Immigration Enforcement, Sanctuary Cities, and Rising Hispanic Suicide Rates

Immigration Enforcement and Hispanic Suicide

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Today's Presentation

1. **Motivation**
2. **Background**
3. **Data**
4. **Empirical Strategy**
5. **Results**
6. **Heterogeneity Analysis and Mechanisms**

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Motivation

Motivation

Immigration enforcement has intensified in recent years

11-12 million undocumented immigrants live in mixed-status families (Passel and Krogstad, 2025)

Enforcement creates ripple effects beyond targeted individuals

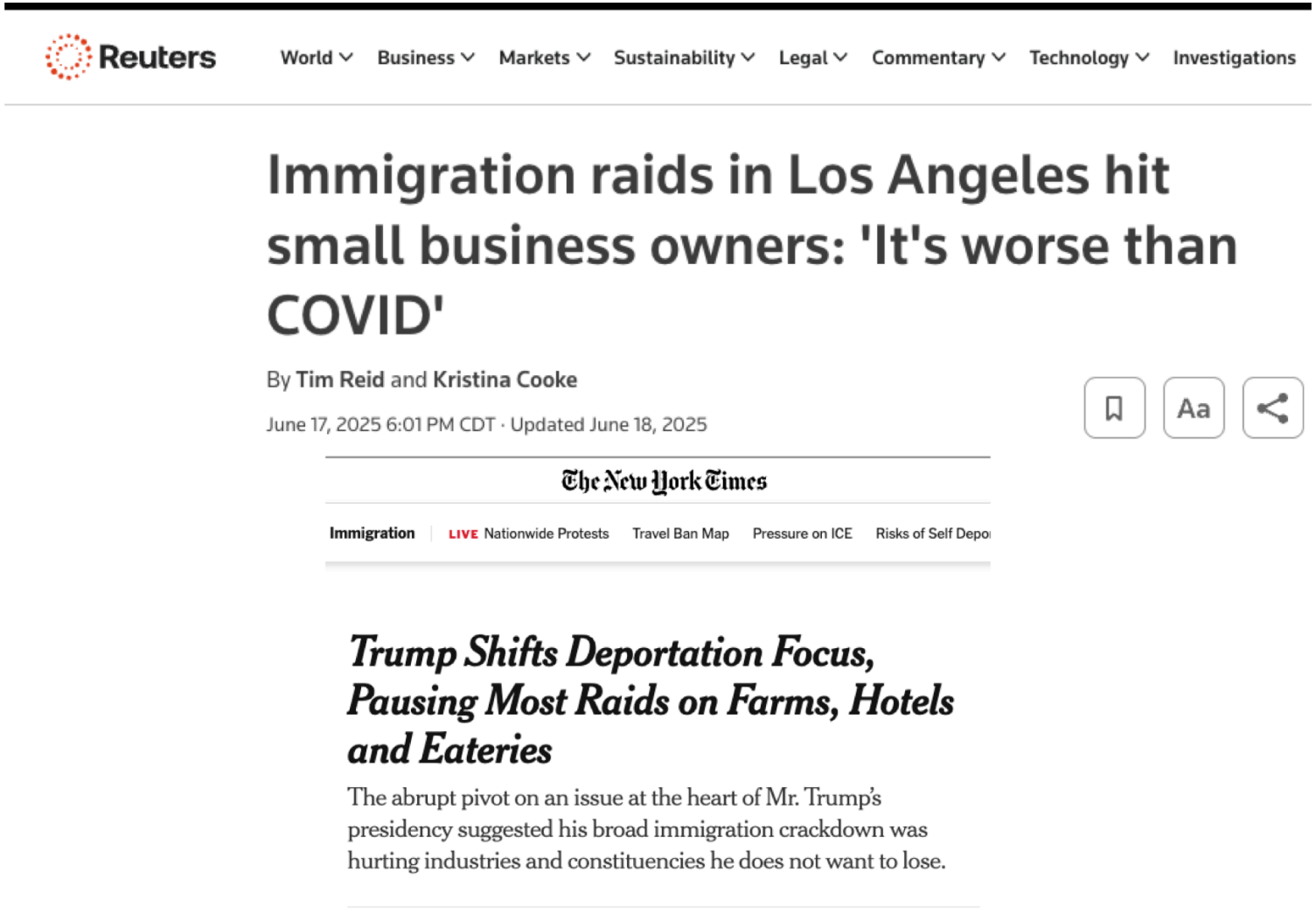
Economists studies the effects of immigration enforcement on various outcomes

Welfare take-up (Alsan and Yang, 2024)

Labor market outcomes (East, Hines, Luck, Mansour, and Velásquez, 2023)

Infant health outcomes (Vu, 2024)

Examples of recent immigration enforcement



Reuters

World Business Markets Sustainability Legal Commentary Technology Investigations

Immigration raids in Los Angeles hit small business owners: 'It's worse than COVID'

By **Tim Reid** and **Kristina Cooke**

June 17, 2025 6:01 PM CDT · Updated June 18, 2025

Aa

The New York Times

Immigration | LIVE Nationwide Protests Travel Ban Map Pressure on ICE Risks of Self Depo

Trump Shifts Deportation Focus, Pausing Most Raids on Farms, Hotels and Eateries

The abrupt pivot on an issue at the heart of Mr. Trump's presidency suggested his broad immigration crackdown was hurting industries and constituencies he does not want to lose.

The effects of immigration enforcement on mental health is understudied

As immigration enforcement intensifies and becomes more pervasive, understanding its broader impacts is crucial

These laws, designed to enhance security, they generate significant unintended consequences (Vu, 2024; Alsan and Yang, 2024; East, Hines, Luck et al., 2023; Cox and Miles, 2013)

I use the recent developments in DiD literature to answer the following question

What is the **causal effect** of immigration enforcement on suicide rates among Hispanic populations in the United States?

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What is the **causal effect** of immigration enforcement on suicide rates among **Hispanic** populations in the United States?

I use the staggered rollout of Secure Communities (2008-2013)---a deportation expansion program---to estimate triple difference-in-differences (DDD)

Preview of Results

Key Findings:

- **Hispanic children (5-14)**: **35-100% decrease** in suicide rates relative to Whites
- **Hispanic adults (34+)**: **18-60% increase** in suicide rates relative to Whites
- **Sanctuary cities**: Protective effects across most age groups
- **Low unemployment**: Key mechanism moderating effects
- **Political affiliation**: Democratic counties show larger increases in adult suicide rates

Implications:

- Immigration enforcement creates **substantial spillover effects** beyond direct targets.
- Local policies can **mitigate harm**.

Background

Secure Communities (2008-2014)

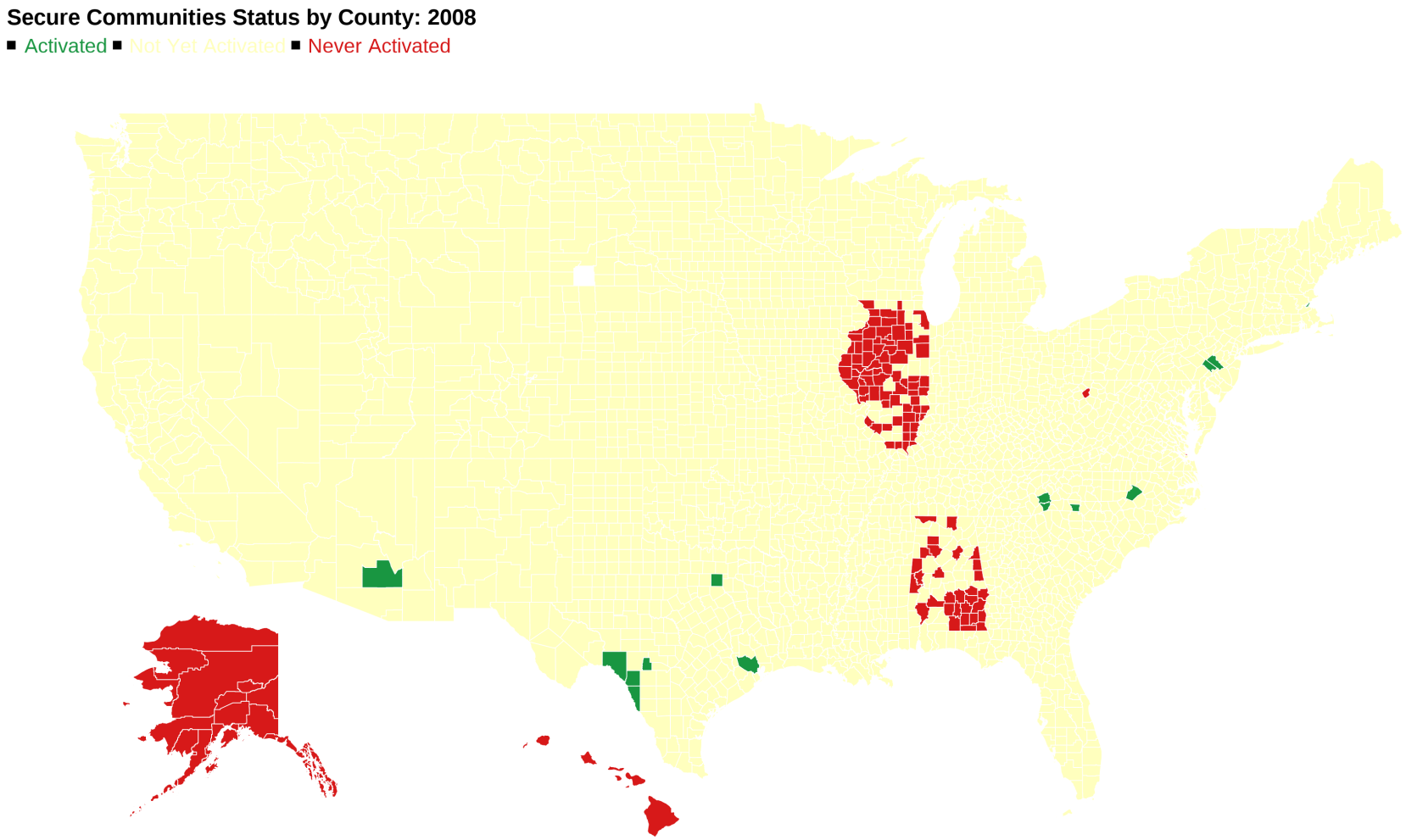
Immigration enforcement program run by the Immigration and Customs Enforcement (ICE)

Operated from 2008 to 2014, counties opted into the program voluntarily until the federal mandates the participation in 2013

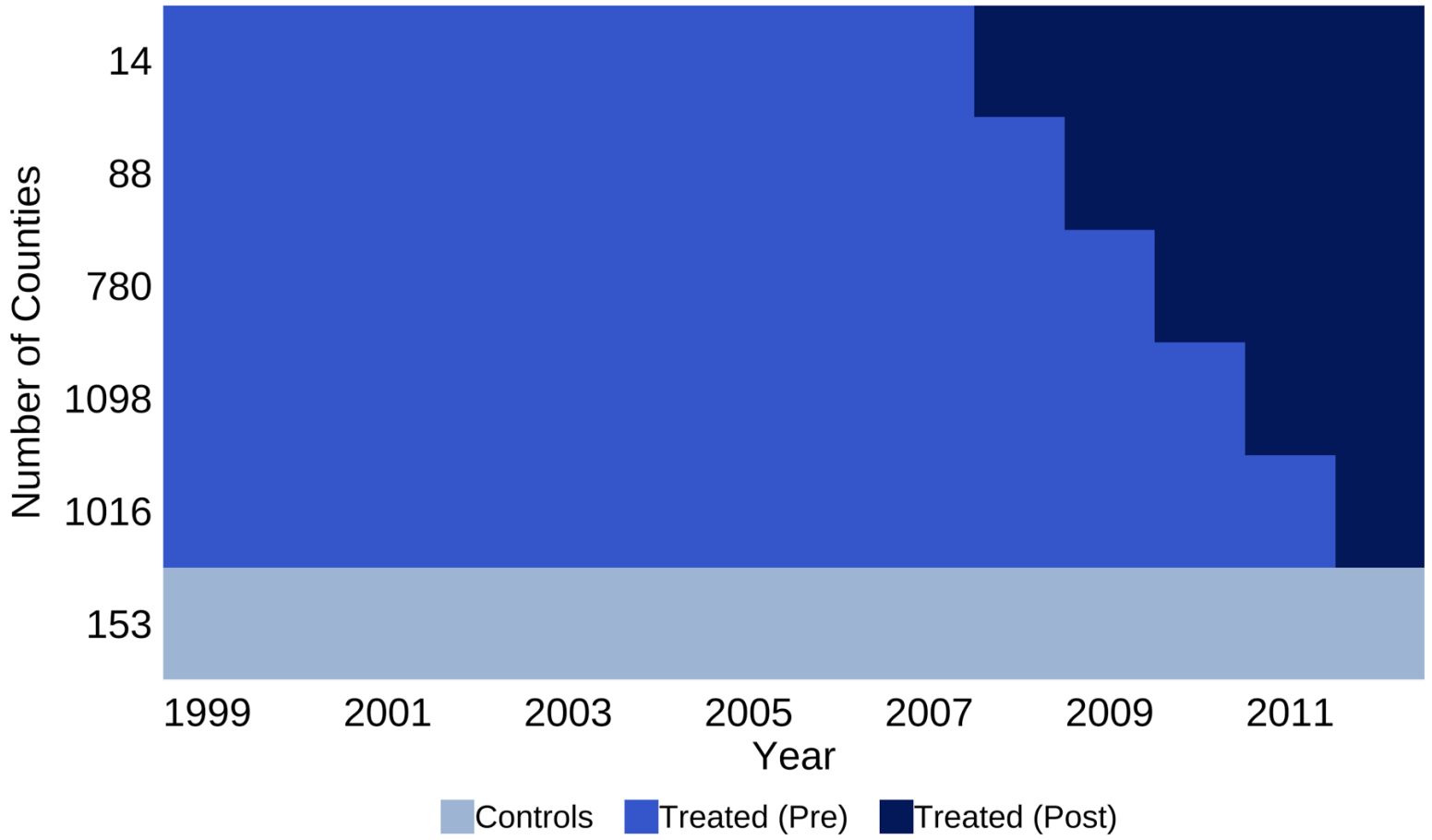
Fingerprints of all arrestees automatically shared with ICE for immigration status checks

ICE issued "detainer" requests to hold individuals for up to 48 hours for potential deportation

Map: Secure Communities staggered rollout (2008-2013)



The staggered rollout of Secure Communities



Local and state governments that resisted Secure Communities implementation were designated as sanctuary cities

Local jurisdictions that limited cooperation with federal immigration enforcement and refused ICE' detainer requests

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Local jurisdictions that limited cooperation with federal immigration enforcement and refused ICE' detainer requests

Three main types of sanctuary policies:

- **"Don't ask" - prohibit inquiring about immigration status**
- **"Don't enforce" - limit local enforcement of immigration law**
- **"Don't tell" - restrict information sharing with federal authorities**

Data

I use multiple data sources for my analysis

Mortality data from the National Vital Statistics System (NVSS) (National vital statistics system, 2007)

- **Annual count of suicides by county, race, and age group**
- **Sample period: 1999-2013 to align with SC implementation**

Secure Communities (SC) data (Alsan and Yang, 2024)

- **They use data from Freedom of Information Act (FOIA) requests**
- **Determined when counties opted into the program**

I use multiple data sources for my analysis (cont.)

Sanctuary city data from ICE's reports

- **Listed all local and state jurisdictions that adopted sanctuary policies**

I use multiple data sources for my analysis (cont.)

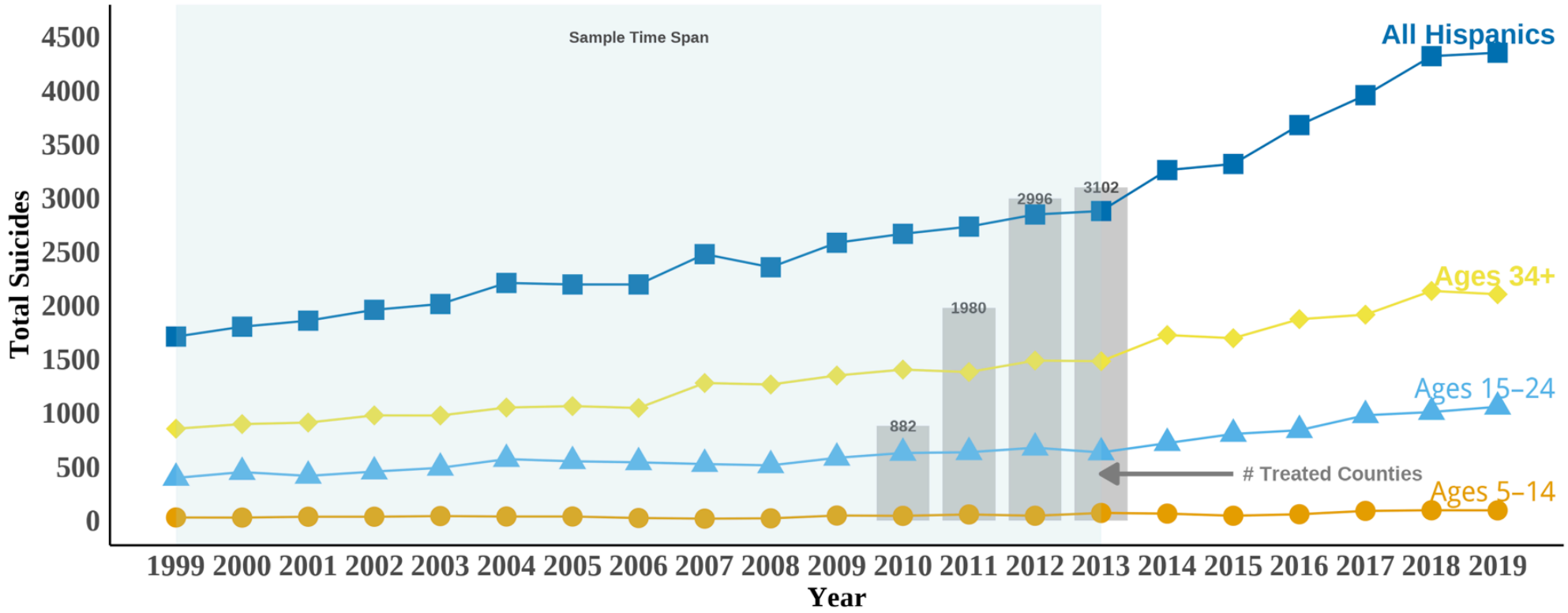
Sanctuary city data from ICE's reports

- **Listed all local and state jurisdictions that adopted sanctuary policies**

For heterogeneity analysis, I also use:

- **County-level demographic and socioeconomic data from the Census Bureau**
- **Prejudice measures from the Implicit Association Test (IAT), American National Election Studies (ANES), and Uniform Crime Reports (UCR) to calculate the number of hate crimes against Hispanics** (Greenwald, McGhee, and Schwartz, 1998; American National Election Studies, 2021; Bureau of Justice Statistics, 2023a)
- **County-level unemployment data using Current Population Survey (CPS) and Local Area Unemployment Statistics (LAUS)** (U.S. Bureau of Labor Statistics, 2025)
- **County-level election results** (Amlani and Algara, 2021)

