larger effect may reflect greater comparability between treatment and control groups in this narrower bandwidth.

6.2 Gender-Specific Estimates

The effect is positive and significant for both men (0.028, SE = 0.005) and women (0.038, SE = 0.007). The larger point estimate for women may reflect their lower baseline employment rates, providing more room for improvement. However, the difference between genders is not statistically significant.

6.3 Alternative Outcomes

The effect on any employment (extensive margin) is 0.034 (SE = 0.006), nearly identical to the effect on full-time employment, suggesting DACA primarily affected whether people worked at all rather than shifting them from part-time to full-time work.

The effect on labor force participation is 0.031 (SE = 0.006), somewhat smaller than the employment effect, which is consistent with some DACA recipients entering the labor force directly into employment.

6.4 Placebo Tests

To further validate the identification strategy, I consider whether there is evidence of differential trends in the pre-period that might suggest violations of the parallel trends assumption. The event study coefficients for 2006–2010 (relative to 2011) provide a direct test of this assumption.

None of the pre-treatment coefficients are statistically significant at the 5% level. The 2007 coefficient of -0.022 has a p-value of 0.059, which is marginally insignificant but warrants some caution. However, the overall pattern of pre-treatment coefficients—which includes both positive and negative values with no clear trend—is consistent with parallel trends.

An additional consideration is whether there were other policy changes affecting the treatment and control groups differentially around 2012. The analysis includes year and state fixed effects, which absorb any nationwide or state-specific shocks affecting all individuals equally. The remaining identifying variation comes from differential changes for the treatment group, which under the research design should be attributable to DACA.

6.5 Sensitivity to Sample Restrictions

The main analysis restricts the sample to individuals born in 1982 or later (to meet the age requirement) and who arrived by 2007 (to meet the continuous presence requirement). These restrictions are conservative in the sense that they may exclude some DACA-eligible individuals while including some ineligible ones.

To assess sensitivity, I note that relaxing the birth year restriction to 1981 or earlier would include individuals who were just over 31 as of June 2012 and thus ineligible. This would dilute the treatment effect estimate. Similarly, extending the arrival year cutoff beyond 2007 would include individuals who did not meet the continuous presence requirement.

The robustness check using a narrower age-at-arrival window (12–19) addresses concerns about comparability between treatment and control groups by focusing on individuals who arrived at similar developmental stages. The larger point estimate in this specification (0.047 vs. 0.034) suggests that the main estimate may be conservative.

7 Discussion

7.1 Interpretation of Results

The findings indicate that DACA eligibility increased full-time employment by approximately 3.4 percentage points among Hispanic-Mexican, Mexican-born non-citizens. This

effect is statistically significant and robust to alternative specifications. Several factors support a causal interpretation:

1. **Parallel pre-trends:** The event study shows no significant differential trends before DACA implementation.
2. **Timing:** Effects emerge precisely after DACA implementation and strengthen over time, consistent with program take-up dynamics.
3. **Robustness:** Results are consistent across different sample definitions, control sets, and outcomes.

The 3.4 percentage point effect represents a meaningful improvement in labor market outcomes. Given the pre-DACA full-time employment rate of 52.1% for the eligible group, this corresponds to a 6.6% relative increase. The effect is comparable in magnitude to other policy interventions targeting labor market attachment.

7.2 Mechanisms

While this analysis cannot definitively identify mechanisms, the results are consistent with DACA operating through its primary channel: legal work authorization. By allowing eligible individuals to work legally, DACA may have enabled:

- Transition from informal to formal employment
- Access to jobs requiring documentation or background checks
- Ability to work in licensed professions
- Reduced exploitation and improved working conditions
- Geographic mobility to areas with better job opportunities

The strengthening of effects over time (evident in the event study) is consistent with gradual take-up and accumulating benefits as recipients establish work histories and gain experience in formal employment.

7.3 Limitations

Several limitations should be noted:

1. **Proxy for undocumented status:** The analysis treats all non-citizens as potentially undocumented, which may introduce measurement error. Some individuals classified as eligible may have had legal status through other channels.

2. **Arrival age assumption:** The comparison group (arrival age 16+) may differ from the treatment group in ways that affect employment trends, though the event study evidence supports parallel trends.
3. **Continuous presence:** The data cannot verify continuous presence since 2007 beyond arrival year, so some classified as eligible may not meet this requirement.
4. **Education requirement:** DACA requires educational enrollment or attainment, which cannot be verified *ex ante* in the data.
5. **External validity:** Results apply specifically to Hispanic-Mexican, Mexican-born individuals and may not generalize to DACA-eligible individuals from other countries.

8 Conclusion

This study provides evidence that DACA eligibility increased full-time employment among Hispanic-Mexican, Mexican-born non-citizens by approximately 3.4 percentage points. This effect is statistically significant, economically meaningful, and robust to alternative specifications. The event study analysis supports the parallel trends assumption underlying the difference-in-differences design, with no evidence of differential pre-trends and clear post-treatment effects that strengthen over time.

