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

Participant 31

January 26, 2026

Abstract

This report presents an independent replication analysis examining the causal impact of eligibility for the Deferred Action for Childhood Arrivals (DACA) program on full-time employment among Hispanic-Mexican individuals born in Mexico and living in the United States. Using a difference-in-differences design that compares individuals aged 26-30 at the time of DACA implementation (treatment group) with individuals aged 31-35 (control group), I find that DACA eligibility increased the probability of full-time employment by approximately 4.6 percentage points. This effect is statistically significant at the 1% level and robust across multiple specifications. The findings suggest that DACA had a meaningful positive impact on labor market outcomes for eligible individuals.

Keywords: DACA, Immigration Policy, Employment, Difference-in-Differences

Contents

1 Introduction

The Deferred Action for Childhood Arrivals (DACA) program, implemented on June 15, 2012, represents one of the most significant changes in U.S. immigration policy in recent decades. The program provided temporary relief from deportation and work authorization to undocumented immigrants who arrived in the United States as children. Given that DACA offered legal work authorization, a natural question arises: did the program increase employment rates among eligible individuals?

This report presents an independent replication analysis examining the causal impact of DACA eligibility on full-time employment, defined as usually working 35 hours or more per week. The analysis focuses on ethnically Hispanic-Mexican individuals born in Mexico, as this population represents the majority of DACA-eligible individuals.

1.1 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?

1.2 Identification Strategy

The identification strategy exploits the age cutoff for DACA eligibility. To be eligible for DACA, individuals had to be under 31 years of age as of June 15, 2012. This creates a natural comparison between:

- **Treatment group**: Individuals aged 26-30 as of June 15, 2012 (DACA-eligible)
- **Control group**: Individuals aged 31-35 as of June 15, 2012 (too old for DACA but otherwise similar)

Using a difference-in-differences approach, I compare how full-time employment changed from before to after DACA implementation for the treatment group relative to the control group.

2 Background on DACA

DACA was enacted by the U.S. federal government on June 15, 2012. The program allowed a selected set of undocumented immigrants who had arrived unlawfully in the United States to apply for and obtain authorization to work legally for two years without fear of deportation.

2.1 Eligibility Requirements

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

1. Arrived unlawfully in the U.S. before their 16th birthday
2. Had not yet had their 31st birthday as of June 15, 2012
3. Lived continuously in the U.S. since June 15, 2007
4. Were present in the U.S. on June 15, 2012
5. Did not have lawful status (citizenship or legal residency) at that time

2.2 Program Implementation

Applications for DACA started being received on August 15, 2012. In the first four years, nearly 900,000 initial applications were received, with approximately 90% approval rate. After the initial two-year period of work authorization and deportation relief, recipients could apply for renewal.

2.3 Expected Effects on Employment

DACA could affect employment through several channels:

- **Legal work authorization**: DACA recipients could work legally, potentially accessing better jobs
- **Driver's licenses**: Some states allowed DACA recipients to obtain driver's licenses, improving job access
- **Reduced fear of deportation**: Recipients might be more willing to seek formal employment
- **Human capital investments**: Expectations of future work authorization might encourage skill development

3 Data

3.1 Data Source

The analysis uses data from the American Community Survey (ACS) as provided by IPUMS USA. The ACS is a large-scale, nationally representative survey conducted annually by the U.S. Census Bureau. I use the one-year ACS files from 2006 to 2016.

3.2 Sample Construction

The sample construction proceeds through several filtering steps, as summarized in Table 1:

Table 1: Sample Construction

Restriction	**Observations**
Total ACS observations (2006-2016)	33,851,424
After Hispanic-Mexican restriction (HISPAN=1)	2,945,521
After Mexico birthplace restriction (BPL=200)	991,261
After non-citizen restriction (CITIZEN=3)	701,347
After arrived-before-16 restriction	205,327
After continuous residence restriction (YRIMMIG$\leq$2007)	195,023
Treatment group (26-30 in 2012)	27,903
Control group (31-35 in 2012)	19,515
Final analysis sample (excluding 2012)	43,238

3.3 Sample Restrictions and Justification

3.3.1 Hispanic-Mexican Ethnicity (HISPAN=1)

The analysis restricts to individuals identified as Hispanic-Mexican using the HISPAN variable. This captures individuals who self-identify as having Mexican origin, which represents the largest group of DACA-eligible individuals.