Suicides by age groups



Empirical Strategy

Triple Difference-in-Differences (DDD) event study specification

Outcome variable transformation

- Suicide counts often zero or small integers at county level
- Apply **inverse hyperbolic sine (IHS)** transformation: $IHS(y) = \ln(y + \sqrt{y^2 + 1})$
- Key advantages: defined for zero values, approximates log for large values, coefficients interpretable as percentage changes (Burbidge, Magee, and Robb, 1988; MacKinnon and Magee, 1990)

$$\text{IHS}(y_{crst}) = \sum_{l=-K}^{L} \beta_l \mathbf{1}\{t - E_c = l\} \times Hispanic_r + \theta_{cr} + \lambda_{rt} + \gamma_{ct} + \varepsilon_{crst}$$

I use Borusyak, Jaravel, and Spiess (2024) to estimate a **causal impact** of SC on Hispanic suicide rates

Triple Difference-in-Differences (DDD) event study specification (cont.)

$$\text{IHS}(y_{crst}) = \sum_{l=-K}^{L} \beta_l \mathbf{1}\{t - E_c = l\} \times Hispanic_r + \theta_{cr} + \lambda_{rt} + \gamma_{ct} + \varepsilon_{crst}$$

- **Outcome**: $\text{IHS}(y_{crst})$ IHS transformation of suicide counts by race *r*, county *c*, time *t*

Triple Difference-in-Differences (DDD) event study specification (cont.)

$$\text{IHS}(y_{crst}) = \sum_{l=-K}^{L} \beta_l \mathbf{1}\{t - E_c = l\} \times Hispanic_r + \theta_{cr} + \lambda_{rt} + \gamma_{ct} + \varepsilon_{crst}$$

- **Treatment interaction**:
  - $\mathbf{1}\{t - E_c = l\}$ is an indicator variable equal to 1 when time t is l years away from the adoption of waiting years in county c
  - $Hispanic\ indicator$ (1 for Hispanic, 0 for White)

Triple Difference-in-Differences (DDD) event study specification (cont.)

$$\text{IHS}(y_{crst}) = \sum_{l=-K}^{L} \beta_l \mathbf{1}\{t - E_c = l\} \times Hispanic_r + \theta_{cr} + \lambda_{rt} + \gamma_{ct} + \varepsilon_{crst}$$

Fixed effects control for:

- **County-race** (θ_{cr}): Time-invariant differences between Hispanic and White rates within counties
- **Race-year** (λ_{rt}): National trends affecting Hispanic and White populations differently
- **County-year** (γ_{ct}): County-specific time-varying shocks affecting both groups equally

Triple Difference-in-Differences (DDD) event study specification (cont.)

$$\text{IHS}(y_{crst}) = \sum_{l=-K}^{L} \beta_l \mathbf{1}\{t - E_c = l\} \times Hispanic_r + \theta_{cr} + lambda_{rt} + \gamma_{ct} + \varepsilon_{crst}$$

Coefficients of interest (β_l):

- For $l < 0$, β_l captures the pre-treatment trends and parallel trends assumption
- For $l \geq 0$, β_l captures the differential effect of Secure Communities adoption on Hispanic suicide rates relative to Whites

[Causal Identification Assumptions]

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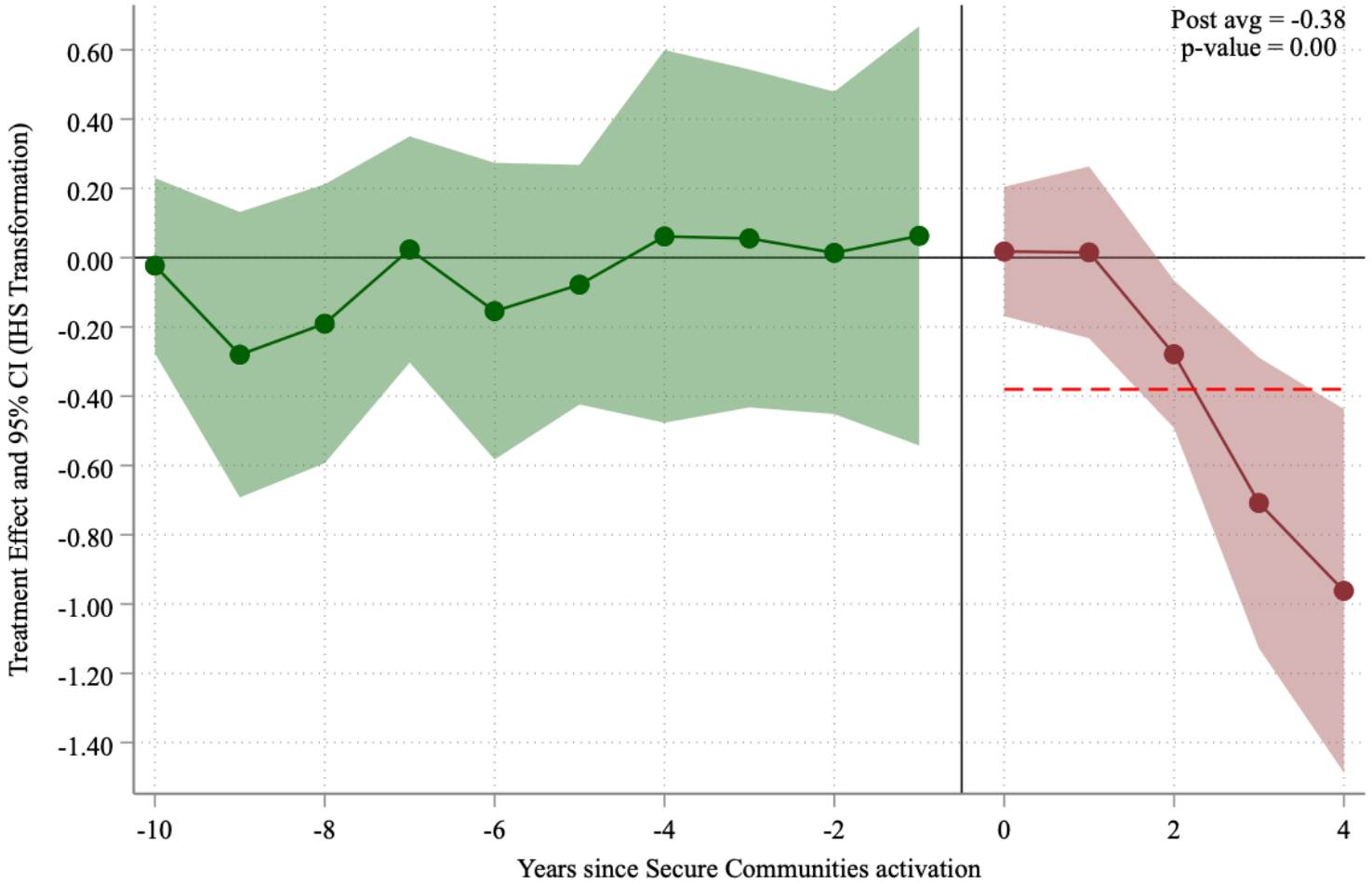
- For $l \geq 0$, β_l captures the differential effect of Secure Communities adoption on Hispanic suicide rates relative to Whites

All regressions are weighted by county population and standard errors are clustered at the county level

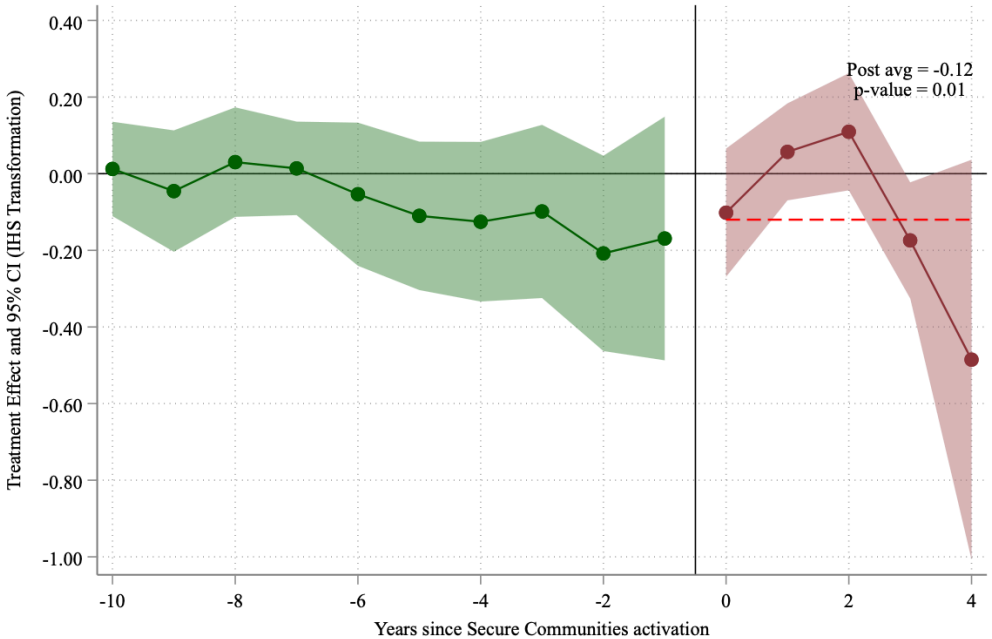
[Causal Identification Assumptions]

Results

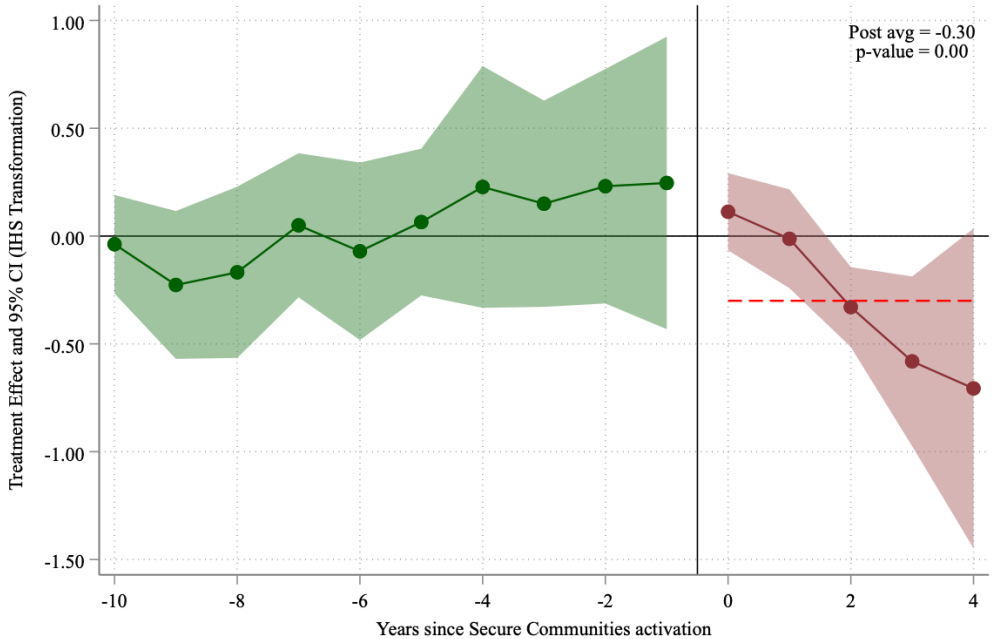
I find significant decreases in suicide rates among ages 5-14 year old Hispanic children



The decreases in suicide is more pronounced among ages 5-14 year old Hispanic boys

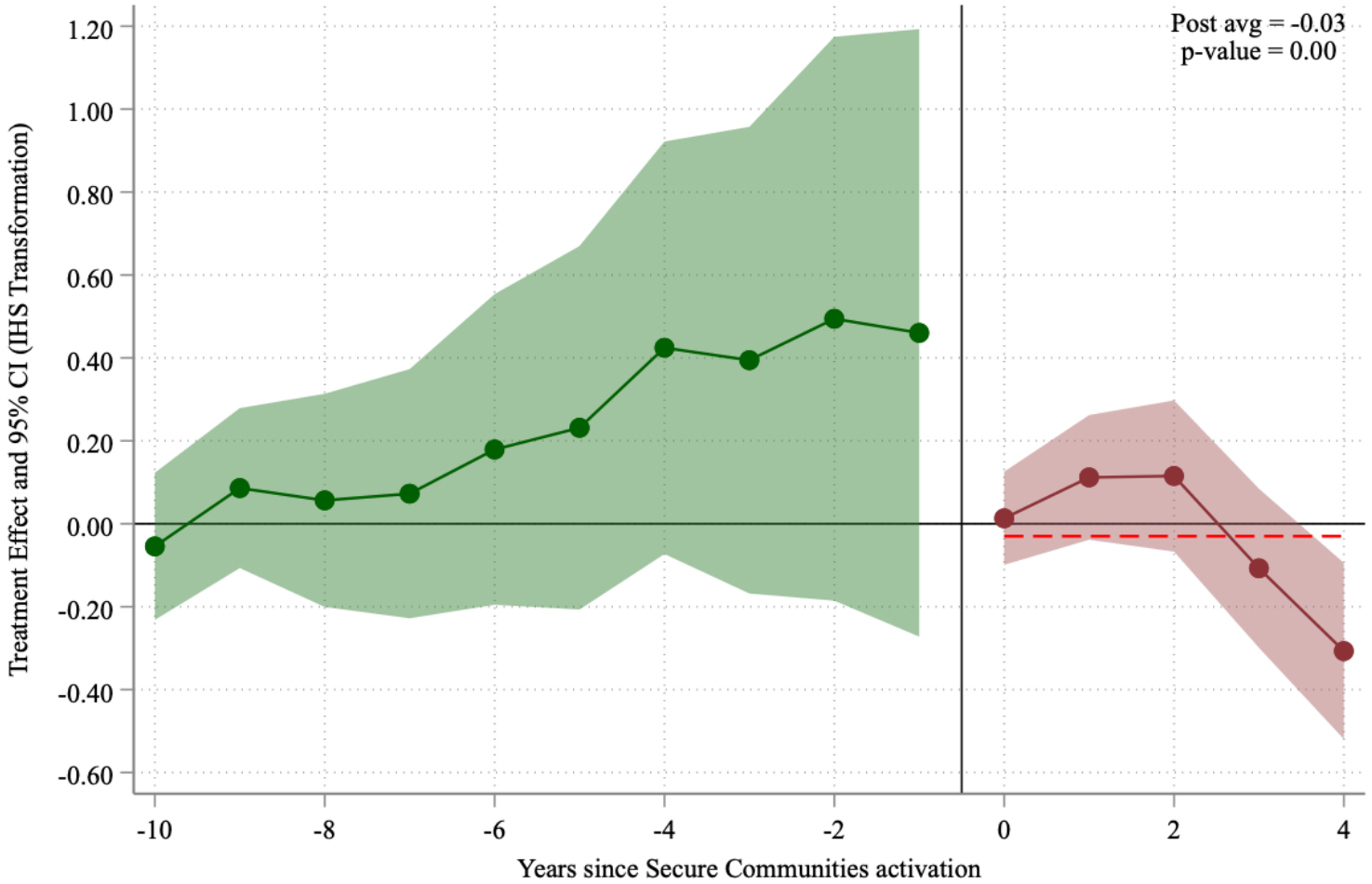


Girls

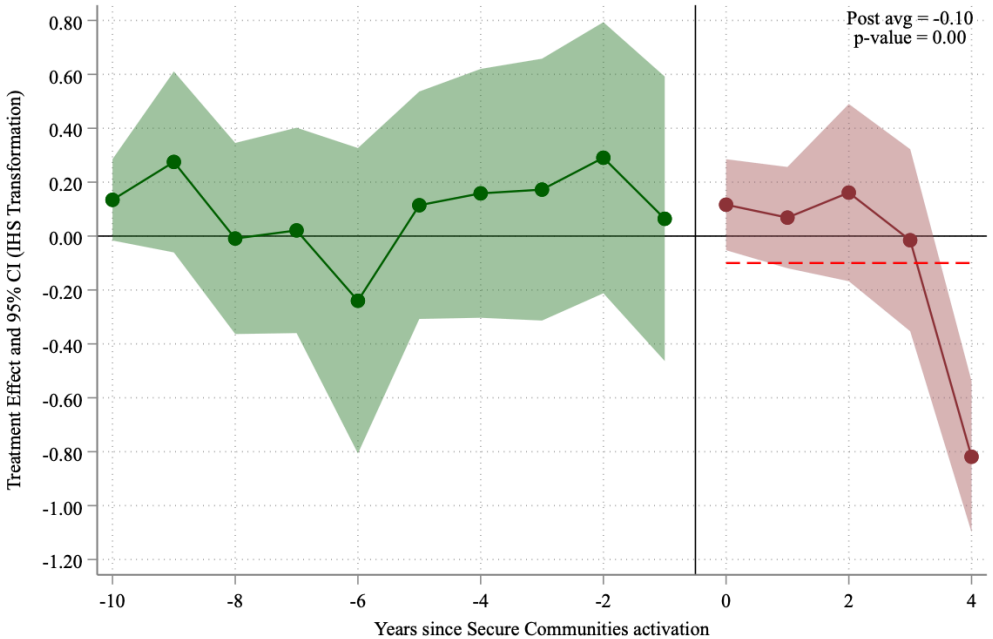


Boys

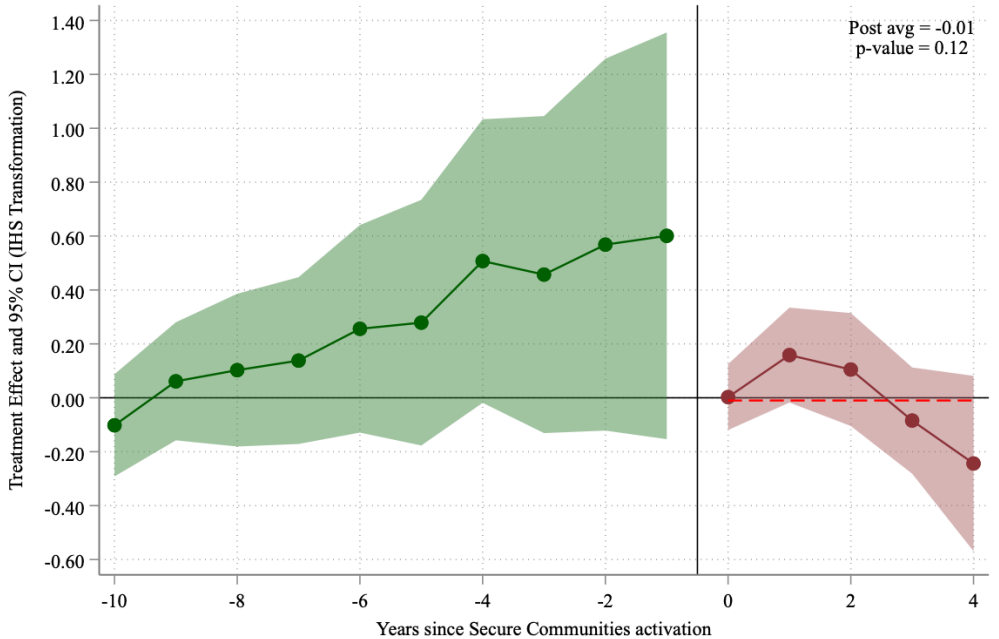
I find a small decreases in suicide rates among ages 15-24 year old Hispanic youth



