Mortality and Immigration Enforcement: The Case of Secure Communities

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Previous work has found that immigration enforcement laws.

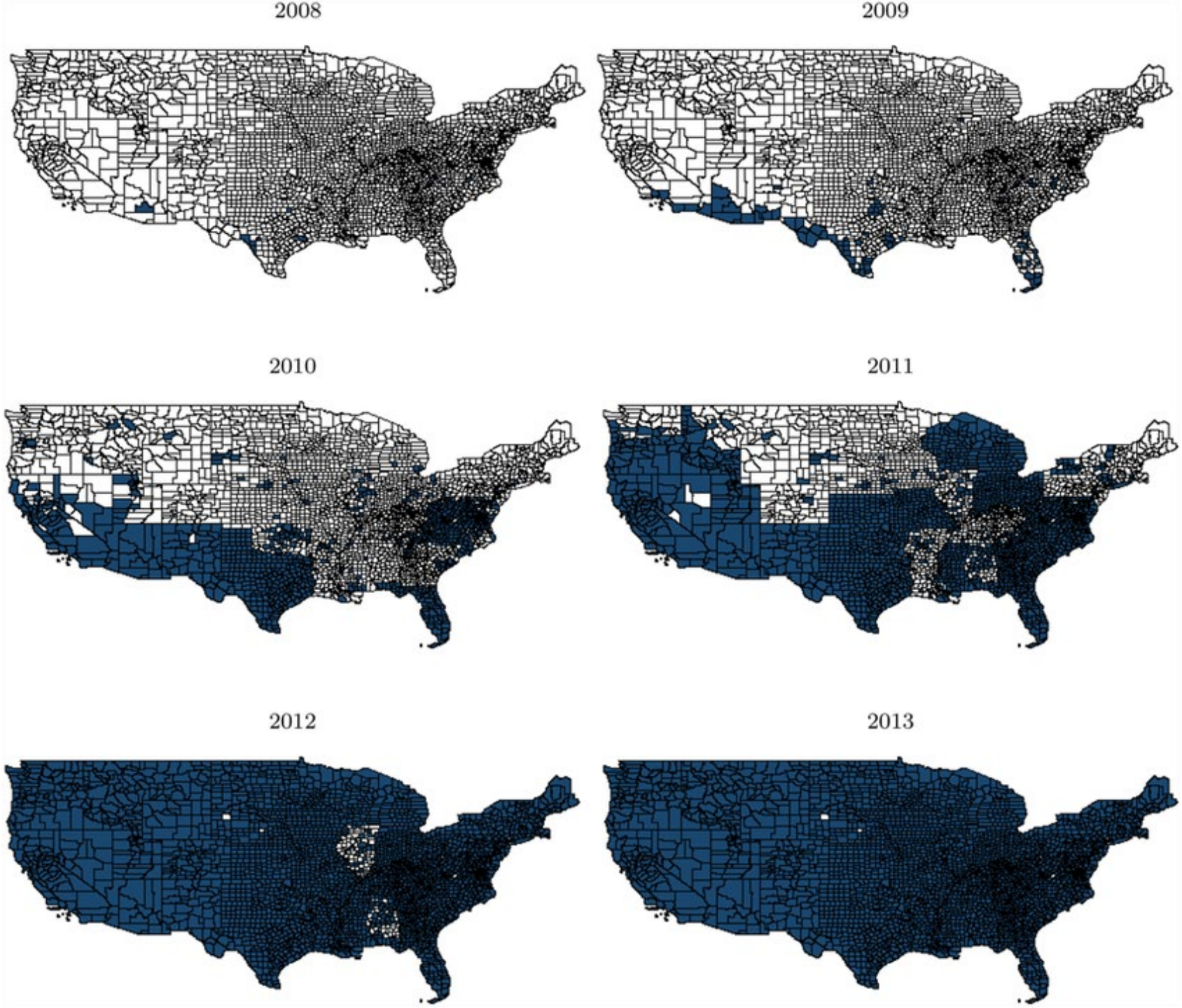
- Lower birth weight (Amuedo-Dorantes, Churchill, and Song, 2022)
- Increase mental health issues (Luo and Escalante, 2021; Luo and Kostandini, 2023)
  - 12-16 percent increase in sad days among adolescent Hispanics
- Labor market outcomes (Amuedo-Dorantes and Bansak, 2014; Churchill 2021):
  - 5 percent decrease in the employment of potentially undocumented workers
  - Increase wages and employment for similar skilled native workers.
  - Reduce crime due to better labor opportunities among (Orozco-Aleman and Gonzalez-Lozano, 2020; Kang and Song, 2022).
  - Fewer instances of domestic violence (Amuedo-Dorantes and Arenas-Arroyo, 2022; Amuedo-Dorantes and Deza, 2022)
- Mixed effects on health insurance coverage (Churchill 2021, Allen & McNeely, 2017)
  - E-verify reduces employer sponsored health insurance access for undocumented workers
  - Omnibus laws may have actually increased coverage for Hispanic children.

Enforcement Laws

Secure Communities

For decades, local jurisdictions have shared the fingerprints of individuals arrested and/or booked into custody with the FBI to see if those individuals have a criminal record and outstanding warrants. Under Secure Communities, the FBI automatically sends the fingerprints to DHS to check against its immigration databases. If these checks reveal that an individual is unlawfully present in the United States or otherwise removable, ICE takes enforcement action

Started in 2008 and ended in 2014, but was reinstated in 2017 under former President Trump.