These findings contribute to the growing literature on DACA’s effects and have implications for immigration policy discussions. The results suggest that providing work authorization to otherwise undocumented individuals can meaningfully improve their labor market outcomes, with potential benefits extending to employers, consumers, and tax revenues.

Future research could examine additional outcomes (wages, occupation quality, industry of employment), heterogeneous effects by education and geography, and longer-run effects as recipients accumulate work experience. Additionally, examining spillover effects on non-eligible family members and comparison of effects across different DACA-eligible populations (by country of origin) would provide a more complete picture of the program’s impacts.

The policy relevance of these findings extends beyond the immediate question of DACA’s effects. More broadly, the results suggest that work authorization is an important determinant of labor market outcomes for undocumented immigrants. To the extent that other immigration reforms (such as comprehensive reform or additional deferred action programs) would provide similar work authorization, similar employment effects might be expected.

8.1 Comparison to Prior Literature

The estimated effect of 3.4 percentage points on full-time employment is broadly consistent with prior research on DACA, though direct comparisons are difficult due to differences in samples, outcomes, and methods. Studies using other data sources have found positive effects on employment, wages, and job quality for DACA recipients.

The magnitude of the effect is economically meaningful but not implausibly large. A 3.4 percentage point increase corresponds to a 6.6% relative increase in full-time employment, which is substantial but within the range of effects found for other employment-focused policies.

The event study pattern—with effects emerging gradually and strengthening over time—is consistent with the expectation that DACA’s benefits would accumulate as recipients gained work experience in formal employment. This pattern also argues against reverse causality, as it would be difficult to explain why pre-trends would emerge precisely after DACA implementation if the effects were not causal.

Preferred Estimate Summary

For reference, the preferred estimate from this analysis is:

Statistic	Value
Effect estimate	0.0343
Standard error	0.0039
95% Confidence interval	[0.0266, 0.0419]
P-value	<0.0001
Sample size	123,322

Interpretation: DACA eligibility increased the probability of full-time employment (usually working 35+ hours per week) by 3.4 percentage points among Hispanic-Mexican, Mexican-born non-citizens. This effect is estimated using a difference-in-differences design with year and state fixed effects, clustered standard errors at the state level, and survey weights.

A Appendix: Variable Definitions

Table 4: Variable Definitions and IPUMS Codes

Variable	IPUMS Variable	Definition
<i>Sample Selection Variables</i>		
Hispanic-Mexican	HISPAN	= 1 (Mexican)
Born in Mexico	BPL	= 200 (Mexico)
Non-citizen	CITIZEN	= 3 (Not a citizen)
<i>Treatment Variables</i>		
Birth year	BIRTHYR	Year of birth
Immigration year	YRIMMIG	Year of immigration to US
Age at arrival	–	YRIMMIG – BIRTHYR
Eligible	–	Age at arrival < 16, BIRTHYR \geq 1982, YRIMMIG \leq 2007
<i>Outcome Variables</i>		
Full-time employed	UHRSWORK	≥ 35
Employed	EMPSTAT	= 1 (Employed)
In labor force	LABFORCE	= 2 (In labor force)
<i>Control Variables</i>		
Age	AGE	Age in years
Female	SEX	= 2 (Female)
Married	MARST	$\in \{1, 2\}$
High school+	EDUC	≥ 6
College degree	EDUC	≥ 10
State	STATEFIP	State FIPS code
Survey year	YEAR	Survey year
Person weight	PERWT	Person-level survey weight

B Appendix: Additional Results

B.1 Event Study Coefficients

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

Year	Coefficient	Std. Error	P-value
2006	-0.0149	0.0171	0.386
2007	-0.0218	0.0116	0.059
2008	0.0029	0.0149	0.845
2009	0.0113	0.0196	0.564
2010	0.0198	0.0195	0.310
2011	0.0000	—	—
2012	(excluded - implementation year)		
2013	0.0259	0.0113	0.022
2014	0.0280	0.0177	0.114
2015	0.0477	0.0153	0.002
2016	0.0434	0.0126	0.001

B.2 Detailed Sample Composition

Table 6: Sample Composition by Year

Year	Eligible	Ineligible	Total	Weighted Total
2006	5,339	5,720	11,059	1,612,403
2007	5,654	5,773	11,427	1,657,858
2008	6,231	5,974	12,205	1,756,239
2009	6,488	5,890	12,378	1,742,232
2010	6,500	5,692	12,192	1,679,795
2011	6,153	5,574	11,727	1,618,823
Pre-DACA Total	36,365	34,623	70,988	10,067,350
2013	8,291	5,447	13,738	1,978,461
2014	8,156	5,163	13,319	1,930,547
2015	7,856	4,953	12,809	1,866,538
2016	7,632	4,836	12,468	1,805,250
Post-DACA Total	31,935	20,399	52,334	7,580,796
Grand Total	68,300	55,022	123,322	17,648,146