I find that SC did not affect the suicides among ages 15-24 year old youth except for the fifth year post SC for female youth

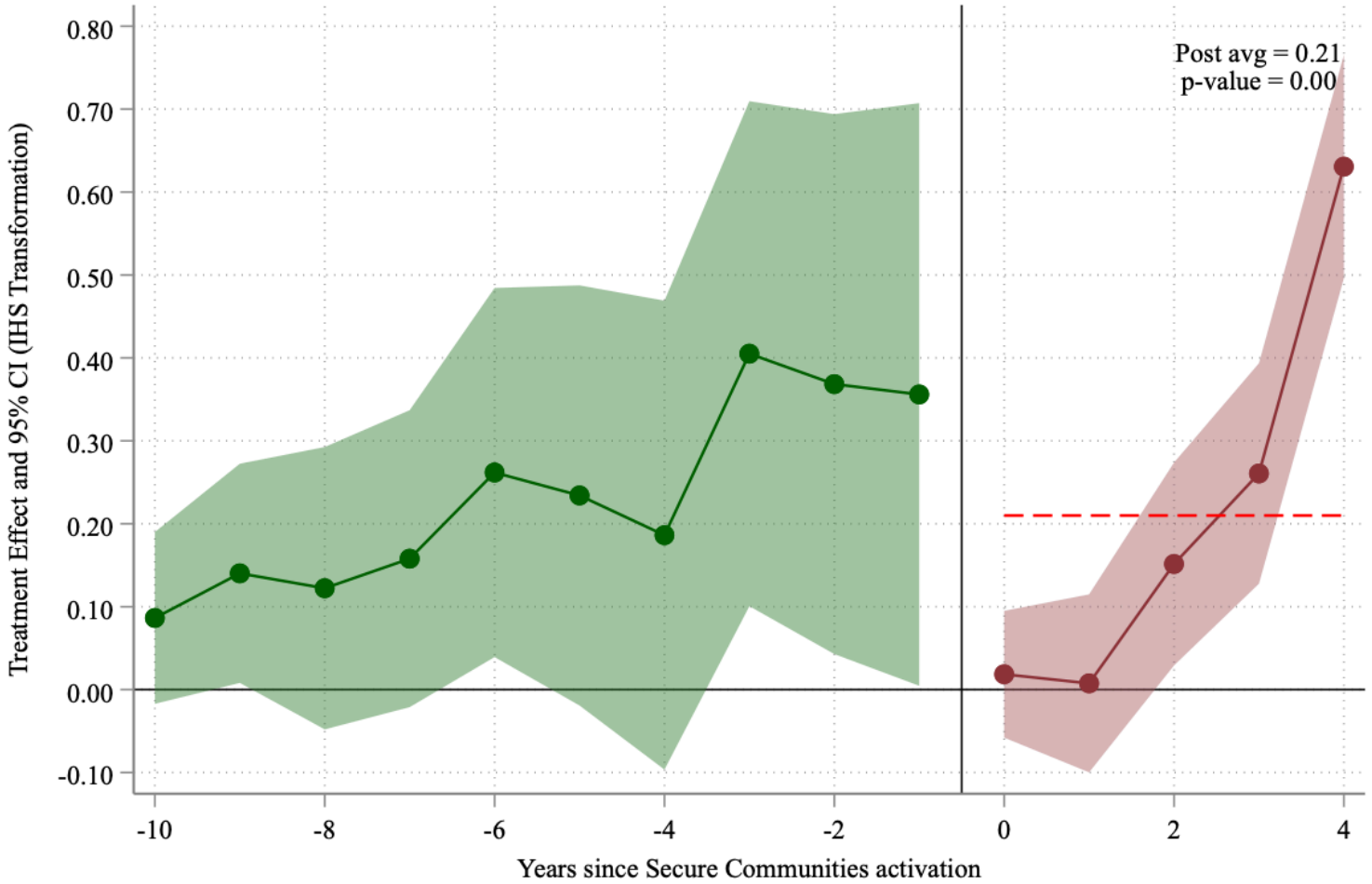


Females

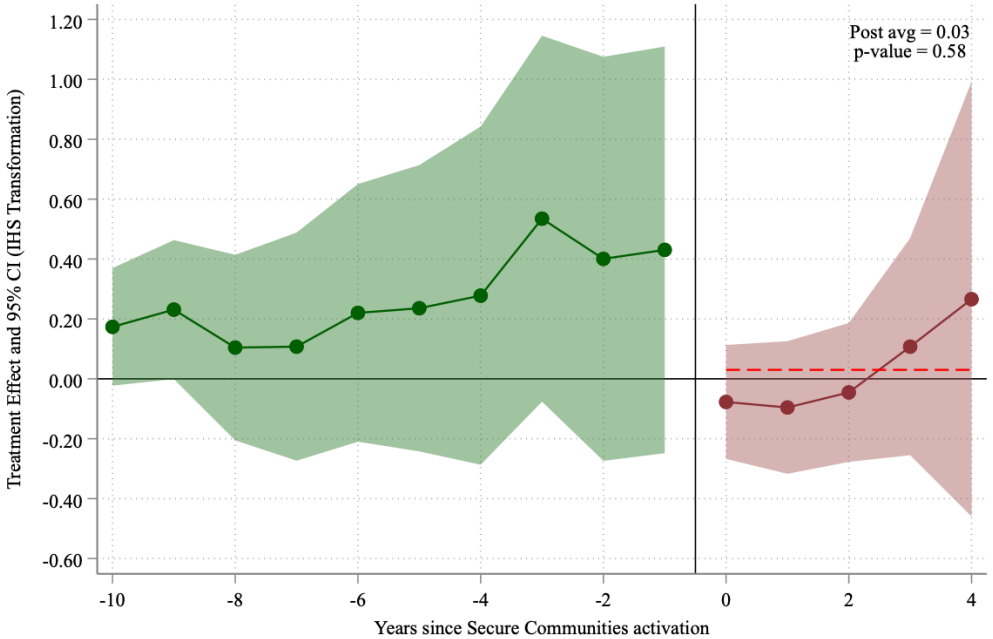


Males

I find a large and significant increase in suicide rates among ages 34+ Hispanics



The large increase in suicide rates is driven by 34+ males



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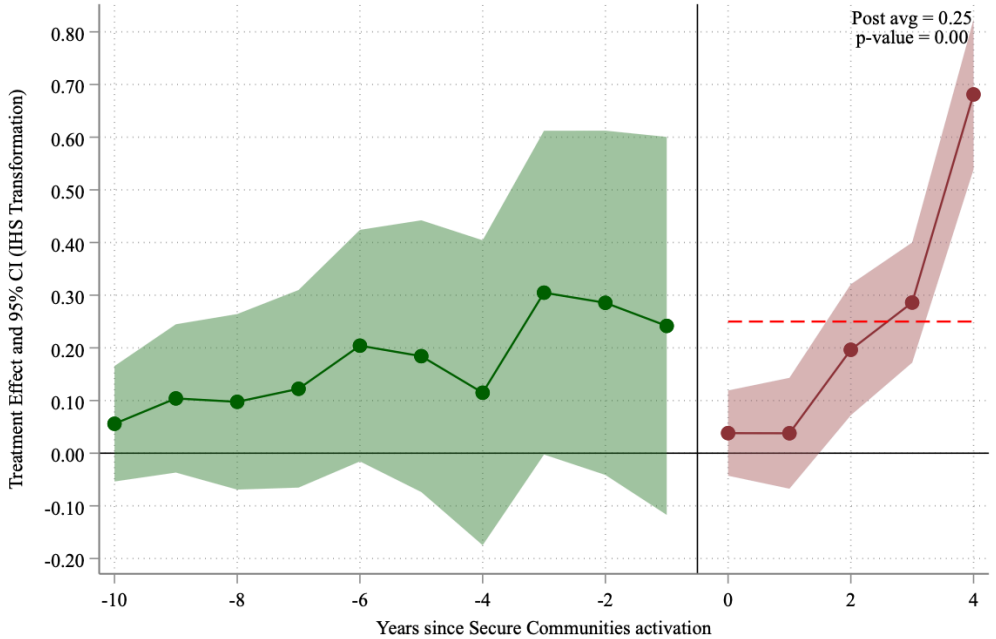
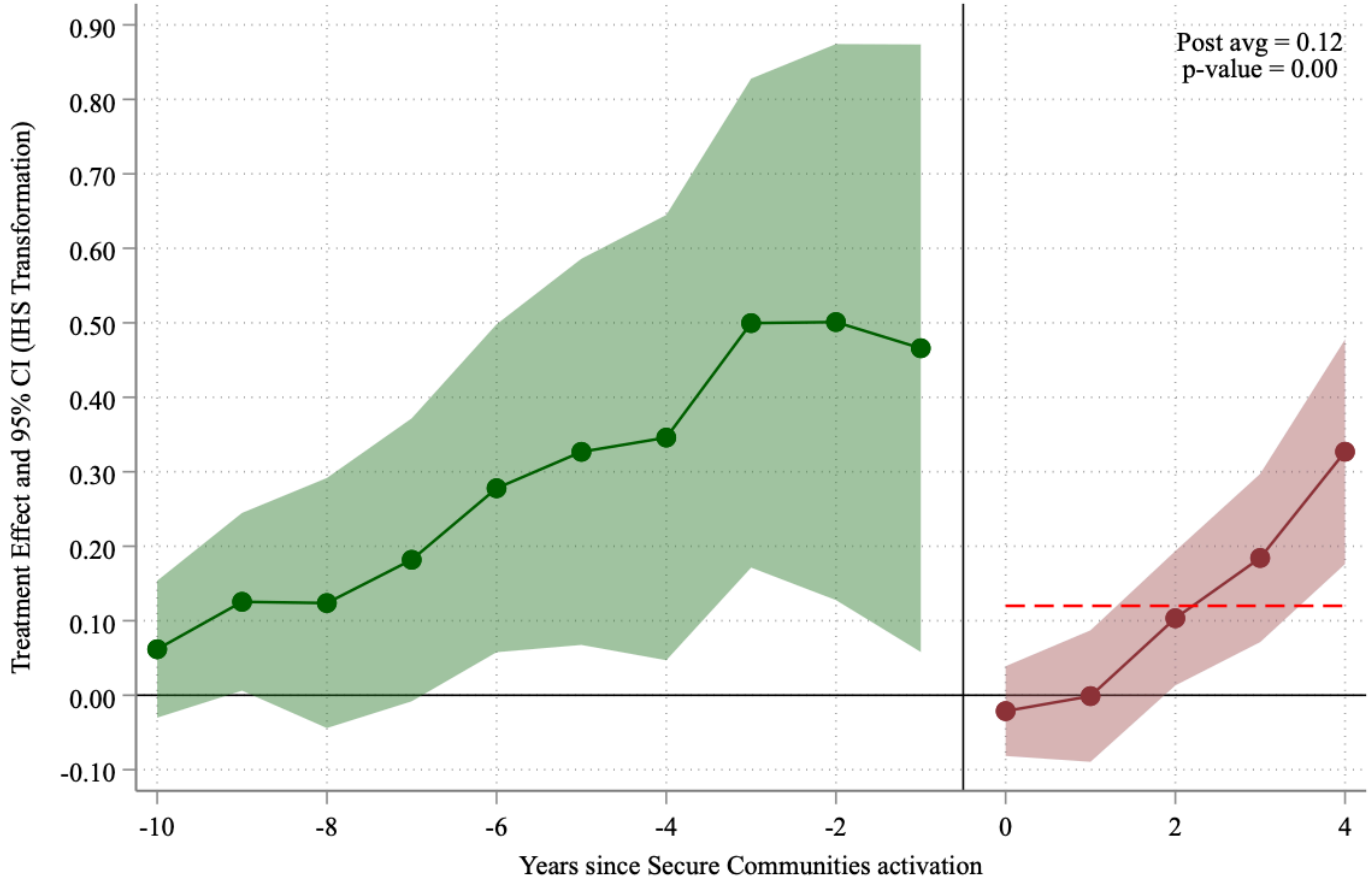


Males

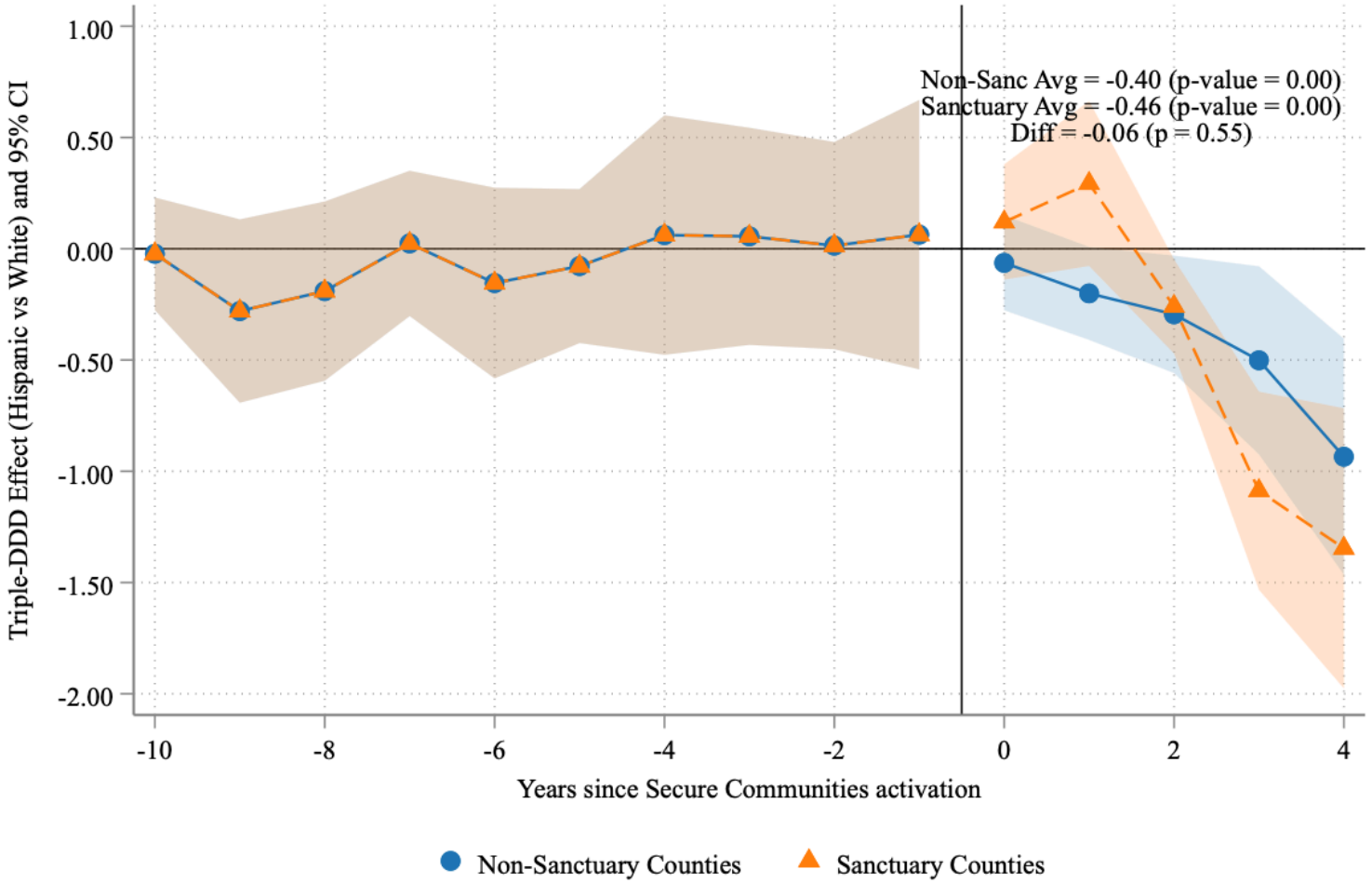
I find a large and significant increase in suicide rates among all Hispanics but parallel trends and non-anticipation likely do not hold



[By gender]

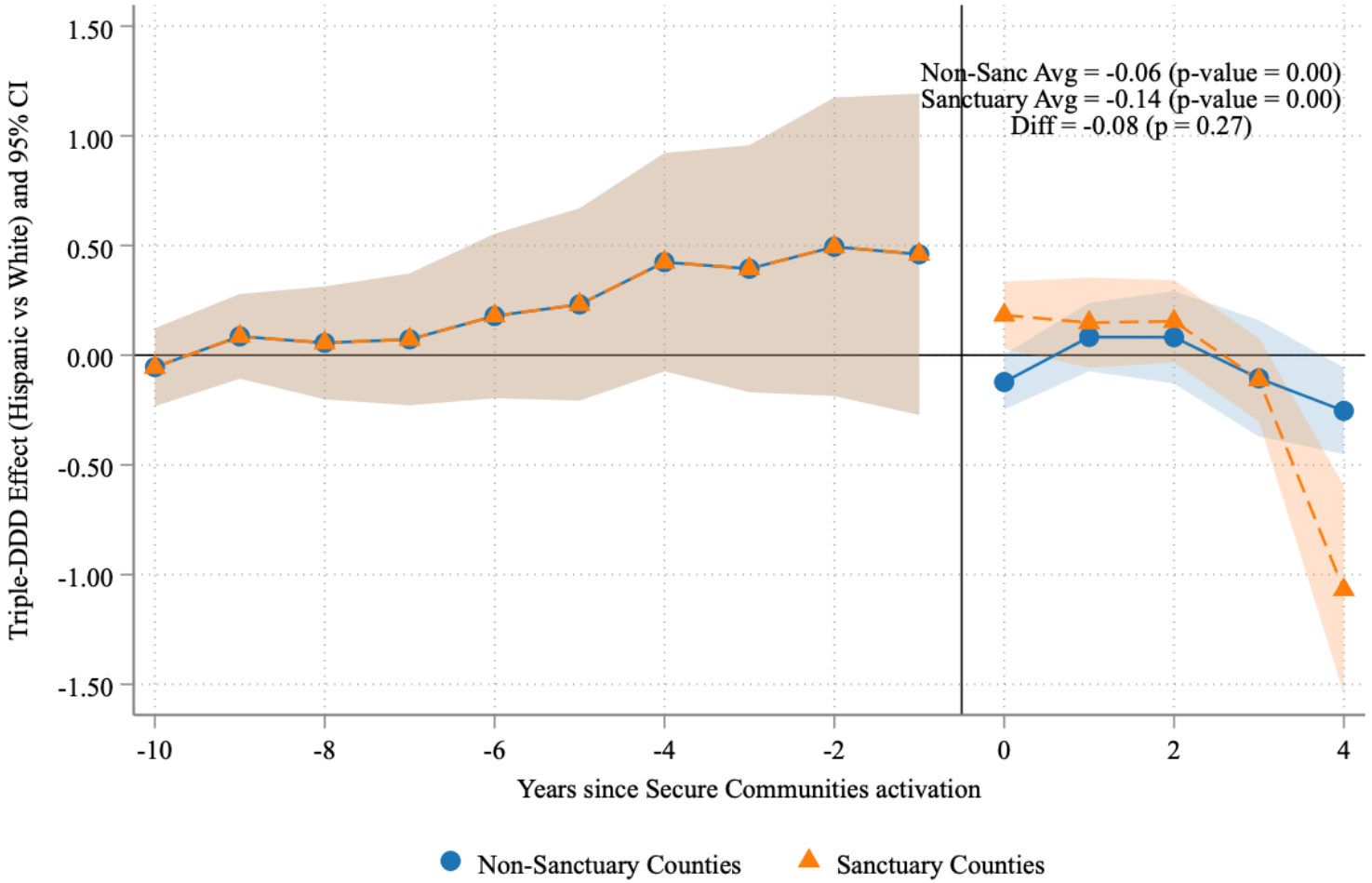
Sanctuary City, Heterogeneity, and Mechanisms