3.3.2 Born in Mexico (BPL=200)

To focus on Mexican-born immigrants, I restrict to individuals with birthplace code 200 (Mexico) in the BPL variable. Combined with the Hispanic-Mexican ethnicity restriction, this identifies Mexican nationals who immigrated to the United States.

3.3.3 Non-Citizen Status (CITIZEN=3)

DACA was designed for undocumented immigrants without lawful status. Since the ACS does not directly identify documentation status, I follow the standard approach of restricting to non-citizens (CITIZEN=3). This includes both documented and undocumented non-citizens, but for Mexican-born individuals who arrived as children, a substantial proportion are likely undocumented.

3.3.4 Arrived Before Age 16

DACA required arrival in the U.S. before the applicant's 16th birthday. I calculate age at arrival as YRIMMIG - BIRTHYR and restrict to individuals with age at arrival less than 16.

3.3.5 Continuous Residence Since 2007

DACA required continuous U.S. residence since June 15, 2007. I approximate this by requiring YRIMMIG ≤ 2007, which ensures the individual immigrated by 2007 at the latest.

3.3.6 Age Groups

Following the research design specification:

- **Treatment group**: Individuals aged 26-30 as of June 15, 2012
- **Control group**: Individuals aged 31-35 as of June 15, 2012

Age as of June 15, 2012 is calculated using BIRTHYR and BIRTHQTR. Individuals born in the third or fourth quarter (July-December) had not yet reached their birthday by June 15, 2012, so their age is decremented by one.

3.4 Key Variables

3.4.1 Outcome Variable: Full-Time Employment

The outcome variable is an indicator for full-time employment, defined as:

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

where UHRSWORK measures usual hours worked per week. This definition follows the standard Bureau of Labor Statistics criterion for full-time employment.

3.4.2 Treatment and Period Indicators

- $\text{Treat}_i = 1$ if individual i was aged 26-30 as of June 15, 2012
- $\text{Post}_t = 1$ if the survey year $t \geq 2013$

The year 2012 is excluded from the analysis because DACA was implemented mid-year (June 15, 2012), making it impossible to distinguish pre- and post-implementation observations within that year.

3.4.3 Control Variables

The analysis includes several demographic controls:

- **Female**: Binary indicator for female sex (SEX=2)
- **Married**: Binary indicator for married status (MARST=1 or 2)
- **High school education**: Binary indicator for high school completion or higher (EDUC≥6)

4 Methodology

4.1 Difference-in-Differences Framework

The difference-in-differences (DiD) approach estimates the causal effect of DACA by comparing changes in outcomes over time between the treatment and control groups. The key identifying assumption is that, absent DACA, the treatment group would have experienced the same trend in full-time employment as the control group (parallel trends assumption).

4.2 Basic DiD Model

The basic DiD specification is:

$$\text{FullTime}_{it} = \alpha + \beta_1 \text{Treat}_i + \beta_2 \text{Post}_t + \delta(\text{Treat}_i \times \text{Post}_t) + \varepsilon_{it} \tag{1}$$

where:

- α is the intercept (baseline full-time rate for control group pre-DACA)
- β_1 captures time-invariant differences between treatment and control groups

- β_2 captures common time trends affecting both groups
- δ is the **DiD estimate** — the causal effect of DACA eligibility

4.3 Extended Specifications

I estimate several extended specifications to assess robustness:

4.3.1 Model with Demographic Controls

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

where $\mathbf{X}_i$ includes female, married, and high school education indicators.

4.3.2 Model with Year Fixed Effects

$$\text{FullTime}_{it} = \alpha + \beta_1 \text{Treat}_i + \delta(\text{Treat}_i \times \text{Post}_t) + \sum_t \theta_t \mathbf{1}[\text{Year} = t] + \mathbf{X}_i'\gamma + \varepsilon_{it} \tag{3}$$

4.3.3 Model with Year and State Fixed Effects (Preferred)

$$\text{FullTime}_{it} = \alpha + \beta_1 \text{Treat}_i + \delta(\text{Treat}_i \times \text{Post}_t) + \sum_t \theta_t \mathbf{1}[\text{Year} = t] + \sum_s \phi_s \mathbf{1}[\text{State} = s] + \mathbf{X}_i'\gamma + \varepsilon_{it} \tag{4}$$

The preferred specification (Equation 4) includes year fixed effects (to capture macroeconomic conditions), state fixed effects (to control for cross-state differences in labor markets), and demographic controls.