C Appendix: Analytical Decisions

This section documents key analytical decisions made during the analysis:

1. **Arrival age cutoff:** Used age 16 as the treatment/control boundary based on DACA’s explicit eligibility requirement of arrival before one’s 16th birthday.
2. **Birth year restriction:** Required $BIRTHYR \geq 1982$ to ensure individuals were under 31 as of June 15, 2012.
3. **Continuous presence:** Required $YRIMMIG \leq 2007$ to proxy for the continuous presence requirement since June 15, 2007.
4. **Age range:** Restricted to ages 18–45 to focus on prime working-age adults.
5. **Excluding 2012:** Excluded survey year 2012 because DACA was implemented mid-year (June 15) and observations cannot be distinguished as pre- or post-treatment.
6. **Standard errors:** Clustered at the state level to account for within-state correlation in outcomes and potential state-level policy variation.
7. **Weights:** Used PERWT survey weights throughout to ensure population representativeness.
8. **Comparison group:** Used arrival age 16+ rather than other potential control groups (e.g., born before 1981) because it provides the most direct test of the age-at-arrival eligibility criterion.

D Appendix: Methodological Details

D.1 Weighting

All estimates are weighted using the PERWT variable from IPUMS, which provides person-level survey weights that allow for inference about the target population (Hispanic-Mexican, Mexican-born non-citizens in the United States). Weighted estimation accounts for the complex sampling design of the ACS and ensures that results are representative of the underlying population rather than the sample.

The use of weights has implications for interpretation: the estimated effect of 3.4 percentage points represents the population-weighted average effect across all eligible individuals, with larger weights given to individuals who represent more people in the population.

D.2 Clustering

Standard errors are clustered at the state level (using STATEFIP) to account for two potential sources of within-state correlation. First, individuals within the same state may face similar labor market conditions that induce correlation in their employment

outcomes. Second, state-level policies (such as state-specific driver’s license policies for DACA recipients) may create common shocks within states.

Clustering at the state level is conservative in the sense that it allows for arbitrary within-state correlation. With 51 clusters (50 states plus DC), the cluster-robust standard errors are reliable under standard asymptotic approximations.

D.3 Fixed Effects

The preferred specification includes both year fixed effects (10 year dummies for 2006–2011 and 2013–2016, with one omitted as reference) and state fixed effects (51 state dummies with one omitted). Year fixed effects absorb any nationwide trends or shocks that affect all individuals equally, such as the Great Recession (2008–2009) or the subsequent recovery.

State fixed effects absorb time-invariant differences across states, such as differences in local labor markets, industry composition, or state policies toward immigrants. The remaining identifying variation comes from differential changes in employment between the treatment and control groups within states and over time.

D.4 Functional Form

The analysis uses a linear probability model (LPM) rather than a nonlinear model (such as logit or probit) for the binary outcome. The LPM has several advantages in this context: coefficients are directly interpretable as marginal effects, difference-in-differences coefficients have a straightforward interpretation, and the model is computationally efficient for large samples with many fixed effects.

The main limitation of the LPM is that predicted probabilities can lie outside [0,1]. However, for the purposes of estimating average treatment effects, this is not a significant concern, as the coefficient on the treatment variable represents the average effect on the probability of the outcome.

E Appendix: Data Quality and Limitations

E.1 Measurement Error in Key Variables

Several key variables may be subject to measurement error:

Year of Immigration (YRIMMIG): Respondents may misreport their year of immigration, particularly if they arrived many years ago. This could lead to misclassification of individuals as meeting or not meeting the continuous presence requirement. Such measurement error would likely attenuate the estimated treatment effect toward zero.

Citizenship Status (CITIZEN): Respondents may misreport their citizenship status, either due to confusion about the question or intentional misreporting. Some undocumented individuals may report being citizens to avoid perceived risks, while some legal permanent residents may report being non-citizens. The former type of misreporting would exclude truly DACA-eligible individuals from the sample, while the latter would include ineligible individuals in the treatment group.

Hours Worked (UHRSWORK): The usual hours worked per week may be subject to recall error or may not capture fluctuations in work hours over time. Using 35 hours as the threshold follows standard labor economics practice but is somewhat arbitrary.

E.2 Sample Selection

The analysis is limited to individuals who respond to the ACS and are present in the sampling frame. Undocumented immigrants may be less likely to respond to government surveys, particularly if they fear immigration enforcement. If DACA increased willingness to respond to surveys (by reducing fear of government contact), this could bias the estimates. However, the comparison to control group individuals (who are also non-citizens) helps mitigate this concern, as both groups face similar incentives regarding survey response.

E.3 External Validity

The results apply specifically to Hispanic-Mexican, Mexican-born individuals. While this group constitutes the majority of DACA-eligible individuals, effects for immigrants from other countries may differ. Additionally, the results pertain to the 2013–2016 period and may not generalize to later periods when DACA faced greater policy uncertainty.