Sanctuary cities buffer the effects of Secure Communities on suicide rates among ages 5-14 Hispanic children



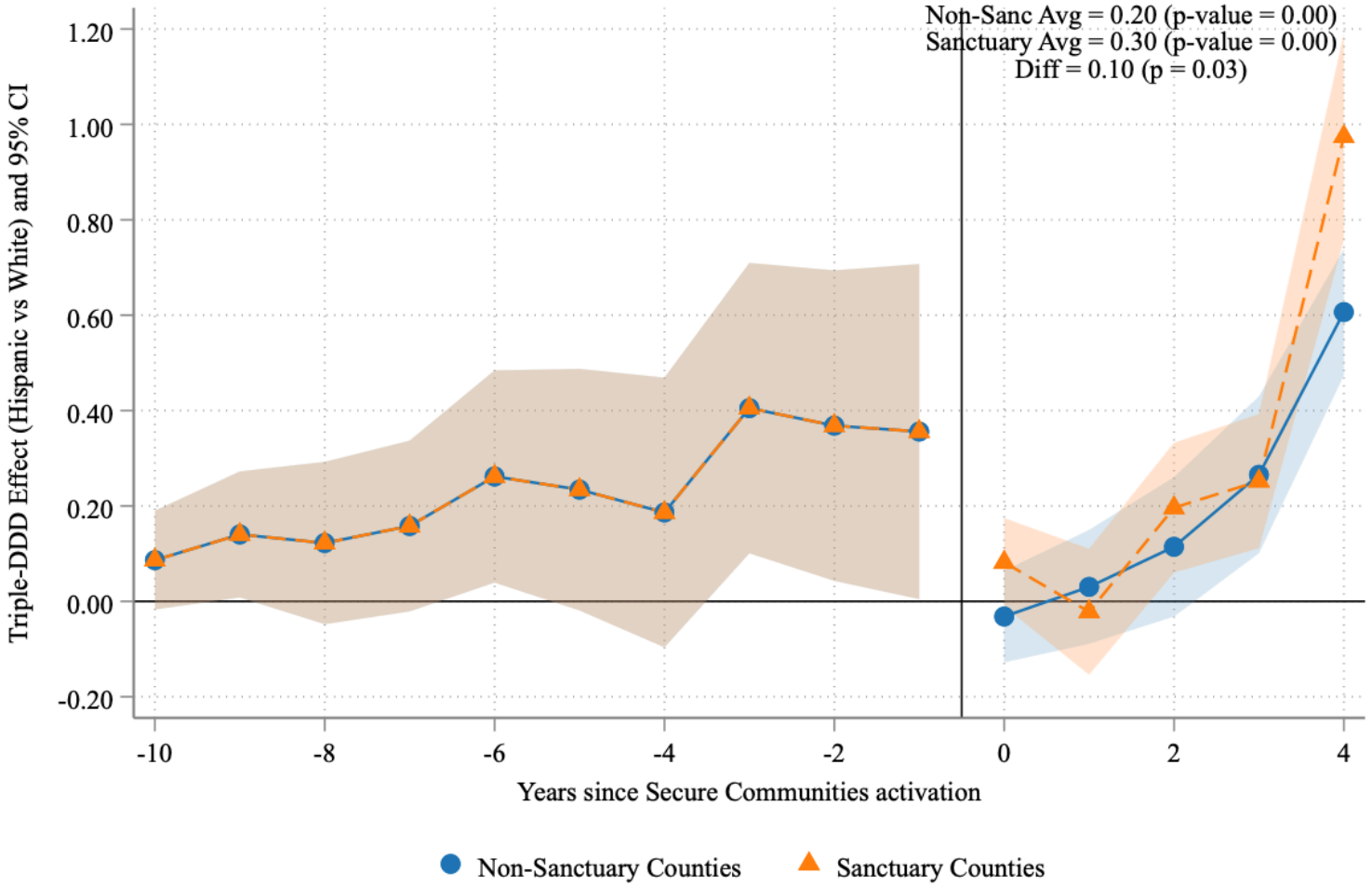
[By gender]

Sanctuary cities buffer the effects of Secure Communities on suicide rates among ages 15-24 Hispanic youth



[By gender]

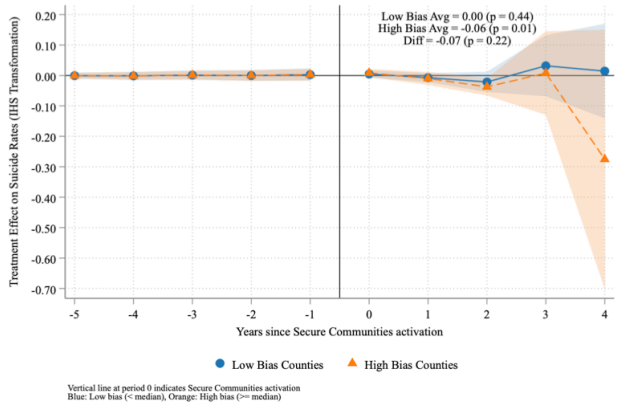
Suicide rate increase among **ages 34+** were higher in Sanctuary cities



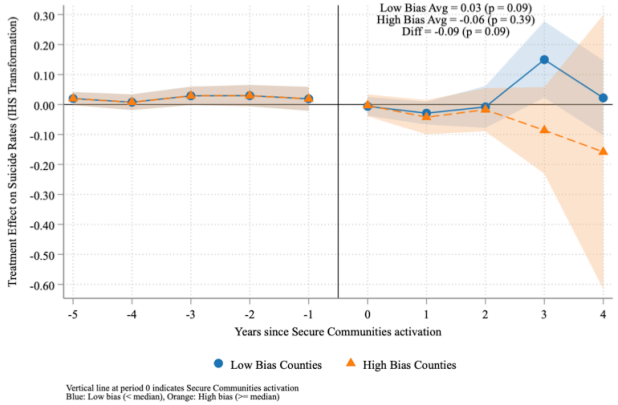
[By gender | All ages]

Anti-Hispanic bias does not seem to be driving the effects of Secure Communities on Hispanic suicide rates

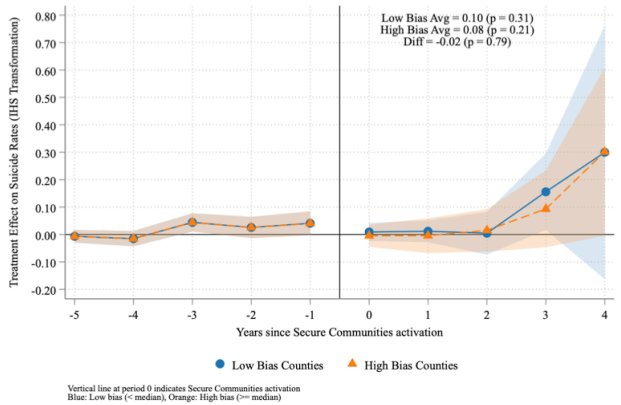
Ages 5-14



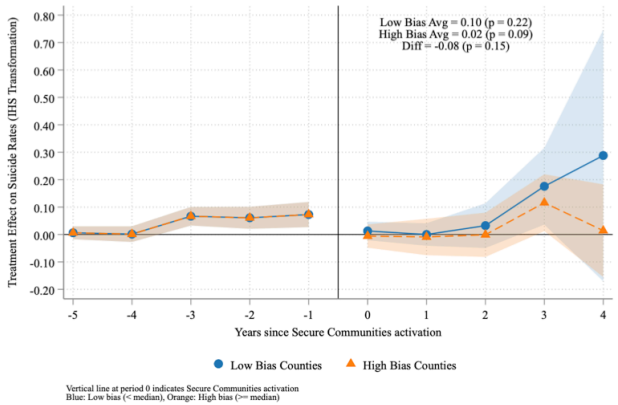
Ages 15-24



Ages 34+



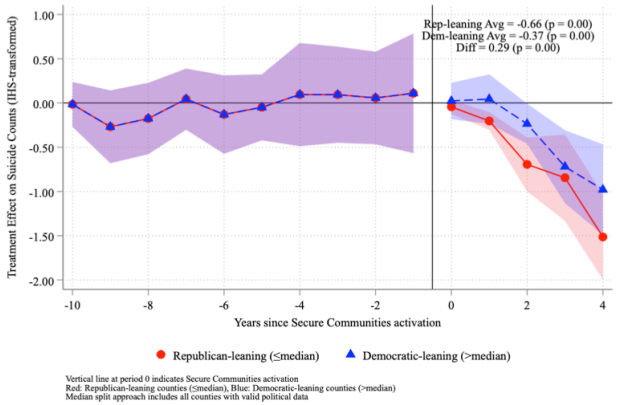
All Ages



[By gender]

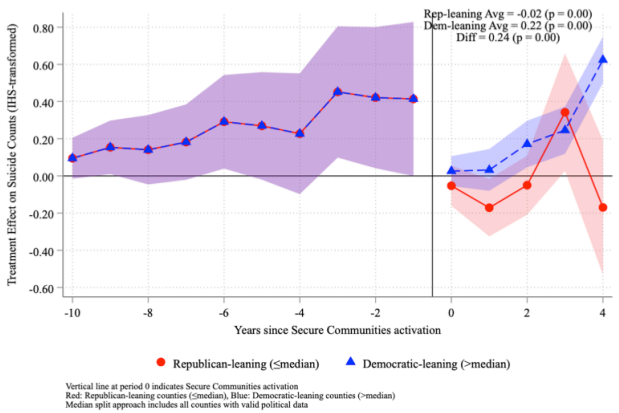
Political affiliation moderates the effects of Secure Communities on Hispanic suicide rates

Ages 5-14

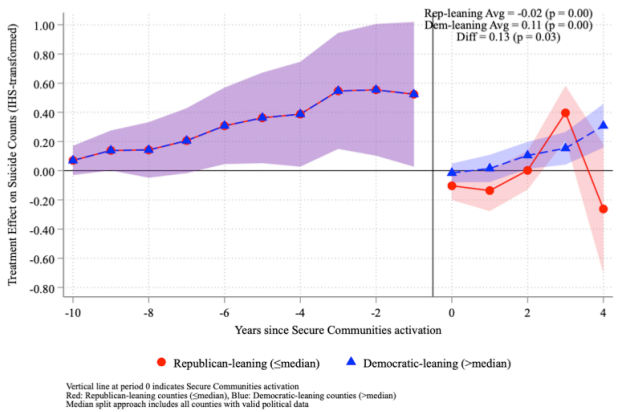


Ages 15-24

Ages 34+



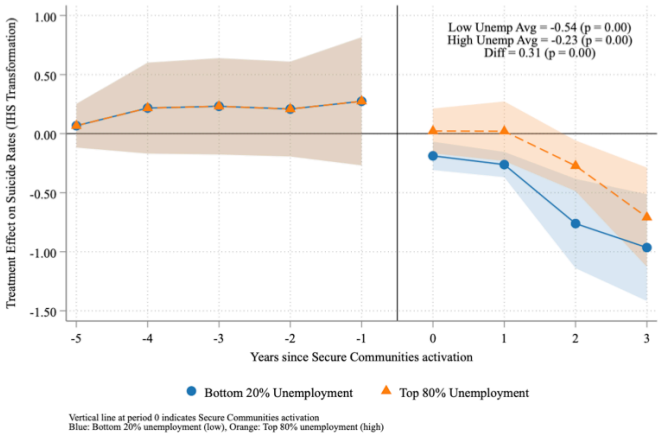
All Ages



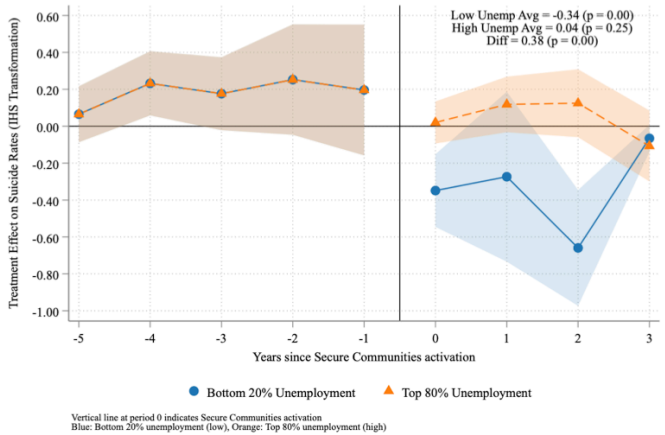
[By gender]

Unemployment (CPS) moderates the effects of Secure Communities on Hispanic suicide rates

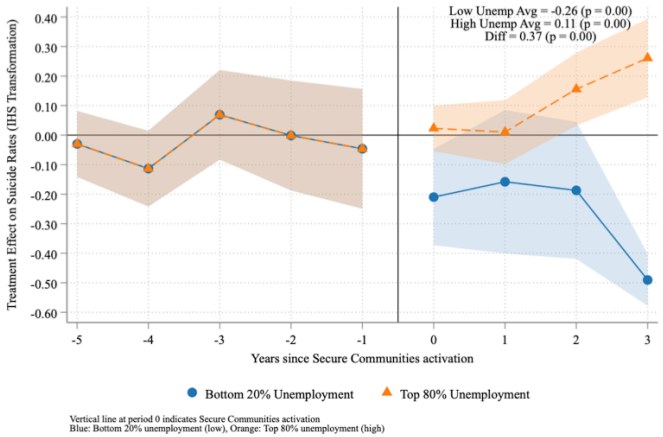
Ages 5-14



Ages 15-24



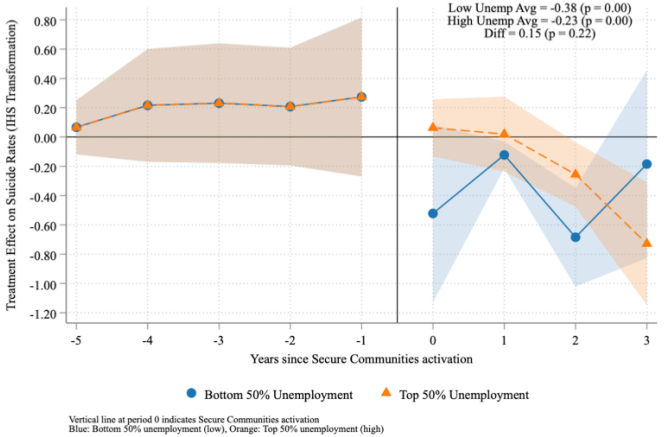
Ages 34+



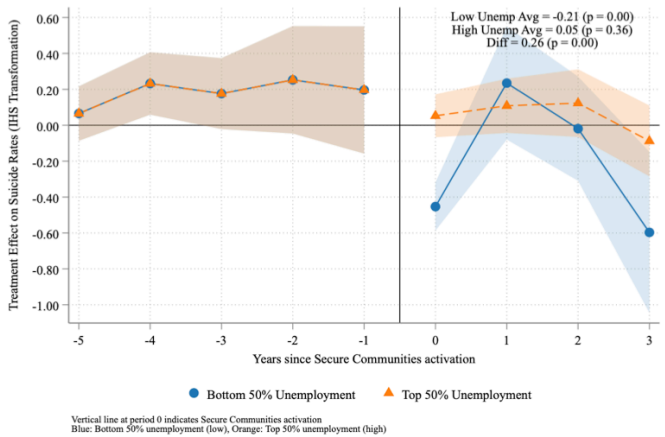
[By gender]

Unemployment (LAUS) moderates the effects of Secure Communities on Hispanic suicide rates

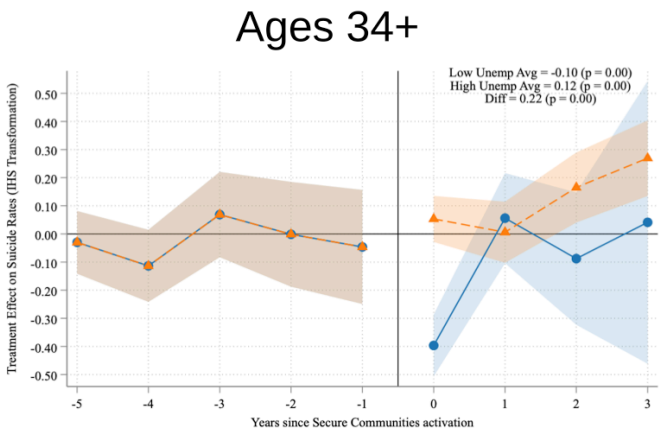
Ages 5-14



Ages 15-24



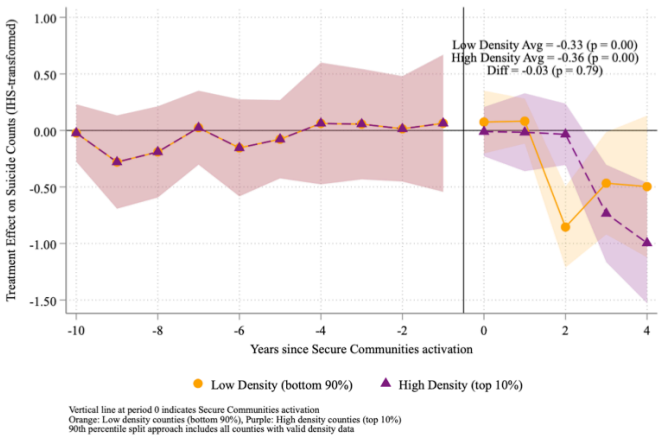
Ages 34+



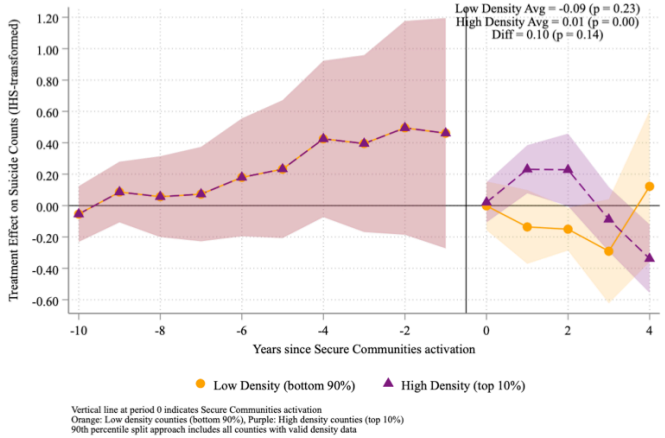
[By gender]