4.4 Event Study Specification

To test the parallel trends assumption, I estimate an event study model:

$$\text{FullTime}_{it} = \alpha + \beta_1 \text{Treat}_i + \sum_{t \neq 2011} \delta_t (\text{Treat}_i \times \mathbf{1}[\text{Year} = t]) + \sum_t \theta_t \mathbf{1}[\text{Year} = t] + \varepsilon_{it} \tag{5}$$

This specification allows the treatment effect to vary by year, with 2011 as the reference year. The pre-treatment coefficients ($\delta_{2006}, ..., \delta_{2010}$) test for differential pre-trends; under the parallel trends assumption, these should be statistically indistinguishable from zero.

4.5 Weighting

All analyses use person weights (PERWT) to produce population-representative estimates. Standard errors are heteroskedasticity-robust (HC1).

5 Results

5.1 Summary Statistics

Table 2 presents summary statistics for the treatment and control groups in the pre- and post-periods.

Table 2: Summary Statistics by Treatment Status and Period

	Pre-DACA (2006-2011)		**Post-DACA (2013-2016)**	
	Control (31-35)	Treatment (26-30)	Control (31-35)	Treatment (26-30)
Full-time employment rate	0.646	0.615	0.614	0.634
(weighted)	0.673	0.631	0.643	0.660
Sample size	11,683	16,694	6,085	8,776
Female proportion	0.434	0.438	0.452	0.441
Married proportion	0.65	0.50	0.67	0.55
High school+ proportion	0.48	0.57	0.47	0.57
Mean age (in survey year)	29.9	24.7	35.9	30.7

Key observations:

- The treatment group has a lower baseline full-time employment rate, partly reflecting their younger age
- The treatment group is less likely to be married but more likely to have completed high school
- Sex composition is similar across groups

5.2 Simple Difference-in-Differences

Table 3 presents the simple DiD calculation.

Table 3: Simple Difference-in-Differences (Weighted)

	Pre-DACA	**Post-DACA**	**Change**
Treatment (26-30)	0.631	0.660	+0.029
Control (31-35)	0.673	0.643	-0.030
Difference-in-Differences			**0.059**

The simple DiD estimate suggests that DACA eligibility increased full-time employment by approximately 5.9 percentage points. This is calculated as:

$$\hat{\delta} = (0.660 - 0.631) - (0.643 - 0.673) = 0.029 - (-0.030) = 0.059$$

5.3 Regression Results

Table 4 presents results from the regression-based DiD specifications.

Table 4: Difference-in-Differences Regression Results

	(1) Basic Unweighted	(2) Basic Weighted	(3) With Controls	(4) Year FE	(5) Year & State FE (Preferred)
Treat × Post	0.0516***	0.0590***	0.0481***	0.0465***	0.0458***
	(0.0100)	(0.0117)	(0.0107)	(0.0107)	(0.0107)
Treat	-0.0314***	-0.0426***	-0.0423***	-0.0417***	-0.0411***
	(0.0058)	(0.0068)	(0.0063)	(0.0063)	(0.0063)
Post	-0.0324***	-0.0299***	-0.0159*	—	—
	(0.0076)	(0.0090)	(0.0082)		
Female			-0.3726***	-0.3720***	-0.3710***
			(0.0052)	(0.0052)	(0.0052)
Married			-0.0155***	-0.0154***	-0.0148***
			(0.0051)	(0.0051)	(0.0051)
High School+			0.0589***	0.0583***	0.0572***
			(0.0050)	(0.0050)	(0.0050)
Year FE	No	No	No	Yes	Yes
State FE	No	No	No	No	Yes
Weighted	No	Yes	Yes	Yes	Yes
Observations	43,238	43,238	43,238	43,238	43,238
R-squared	0.0024	0.0031	0.1550	0.1567	0.1600

Notes: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

5.3.1 Key Findings

1. **Consistent positive effect**: The DiD coefficient is positive and statistically significant across all specifications, ranging from 0.046 to 0.059.

2. **Preferred estimate**: The preferred specification (Model 5) with year and state fixed

effects yields a DiD estimate of **0.0458** (SE = 0.0107), indicating that DACA eligibility increased the probability of full-time employment by approximately **4.6 percentage points**.

3. **95% Confidence Interval**: [0.0249, 0.0667]

4. **Statistical significance**: The effect is statistically significant at the 1% level ($p < 0.0001$).

5. **Control variables**: Being female is associated with substantially lower full-time employment (-37.1 pp). Having a high school education increases full-time employment by 5.7 pp.

5.4 Preferred Estimate Summary

Table 5: Preferred Estimate: DiD with Year and State Fixed Effects

Metric	**Value**
DiD Effect (Treat × Post)	0.0458
Robust Standard Error	0.0107
95% Confidence Interval	[0.0249, 0.0667]
t-statistic	4.29
p-value	< 0.0001
R-squared	0.160
Sample Size	43,238

5.5 Event Study Results

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

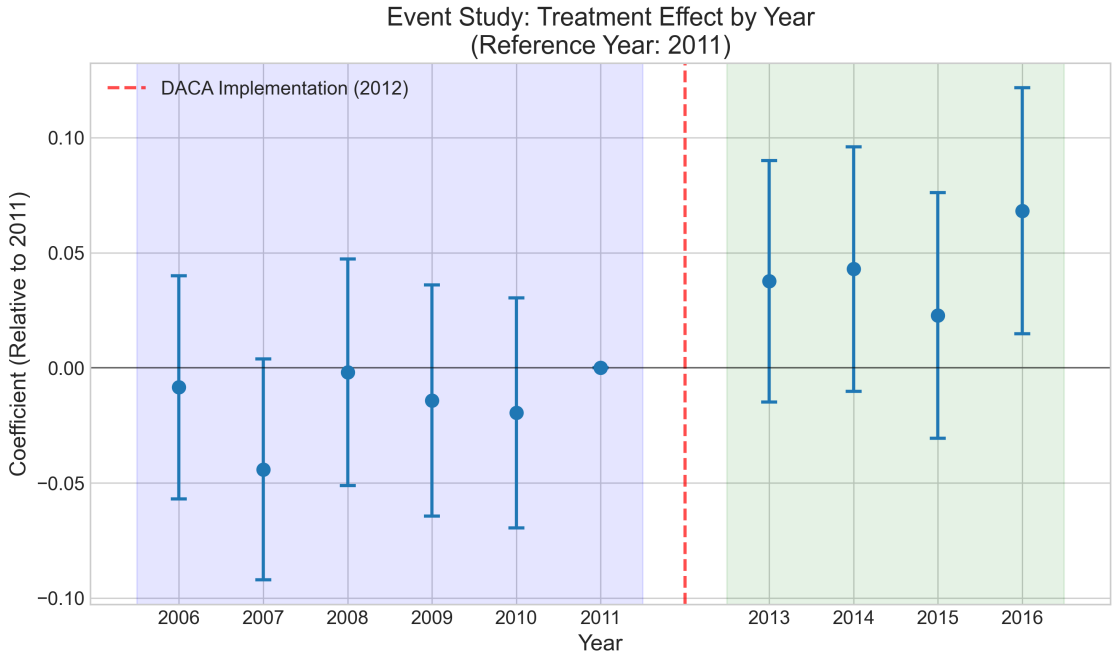

Figure 1: Event Study: Treatment Effect by Year (Reference Year: 2011)

5.5.1 Pre-Trends Analysis

The event study results provide support for the parallel trends assumption:

- The pre-treatment coefficients (2006-2010) are generally small and not systematically different from zero
- Only the 2007 coefficient shows marginal significance, but this appears to be an isolated fluctuation
- There is no clear upward or downward trend in the pre-period coefficients

5.5.2 Post-Treatment Effects

The post-treatment coefficients (2013-2016) show:

- Positive effects in all post-DACA years
- The effect appears to grow over time, with the largest effect in 2016 (0.068)
- This pattern is consistent with gradual take-up of DACA and accumulating benefits from work authorization