Population density moderates the effects of Secure Communities on Hispanic suicide rates

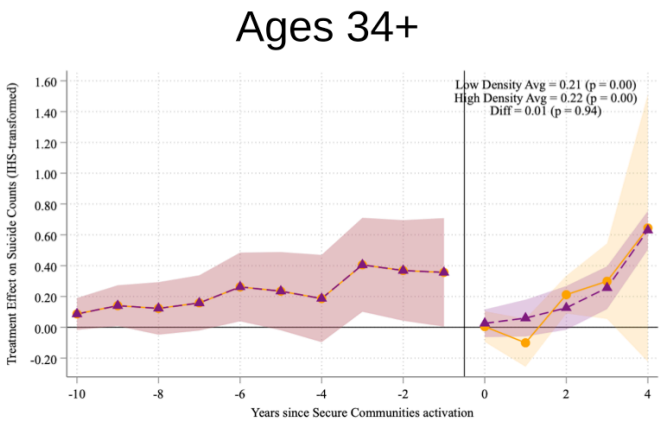
Ages 5-14



Ages 15-24

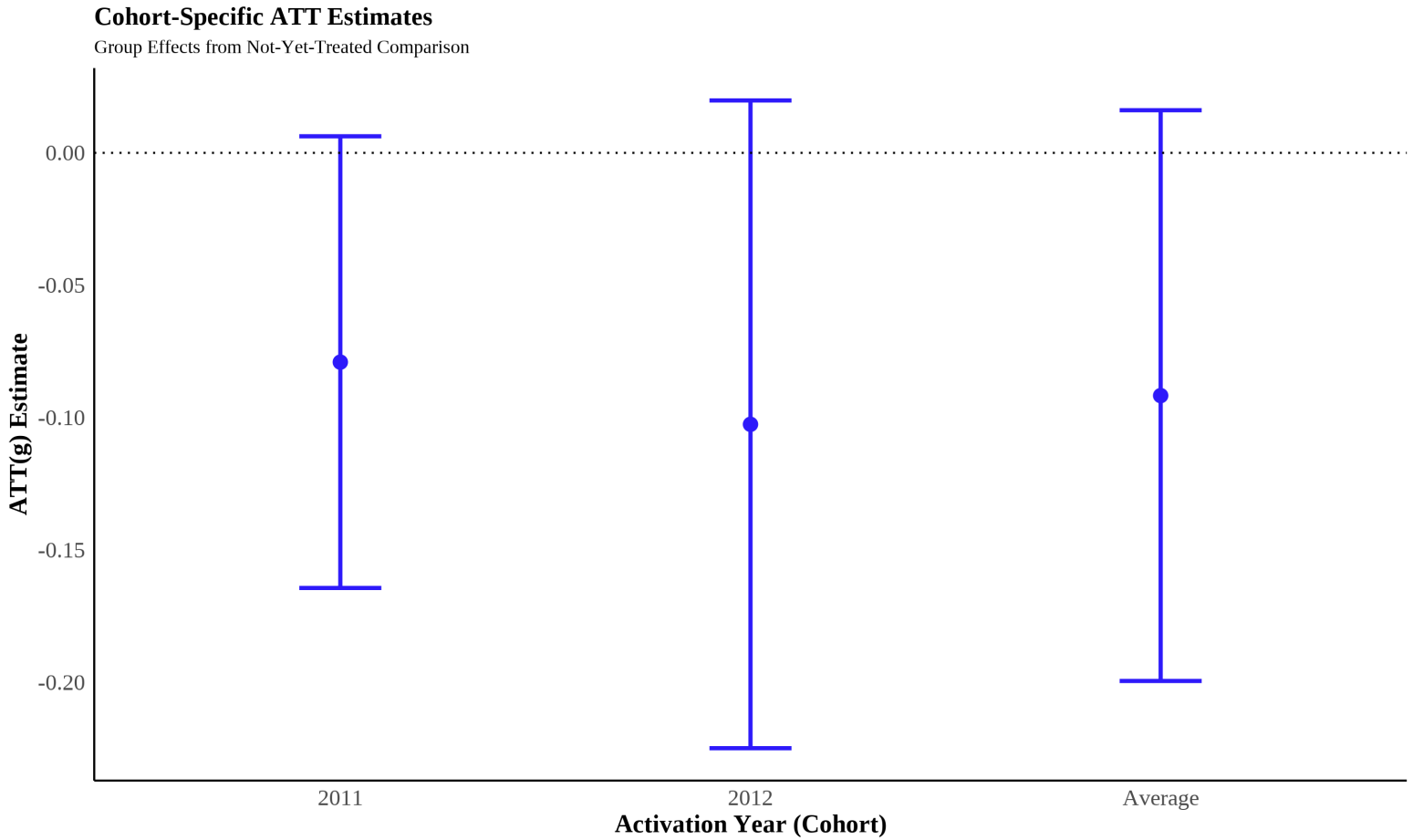


Ages 34+



[By gender]

Mental health mechanism: Secure Communities does not significantly impact poor mental health days



Secure Communities has heterogeneous effects on Hispanic suicide rates across age groups

- **Hispanic children (5-14)**: **35-100% decrease** vs. **Hispanic adults (34+)**: **18-60% increase** in suicide rates relative to Whites
- **Sanctuary cities** provide protective effects among the younger age groups by limiting local cooperation with federal enforcement
- **Low unemployment** serves as a key mechanism moderating the effects of immigration enforcement on Hispanic suicide rates
- Effects vary significantly by **political affiliation**: Democratic counties show larger increases in adult suicide rates
- Next step: test for the magnitude of deportation as a mechanism (waiting for a funding source to purchase the data)

Thank you!

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Appendix

Key Causal Identification Assumptions

1. Stable Unit Treatment Value Assumption (SUTVA)

- No spillovers between counties
- Treatment of one county does not affect outcomes in other counties

2. Parallel Trends Assumption

- Absent SC implementation, Hispanic and White suicide rates would have followed parallel differential trends across counties
- Testable: If coefficients β_l for $l < 0$ are statistically insignificant, the assumption holds

3. Limited Anticipation Assumption

- Hispanic youth do not alter behavior affecting suicide risk prior to SC's actual implementation
- Testable: If coefficient β_{-1} is statistically insignificant, the assumption holds [Back]

Testing Parallel Trends Assumption using Borusyak, Jaravel, and Spiess (2024)

$$Y_{it} = \alpha_i + \beta_t + X_{it}'\delta + \sum_{h=1}^{K} \gamma_h \cdot 1\{K_{it} = -h\} + \varepsilon_{it}$$

Sample Construction

- Uses **only untreated observations**
- All unit-time pairs where treatment has not yet occurred
- All observations from never-treated units
- $K_{it} = t - E_i$ measures periods relative to treatment date

Testing Pre-Trends

- Indicators capture pre-treatment outcome differences
- Testing $H_0 : \gamma_1 = \cdots = \gamma_K = 0$ assesses parallel trends
- Significant pre-treatment coefficients would indicate violations

[Back]

Advantages of This Approach

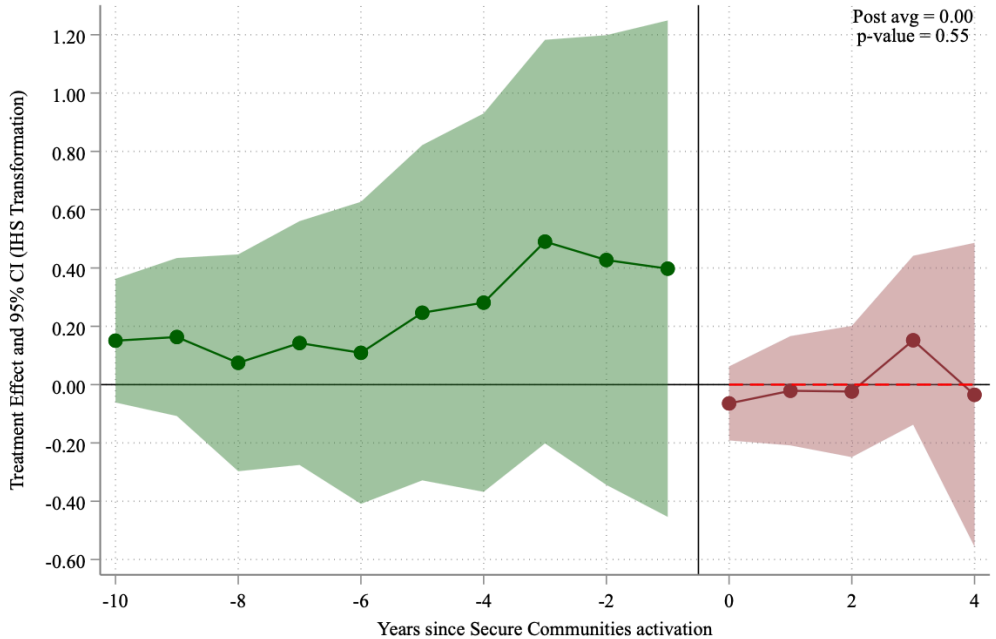
Methodological Strengths

- Direct test of parallel trends validity
- No restrictions on treatment-effect heterogeneity
- More efficient test than placebo-based strategies

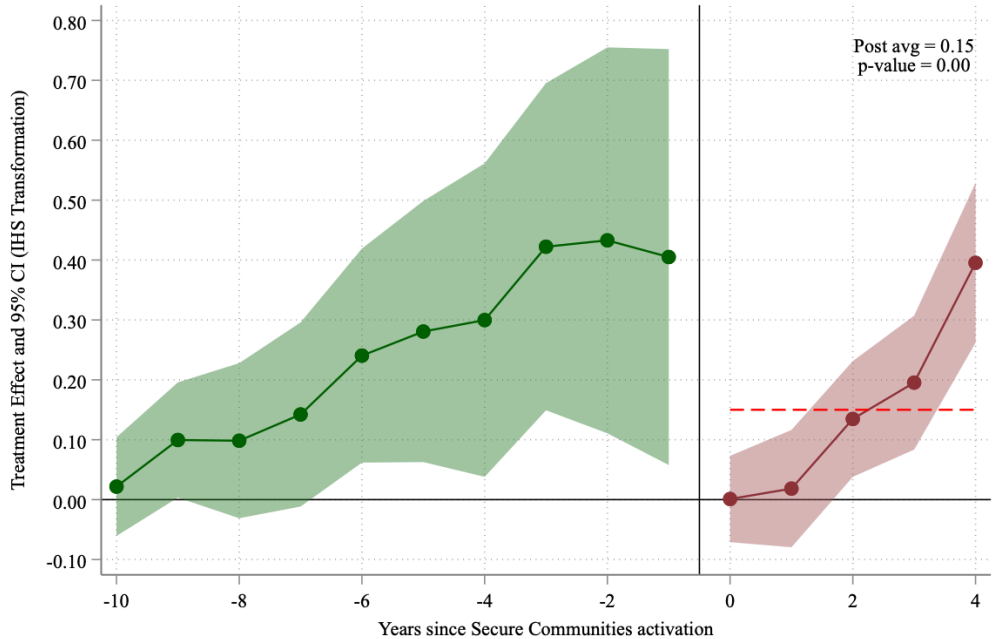
Statistical Improvements

- Maintains valid inference without conditioning on passing pre-test
- Avoids inflated variances and overly conservative inference
- Provides rigorous diagnostic of potential violations [Back]

SC does not affect the suicide rates among all Hispanic females and increases the rates among all Hispanic males but the parallel trends likely does not hold



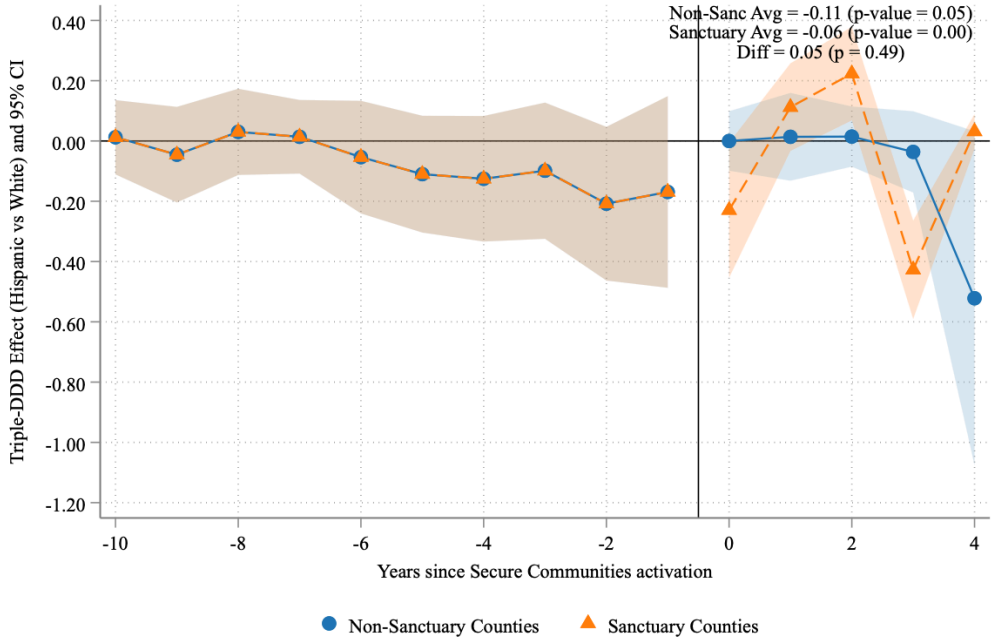
Females



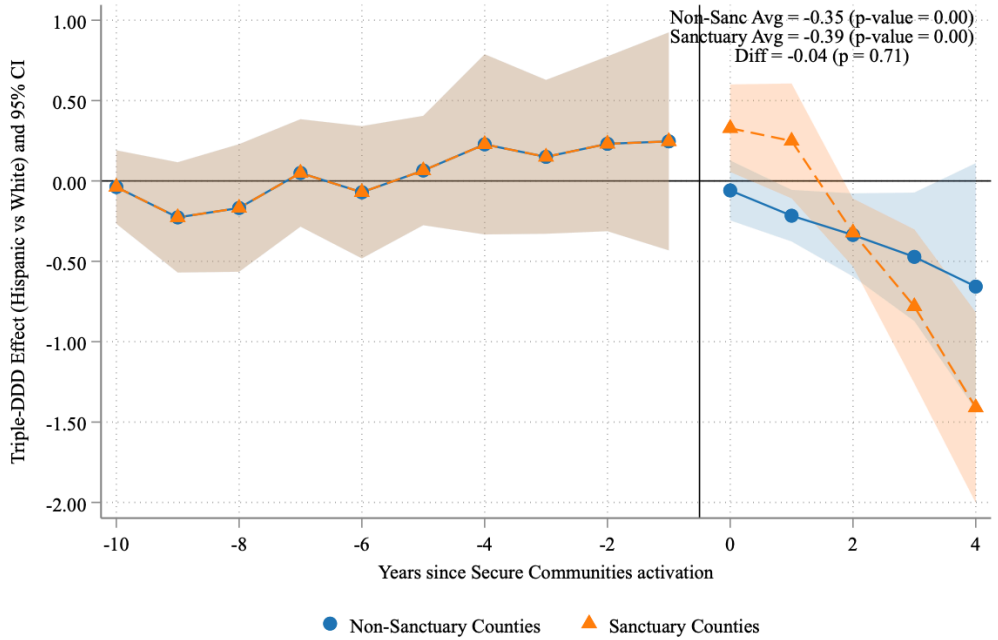
Males

[Back]

Sanctuary cities buffer the effects of Secure Communities on suicide rates among ages 5-14 Hispanic children by gender



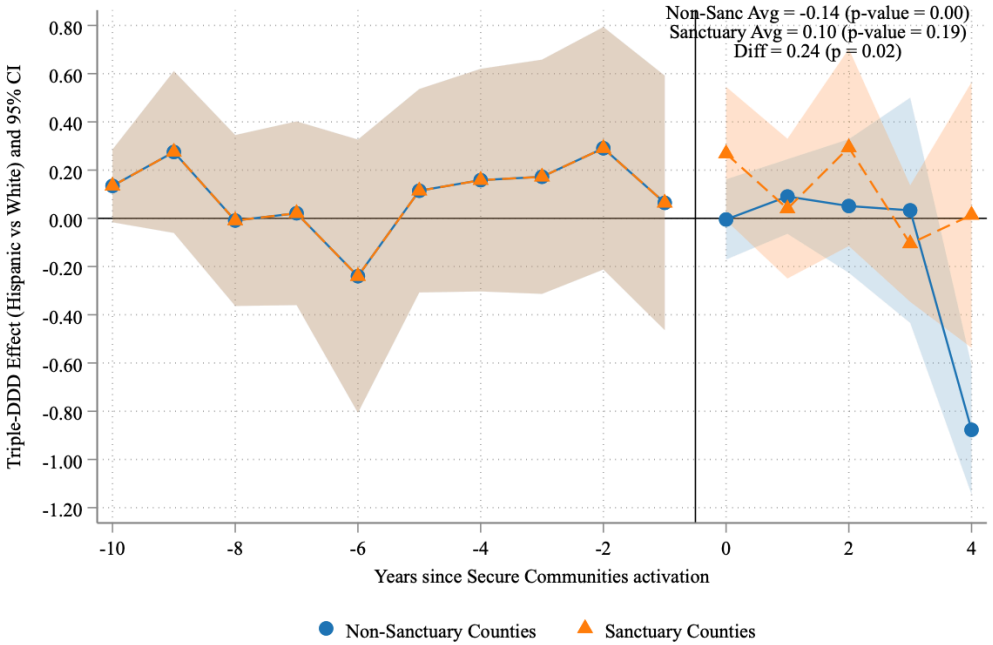
Females



Males

[Back]

Sanctuary cities buffer the effects of Secure Communities on suicide rates among ages 15-24 Hispanic youth by gender