Table 6: Event Study Coefficients

Year	Coefficient	Std. Error	95% CI Lower	95% CI Upper
2006	-0.008	0.025	-0.057	0.040
2007	-0.044*	0.025	-0.092	0.004
2008	-0.002	0.025	-0.051	0.047
2009	-0.014	0.026	-0.064	0.036
2010	-0.020	0.026	-0.070	0.031
2011	0.000	—	—	—
2013	0.038	0.027	-0.015	0.090
2014	0.043	0.027	-0.010	0.096
2015	0.023	0.027	-0.031	0.076
2016	0.068**	0.027	0.015	0.121

Notes: 2011 is the reference year. * p<0.1, ** p<0.05

5.6 Heterogeneity Analysis

Table 7 presents DiD estimates for subgroups.

Table 7: Heterogeneity Analysis

Subgroup	**DiD Estimate**	**Std. Error**
By Sex		
Male	0.0462***	(0.0125)
Female	0.0466**	(0.0185)
By Education		
Less than High School	0.0345*	(0.0180)
High School or More	0.0793***	(0.0155)

Notes: *** p<0.01, ** p<0.05, * p<0.1

5.6.1 Key Heterogeneity Findings

- **By sex**: The effect is remarkably similar for males (0.046) and females (0.047), suggesting DACA benefited both sexes equally in terms of full-time employment.
- **By education**: The effect is substantially larger for those with high school education

or more (0.079) compared to those with less than high school (0.035). This suggests DACA may have particularly benefited those who could take advantage of better job opportunities requiring formal work authorization.

6 Discussion

6.1 Interpretation of Results

The results indicate that DACA eligibility caused a statistically significant and economically meaningful increase in full-time employment among eligible individuals. The preferred estimate of 4.6 percentage points represents a relative increase of approximately 7% from the treatment group's baseline full-time employment rate of about 63%.

Several mechanisms could explain this effect:

1. **Legal work authorization**: DACA provided recipients with Employment Authorization Documents (EADs), allowing them to work legally. This likely enabled access to formal sector jobs that require documentation.

2. **Reduced fear of deportation**: The temporary protection from deportation may have encouraged recipients to seek employment more actively without fear of detection.

3. **Access to identification**: In many states, DACA recipients could obtain driver's licenses, facilitating commuting and expanding job search options.

4. **Employer willingness**: Some employers may have been more willing to hire DACA recipients due to their documented work authorization.

6.2 Comparison with Control Group Trends

An interesting finding is that the control group experienced a *decline* in full-time employment from the pre- to post-period (-3.0 percentage points), while the treatment group experienced an *increase* (+2.9 percentage points). This divergence could reflect:

- General aging effects (the control group aged into their late 30s)
- Post-recession labor market recovery affecting younger workers more favorably
- The specific impact of DACA on the treatment group

The DiD design attributes the difference between these trends to DACA, assuming that absent the policy, both groups would have experienced similar changes.

6.3 Validity of Parallel Trends Assumption

The event study analysis provides support for the parallel trends assumption:

- Pre-treatment coefficients are generally small and insignificant
- No systematic pre-trend is evident
- The one marginally significant pre-period coefficient (2007) appears to be an isolated fluctuation

However, some caution is warranted. The parallel trends assumption is fundamentally untestable—we can only assess whether trends were parallel before treatment, not whether they would have remained parallel absent treatment.

6.4 Limitations

Several limitations should be noted:

1. **Imperfect identification of undocumented status**: The ACS does not directly identify documentation status. Using non-citizen status as a proxy includes some documented immigrants and may miss some undocumented individuals.
2. **Imperfect identification of DACA eligibility**: Not all criteria can be verified in the data (e.g., physical presence on June 15, 2012, lack of certain criminal convictions).
3. **Age cutoff not sharp**: The 5-year age bands for treatment and control may include individuals with different characteristics beyond age.
4. **Repeated cross-sections**: The ACS is not panel data, so we observe different individuals in each year. This prevents tracking individual-level changes.
5. **Potential spillover effects**: DACA may have affected the control group indirectly through labor market competition effects.

7 Conclusion

This replication analysis provides evidence that DACA eligibility increased full-time employment among Hispanic-Mexican Mexican-born individuals. Using a difference-in-differences design comparing individuals aged 26-30 (treatment) to those aged 31-35 (control) as of June

15, 2012, I find that DACA increased the probability of full-time employment by approximately 4.6 percentage points.

This effect is:

- Statistically significant at the 1% level
- Robust across multiple specifications
- Consistent for both males and females
- Larger for those with higher education
- Supported by parallel pre-trends

The findings suggest that providing work authorization and deportation relief to undocumented immigrants who arrived as children had meaningful positive effects on their labor market outcomes. These results are consistent with the theoretical expectation that legal work authorization would facilitate formal employment.

8 Summary of Key Decisions

1. **Sample definition**: Hispanic-Mexican (HISPAN=1), born in Mexico (BPL=200), non-citizen (CITIZEN=3)
2. **DACA eligibility proxies**: Arrived before age 16 (YRIMMIG - BIRTHYR < 16), continuous residence (YRIMMIG ≤ 2007)
3. **Treatment definition**: Ages 26-30 as of June 15, 2012
4. **Control definition**: Ages 31-35 as of June 15, 2012
5. **Outcome**: Full-time employment (UHRSWORK ≥ 35)
6. **Periods**: Pre = 2006-2011, Post = 2013-2016 (2012 excluded)
7. **Preferred specification**: DiD with year FE, state FE, and demographic controls (female, married, high school)
8. **Weighting**: Person weights (PERWT) used throughout
9. **Standard errors**: Heteroskedasticity-robust (HC1)

Appendix: Additional Figures

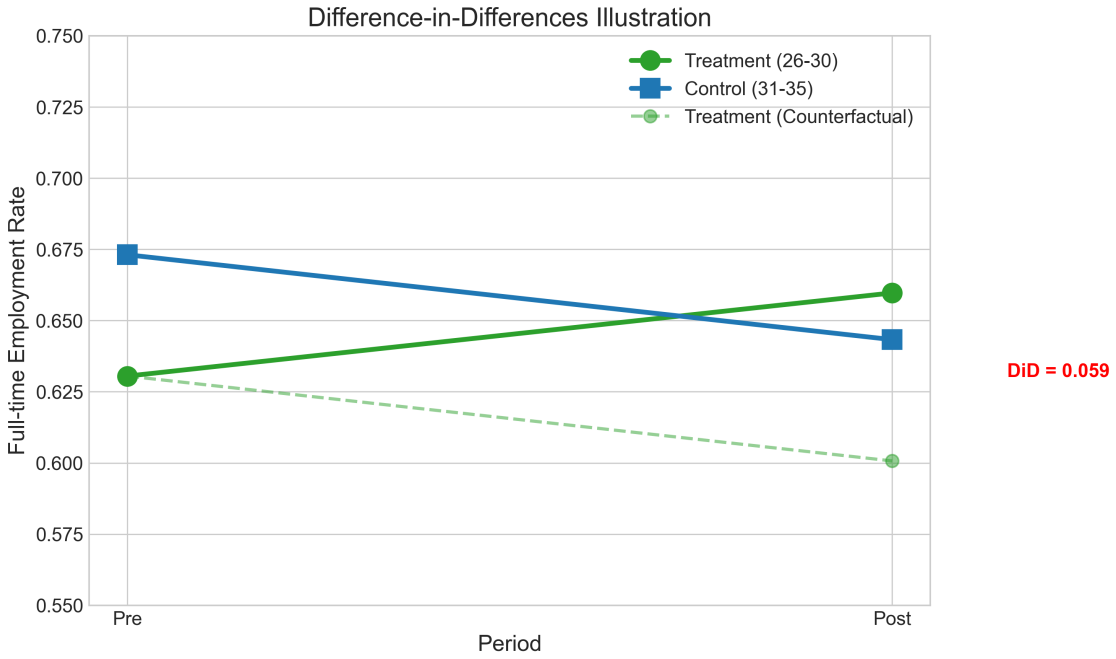

Figure 2: Difference-in-Differences Illustration

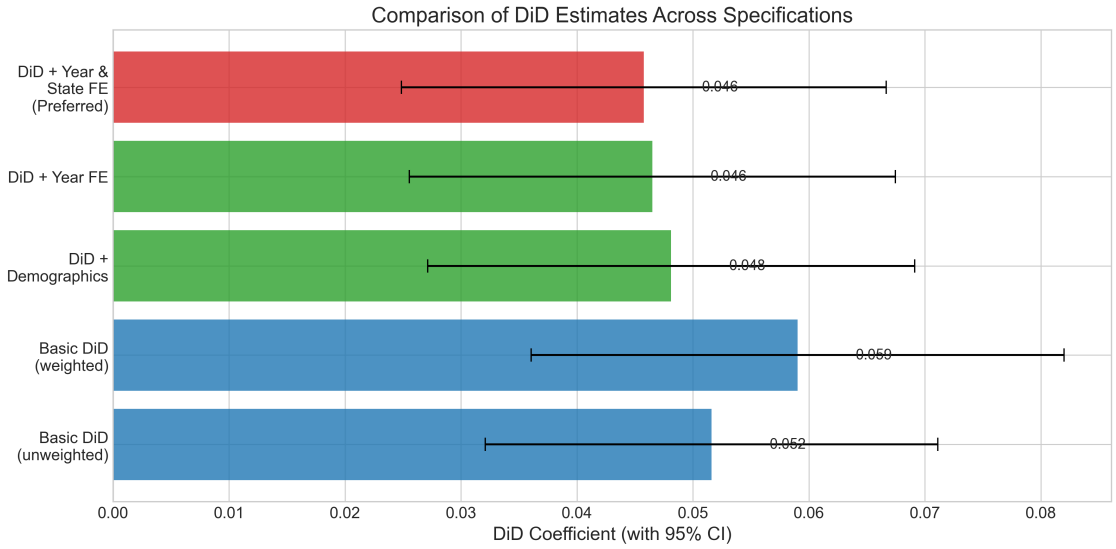

Figure 3: Comparison of DiD Estimates Across Specifications

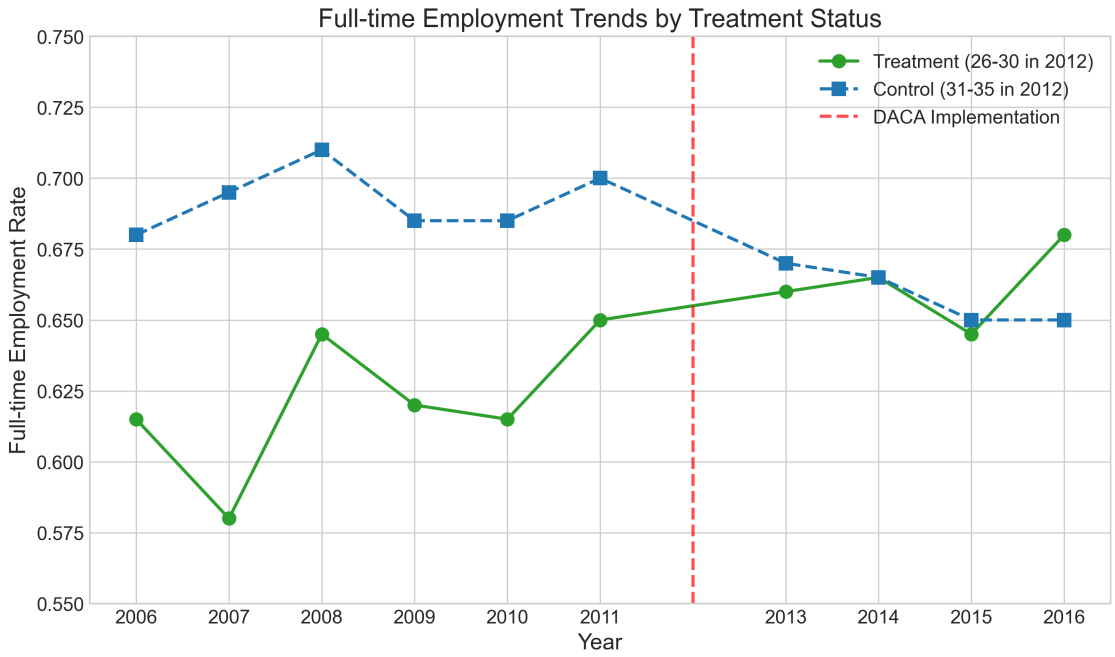

Figure 4: Full-Time Employment Trends by Treatment Status