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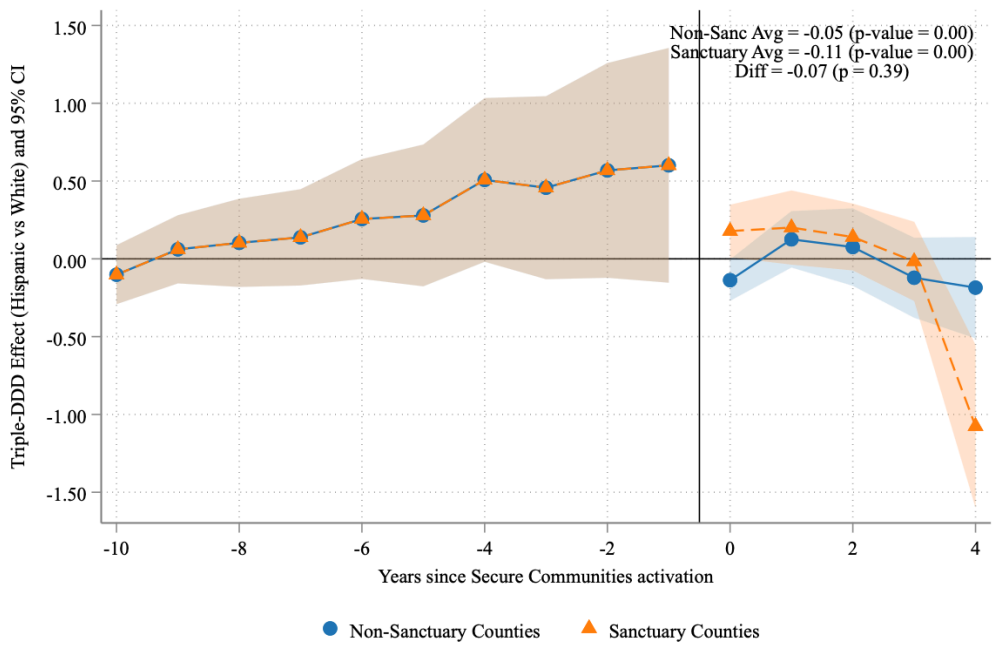
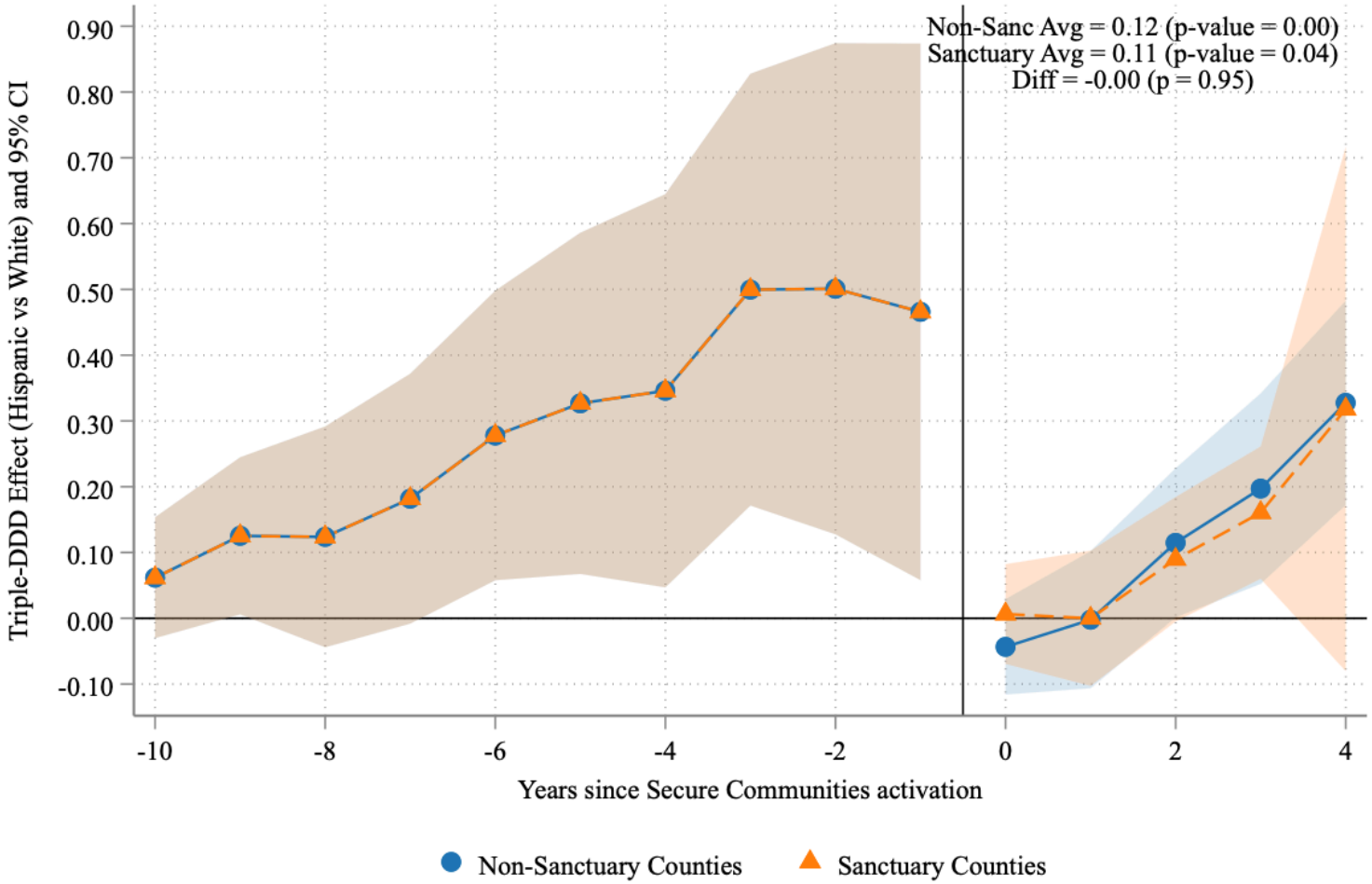


Males

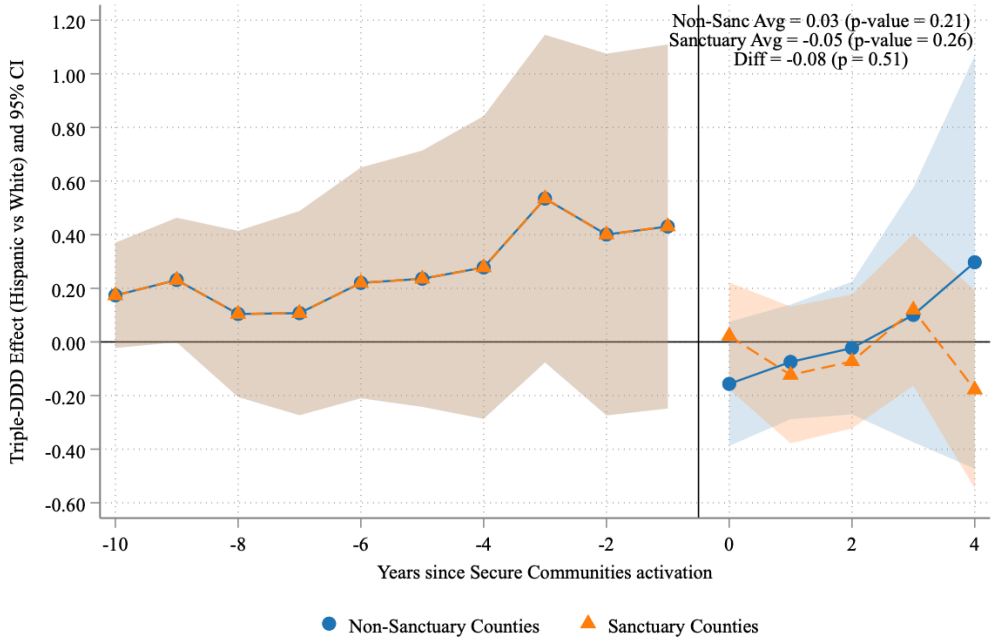
[Back]

Sanctuary cities buffer the effects of Secure Communities on suicide rates among all Hispanics

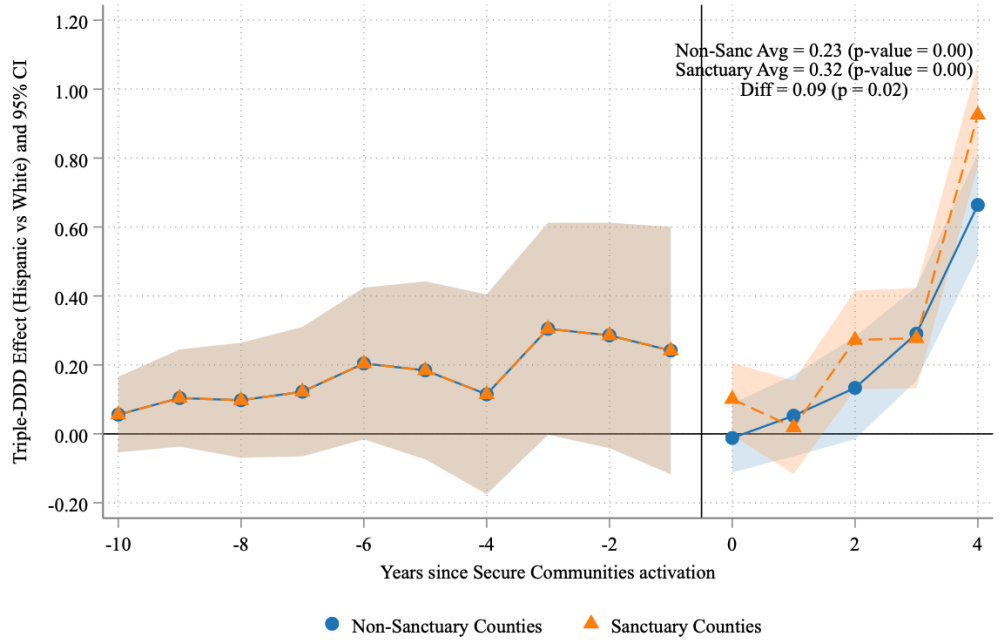


[By gender | Back]

Sanctuary cities buffer the effects of Secure Communities on suicide rates among ages 34+ Hispanic adults by gender



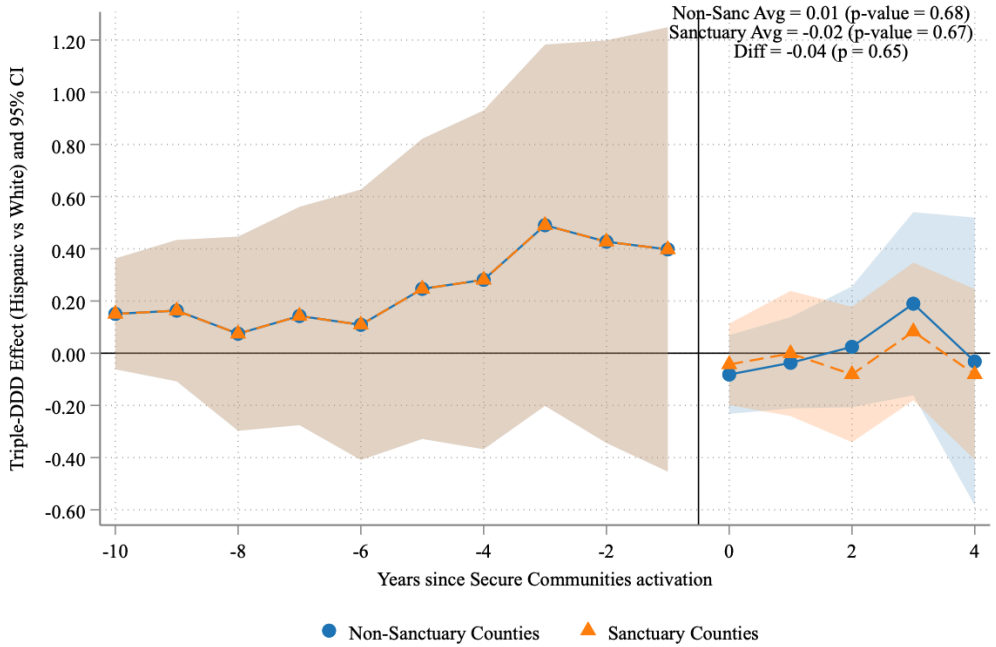
Females



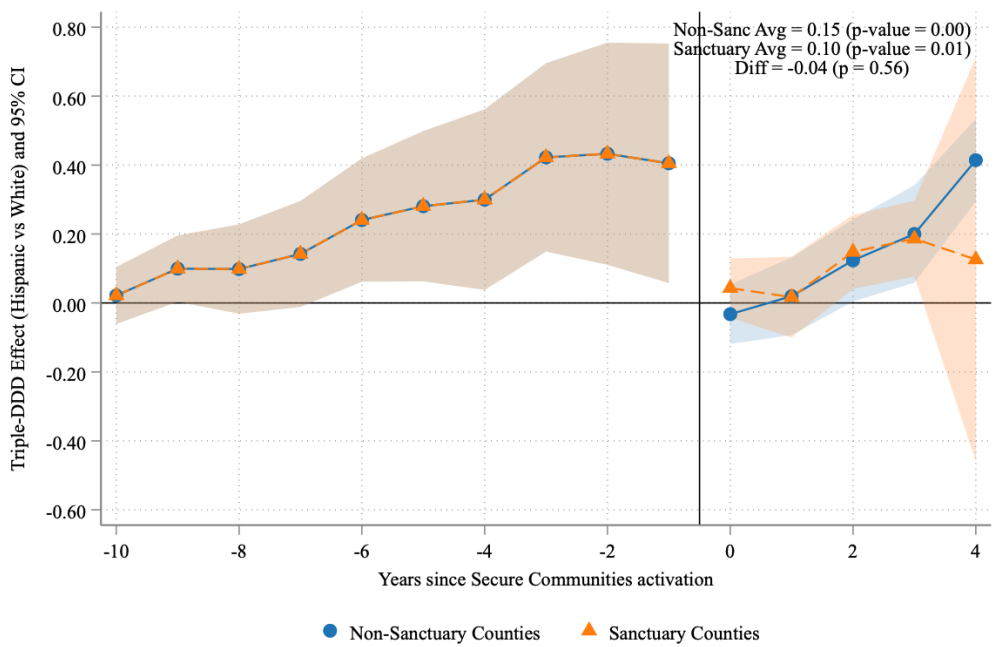
Males

[Back]

Sanctuary cities buffer the effects of Secure Communities on suicide rates among all Hispanics by gender



Females

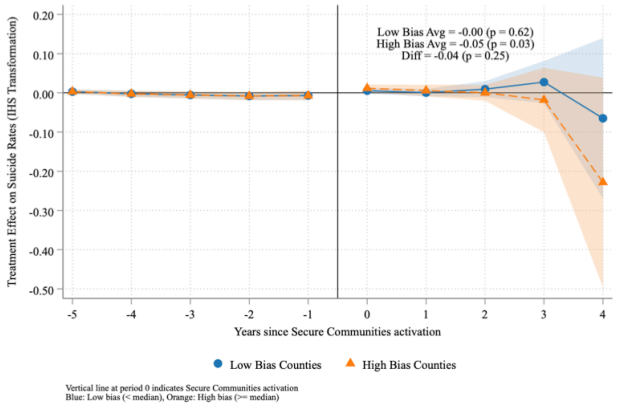


Males

[Back]

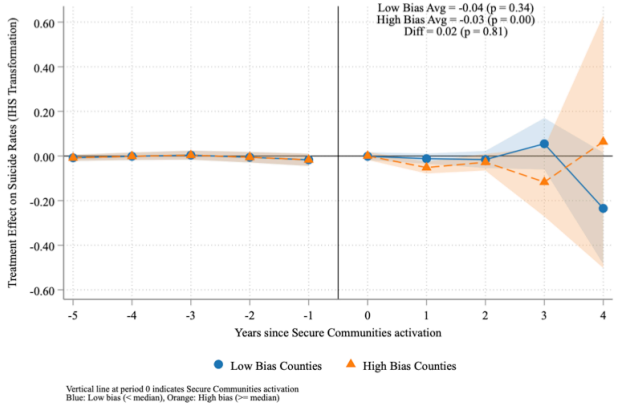
Anti-Hispanic bias does not seem to be driving the effects of Secure Communities on Hispanic suicide rates: Female Analysis

Ages 5-14



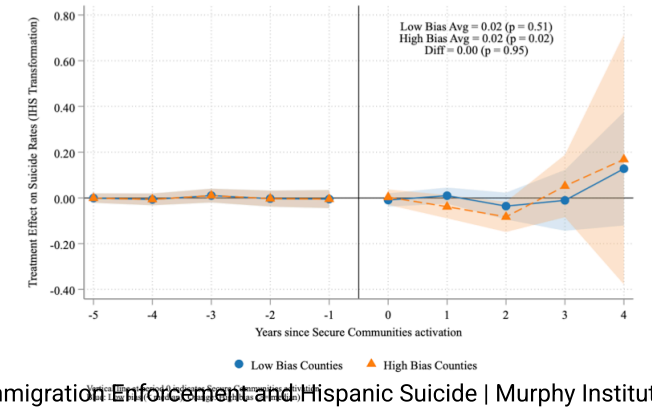
Vertical line at period 0 indicates Secure Communities activation
Blue: Low bias (< median), Orange: High bias (>= median)

Ages 15-24

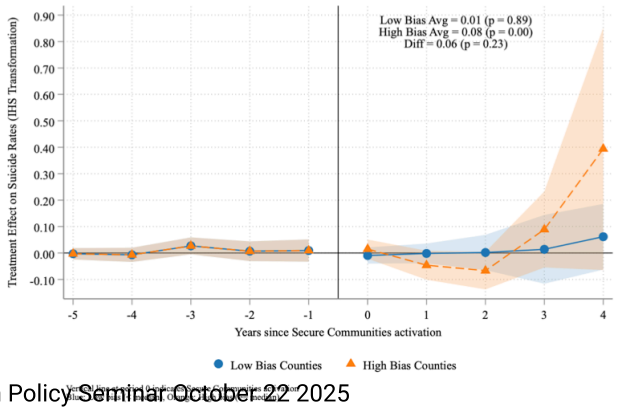


Vertical line at period 0 indicates Secure Communities activation
Blue: Low bias (< median), Orange: High bias (>= median)

Ages 34+

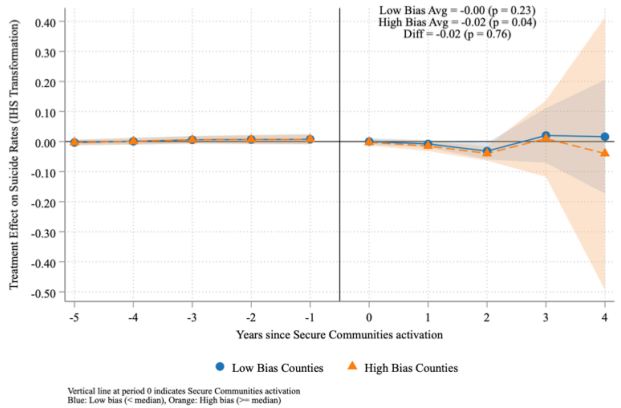


All Ages

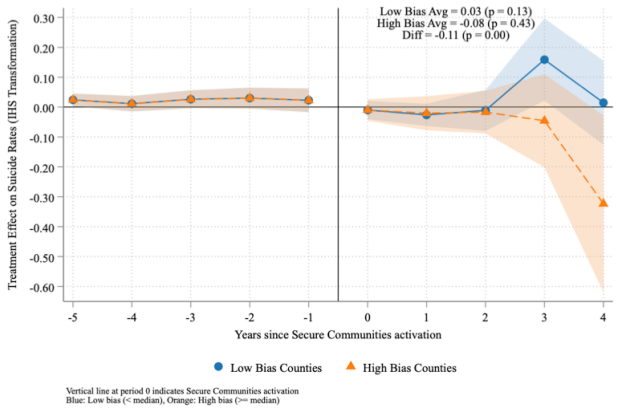


Anti-Hispanic bias does not seem to be driving the effects of Secure Communities on Hispanic suicide rates: Male Analysis

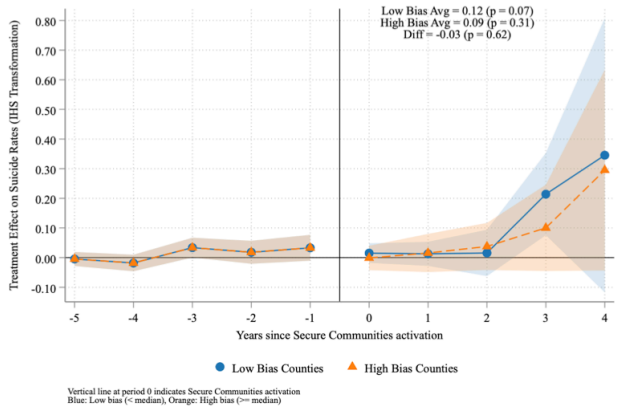
Ages 5-14



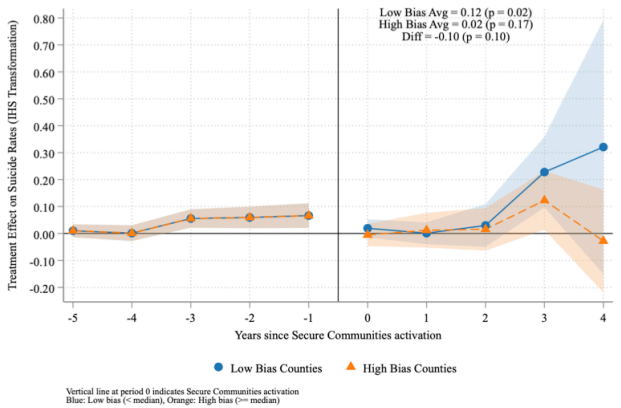
Ages 15-24



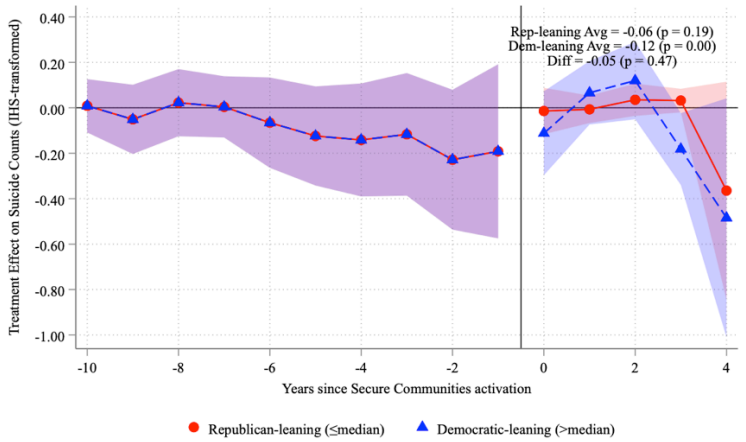
Ages 34+

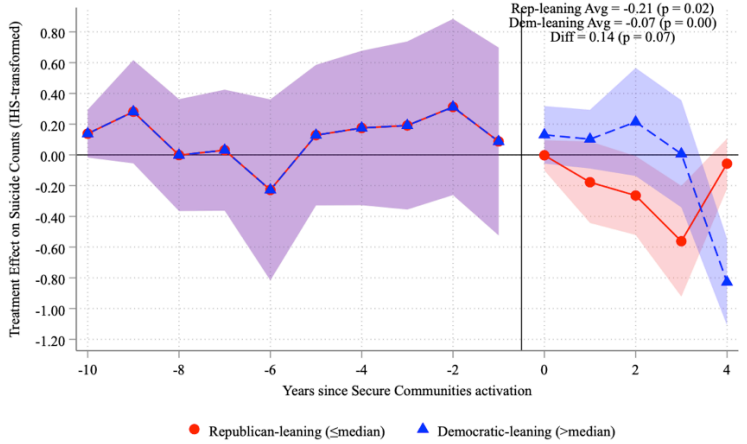


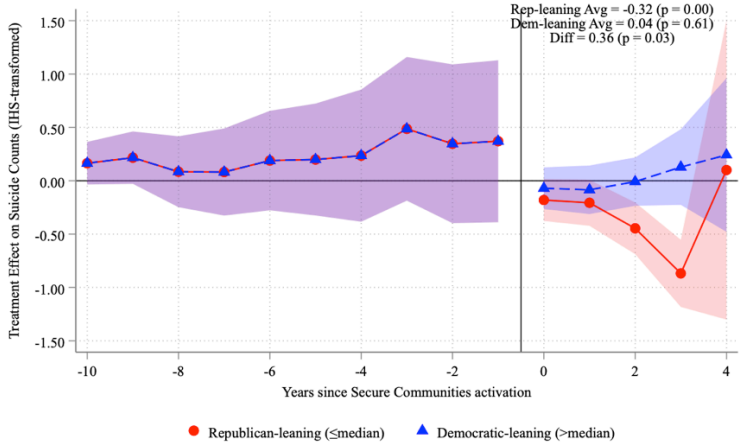
All Ages

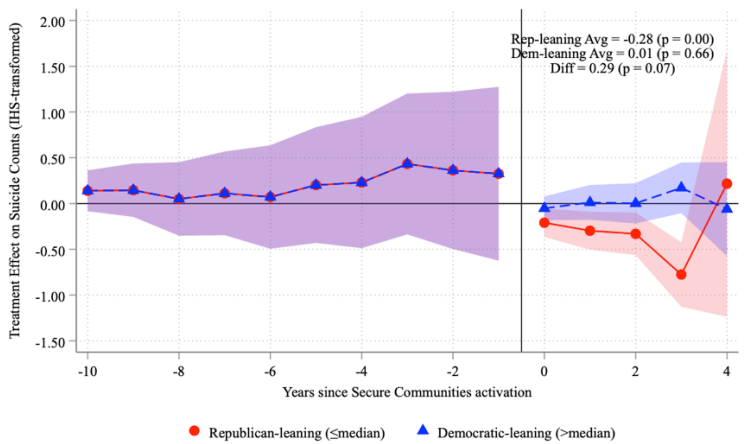


Political affiliation moderates the effects of Secure Communities on Hispanic suicide rates: Female Analysis



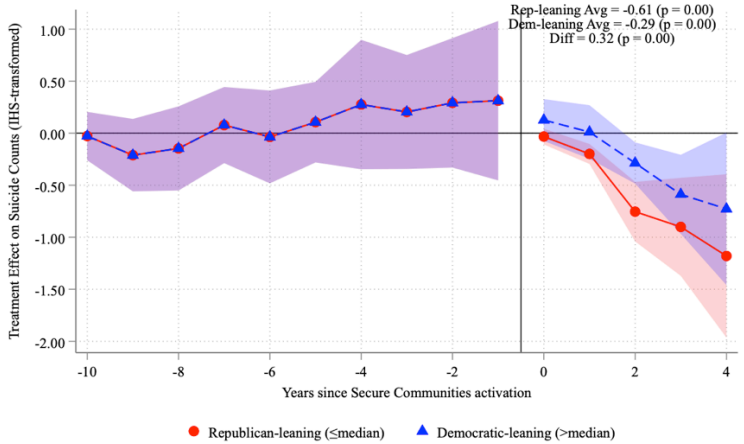


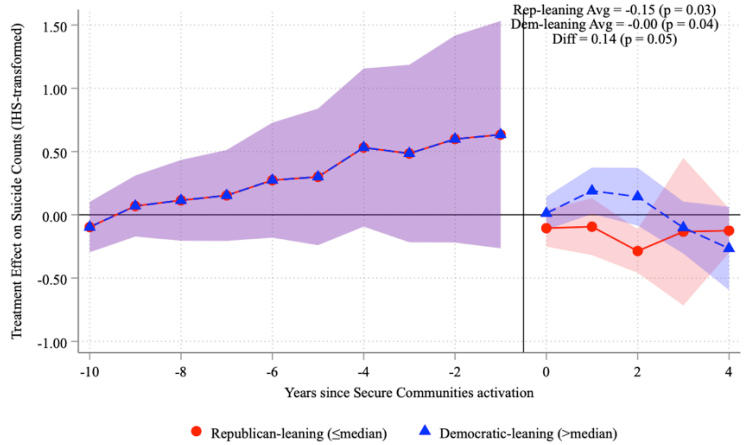


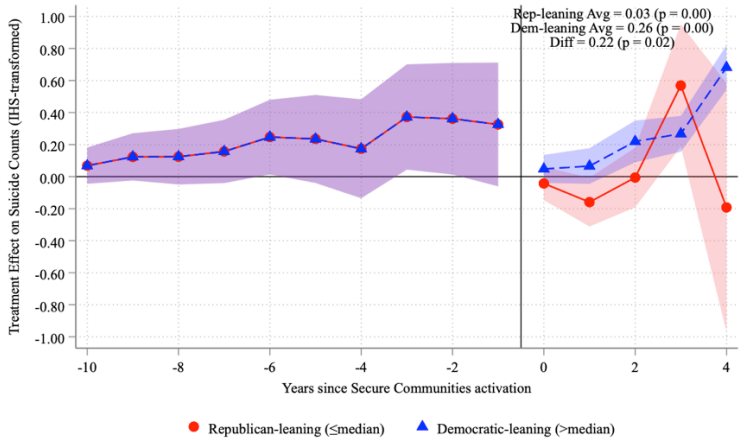


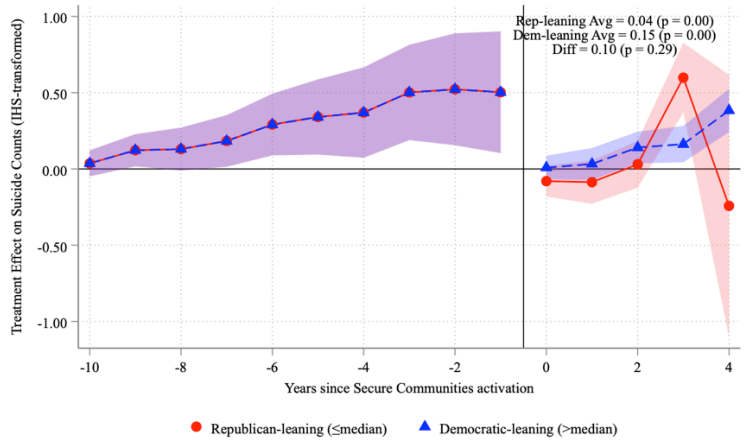
[Back]

Political affiliation moderates the effects of Secure Communities on Hispanic suicide rates: Male Analysis



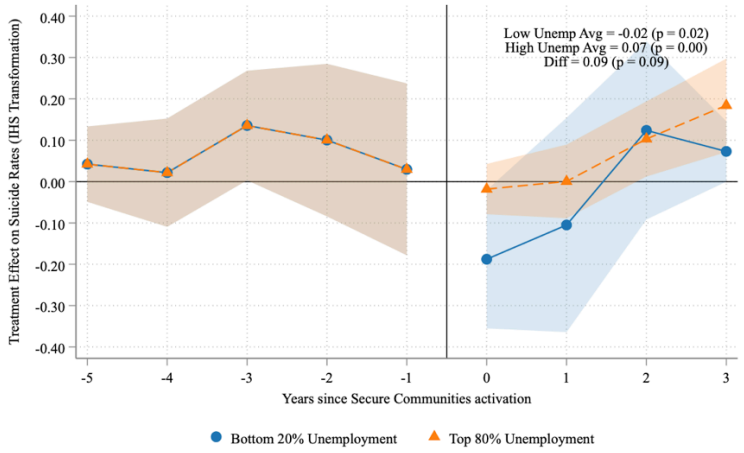


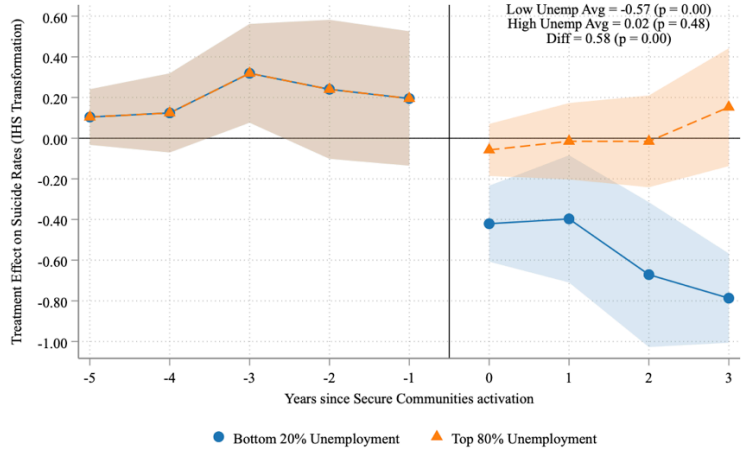


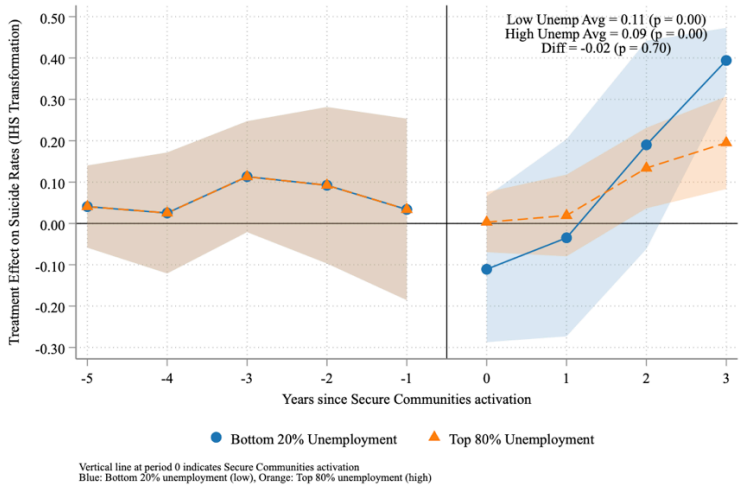


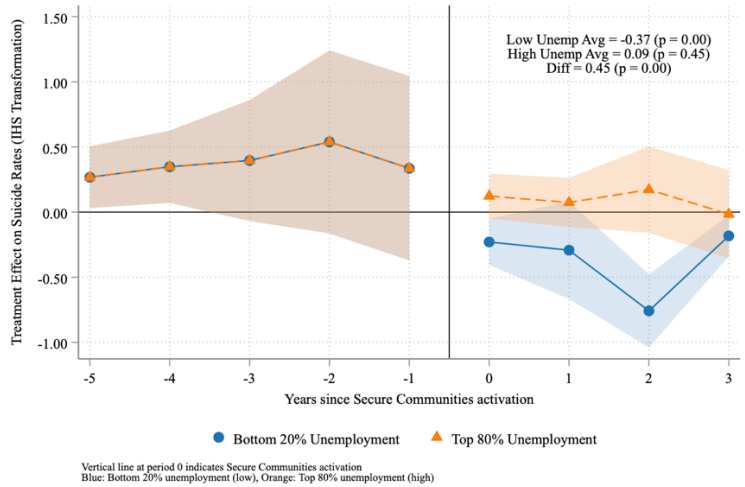
[Back]

Unemployment rates moderate the effects: All Ages and Gender-Specific Analysis









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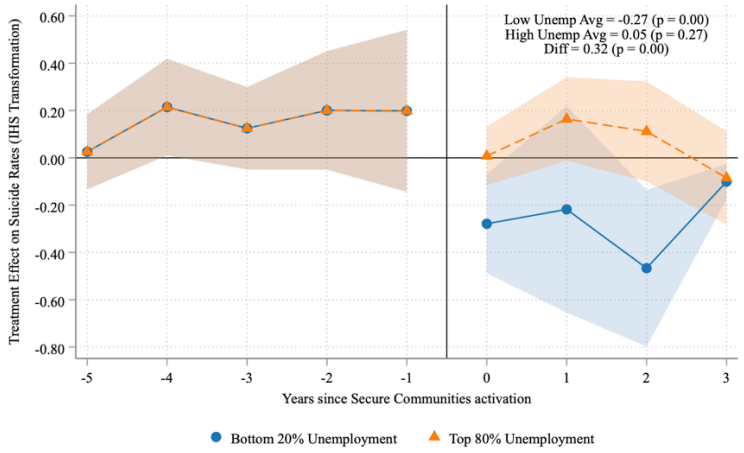
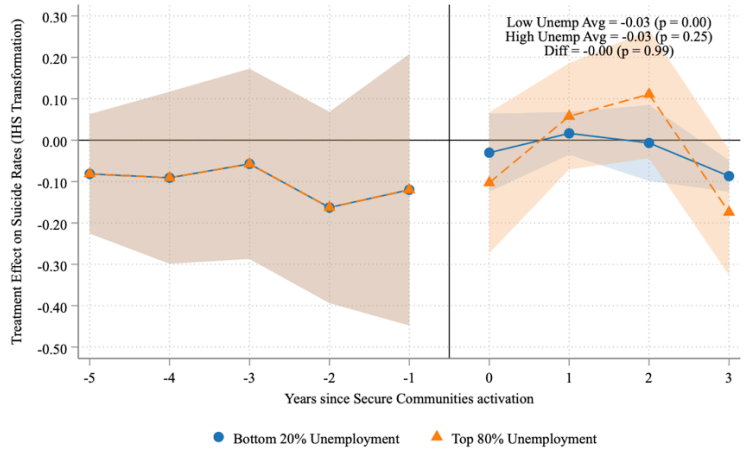
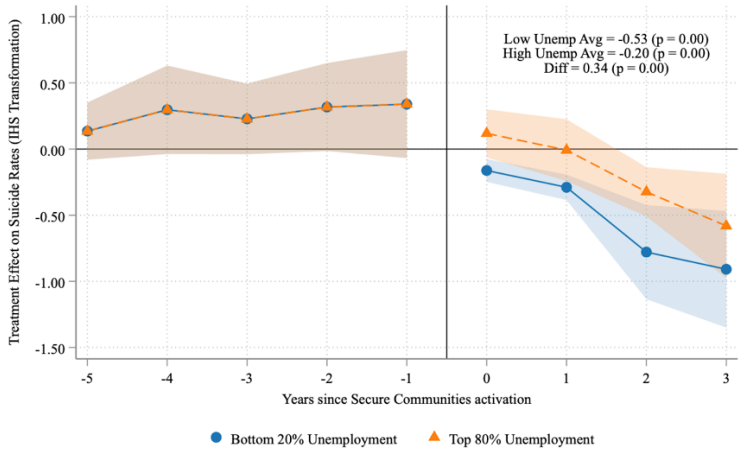
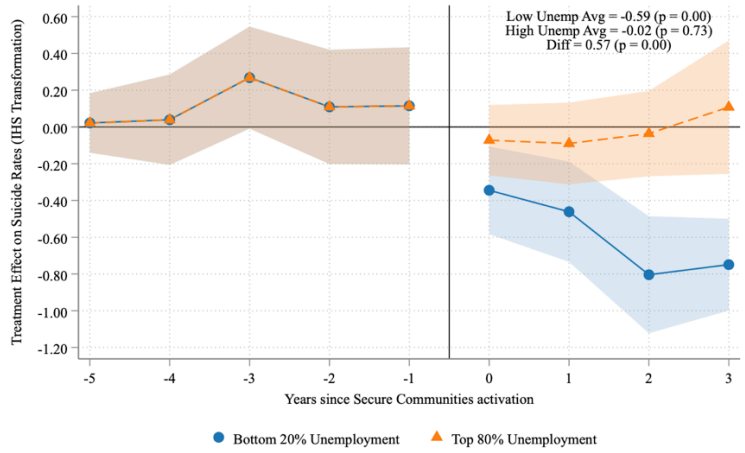
Unemployment rates moderate the effects: Gender-Specific Analysis by Age Group



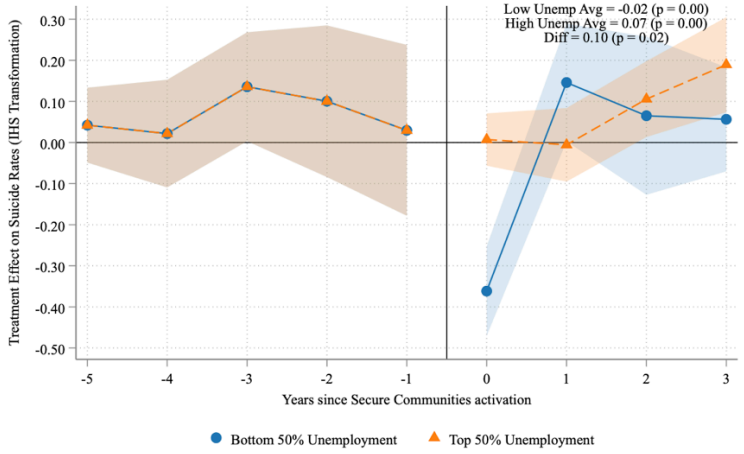


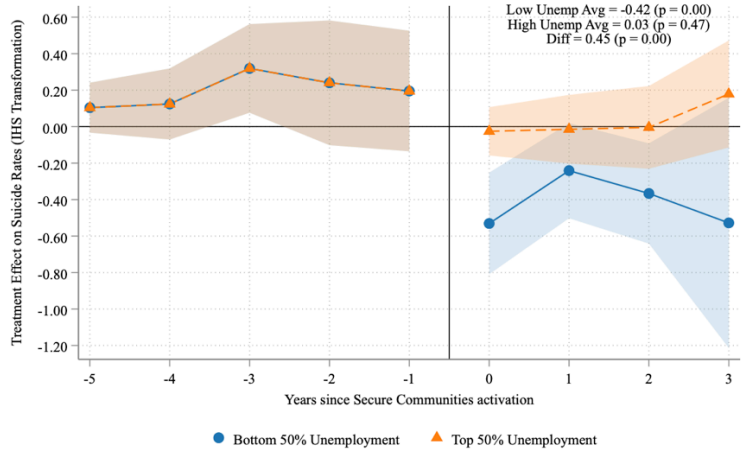


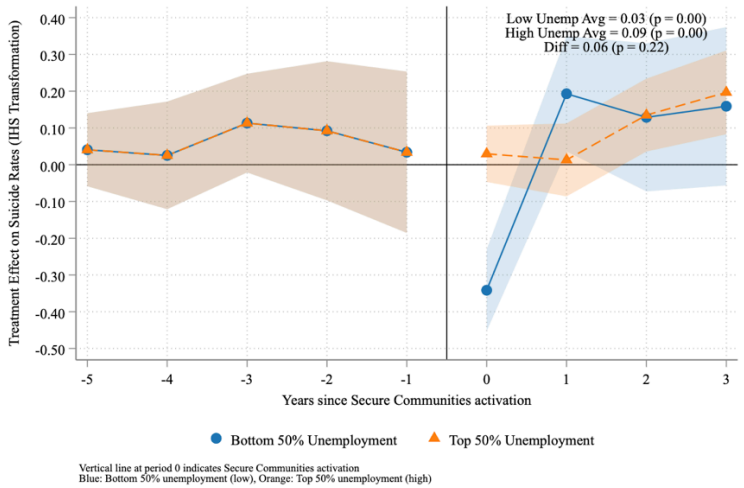


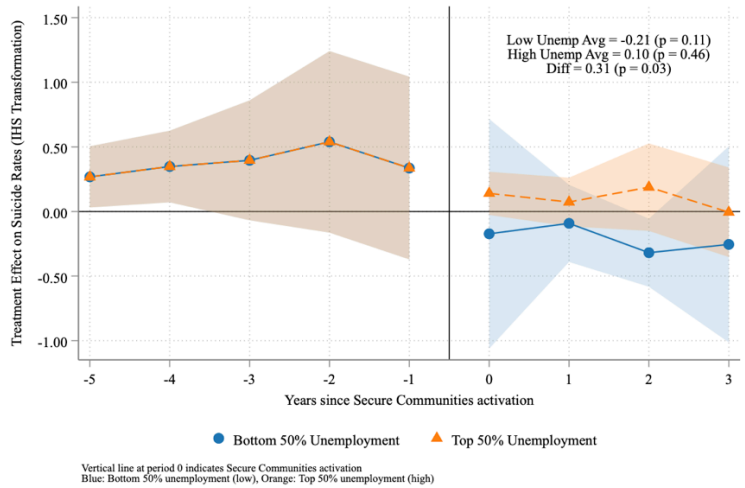
[Back]

Unemployment rates (LAUS) moderate the effects: All Ages and Gender-Specific Analysis



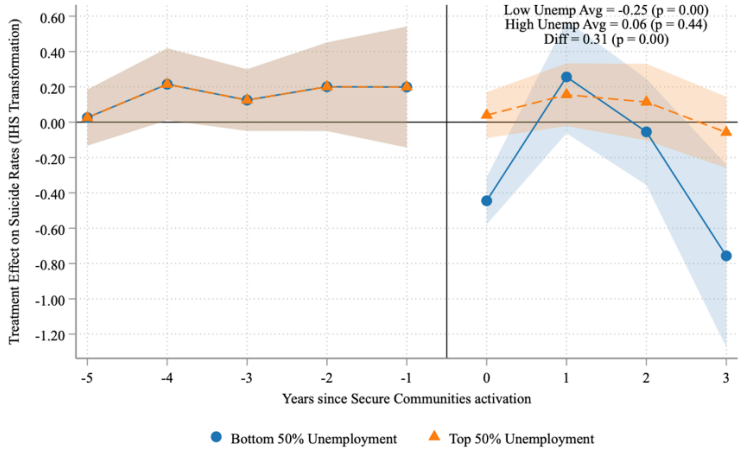


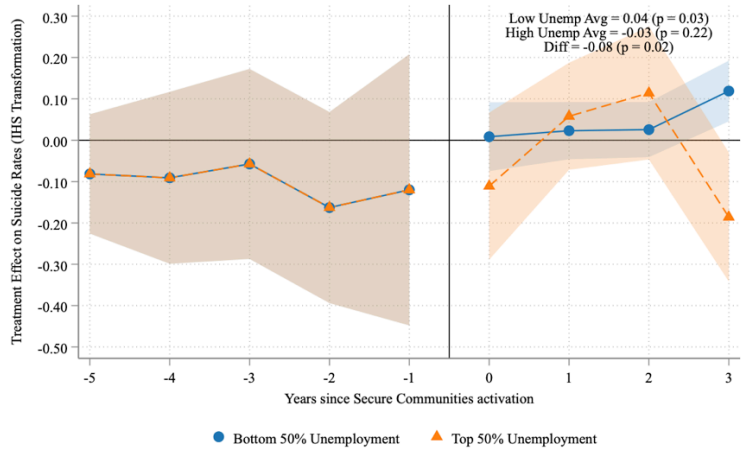


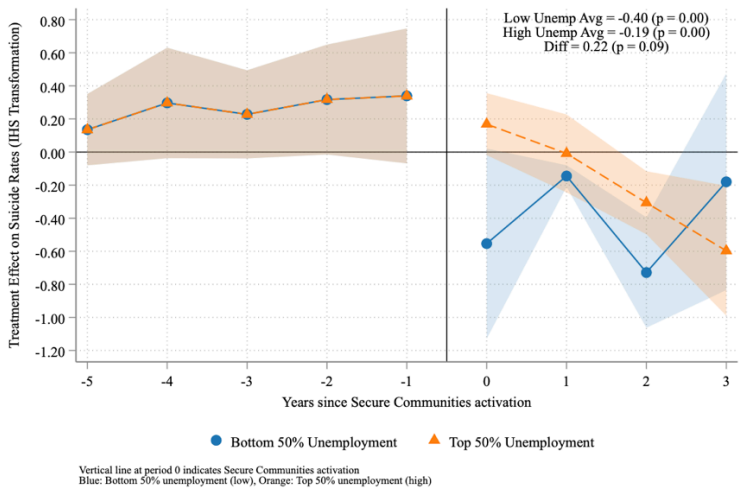


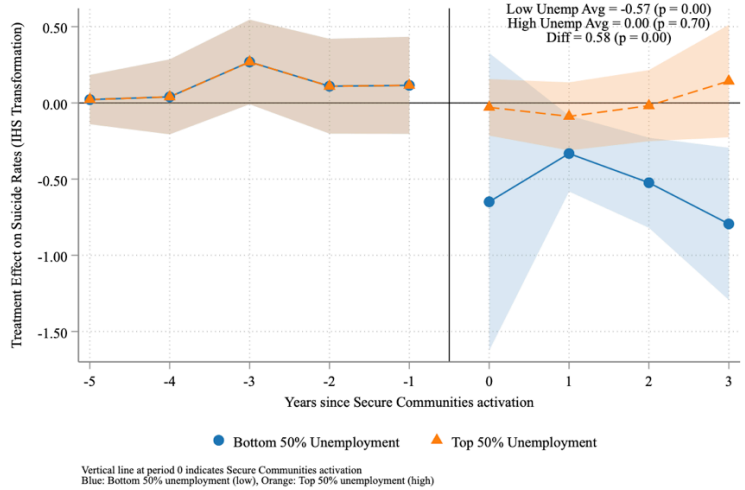
[Back]

Unemployment rates (LAUS) moderate the effects: Gender-Specific Analysis by Age Group



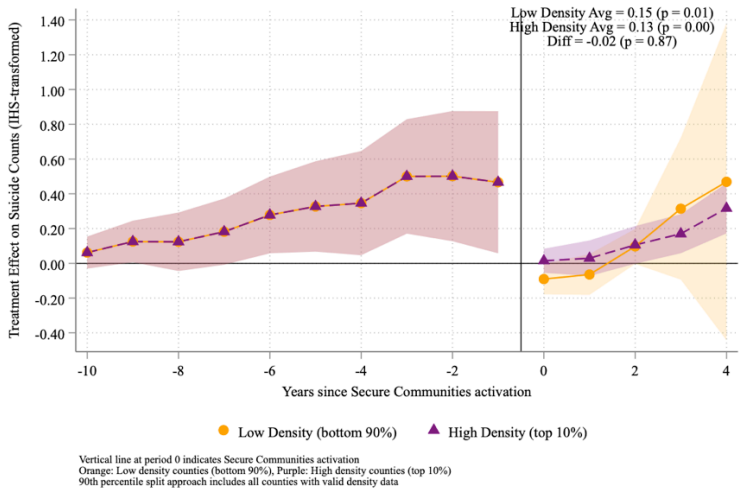


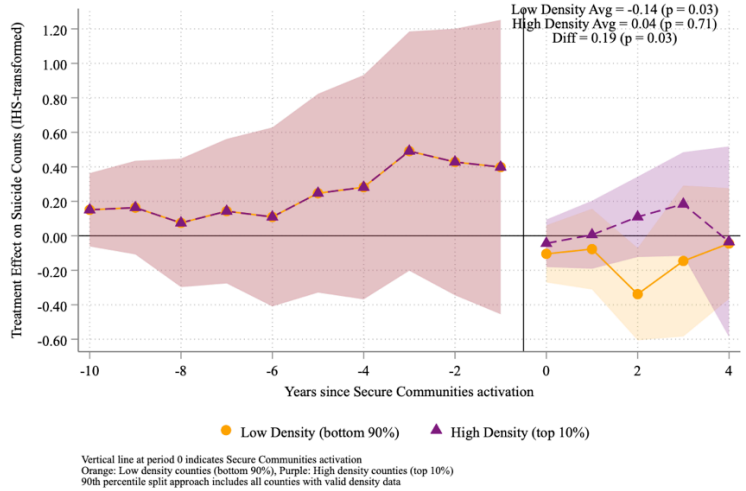


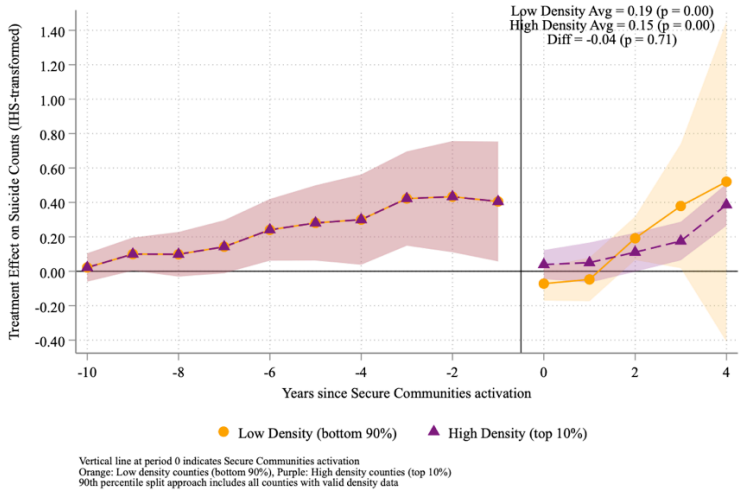


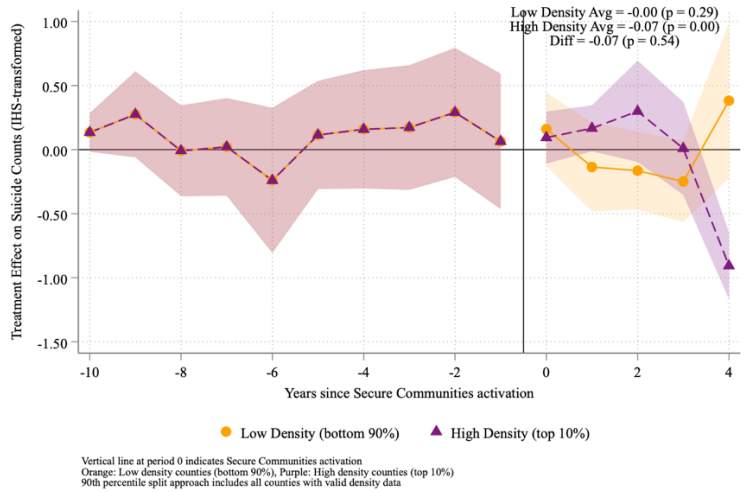
[Back]

Population density moderates the effects: All Ages and Gender-Specific Analysis



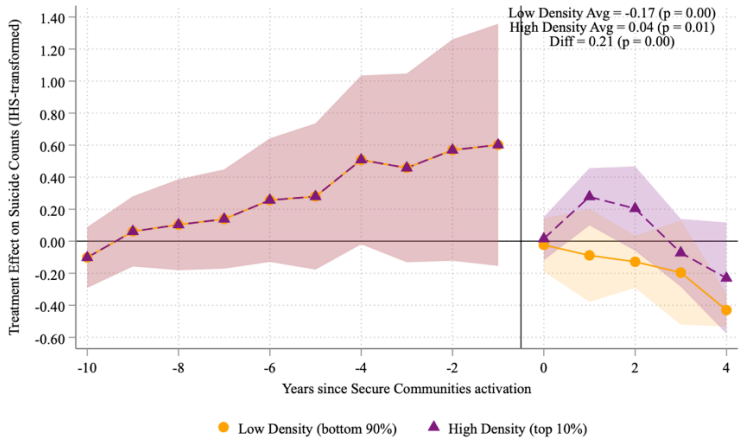


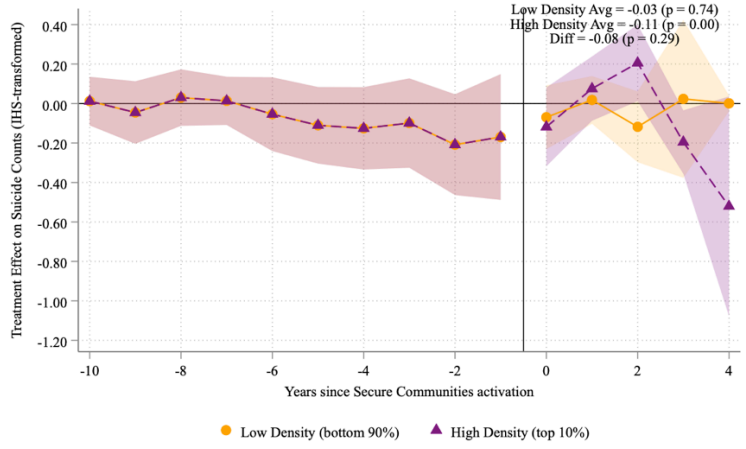


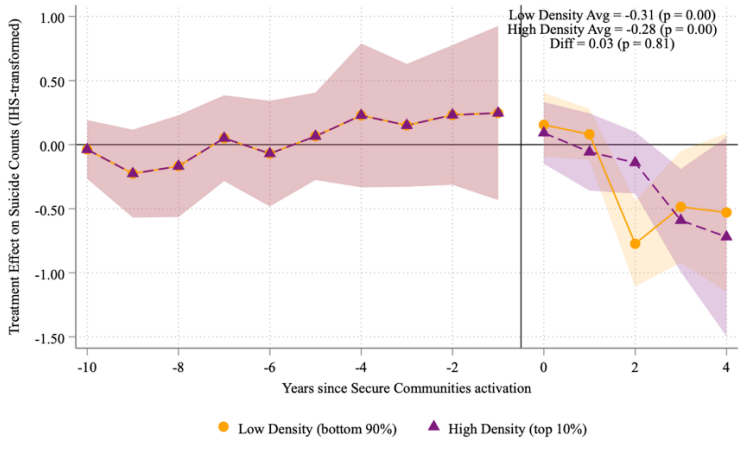


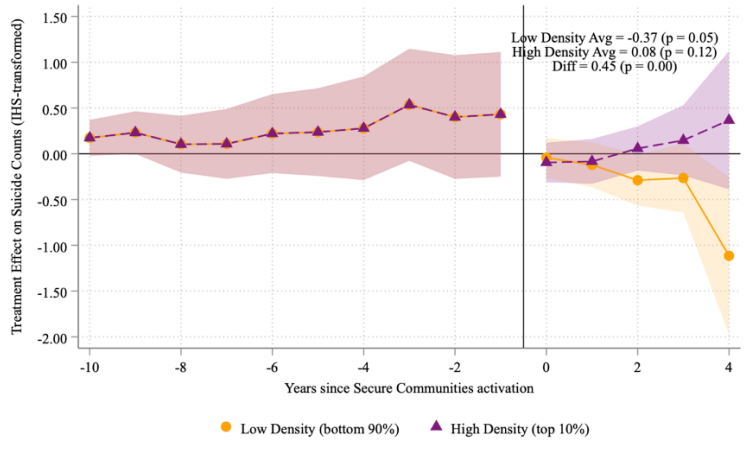
[Back]

Population density moderates the effects: Gender-Specific Analysis by Age Group









[Back]