2008
2009
2010
2011
2012
2013

Enforcement Laws

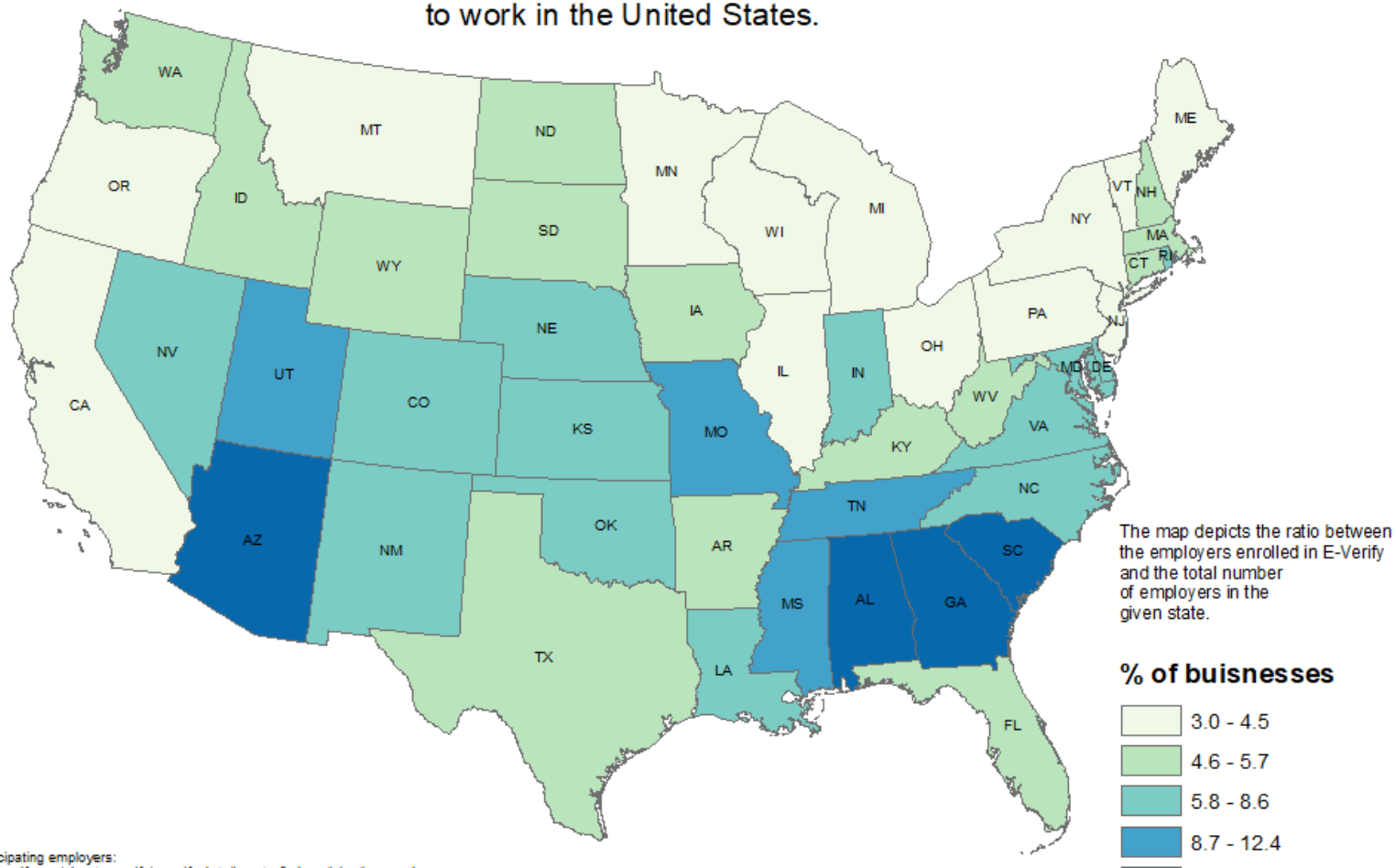
E-Verify

E-Verify is an Internet-based system that compares information entered by an employer from an employee's Form I-9, Employment Eligibility Verification, to records available to the U.S. Department of Homeland Security and the Social Security Administration to confirm employment eligibility.

Employers face fines of $500 - $1200 for not dismissing an unqualified worker.

E-Verify use by state

E-Verify is a United States Department of Homeland Security website that allows businesses to determine the eligibility of their employees to work in the United States.



The map depicts the ratio between the employers enrolled in E-Verify and the total number of employers in the given state.

% of buisnesses

- 3.0 - 4.5
- 4.6 - 5.7
- 5.8 - 8.6
- 8.7 - 12.4
- 12.5 - 22.4

Sources:
E-Verify parcicipating employers:
https://www.e-verify.gov/about-e-verify/e-verify-data/how-to-find-participating-employers

US Census statistics of U.S Businesses (SUSB)
https://www.census.gov/data/datasets/2018/econ/susb/2018-susb.html

Which industries use E-Verify the most?

Rank	Industry	Hiring Sites
1	Professional, Scientific, and Technical Services	313, 916
2	Food and Drink Services	202,022
3	Administrative and Support Services	112,961
4	Specialty Trade Contractors	102,100
5	Social Assistance	81,975
6	Ambulatory Health Care Services	72,464
7	Management of Companies and Enterprises	67,747
8	Religious, Grantmaking, Civic, Professional and similar organization	66,493
9	Credit Intermediation and Related Activities	65,775
10	General Merchandise Stores	62,338

**As of June 30, 2018

Source: https://www.e-verify.gov/about-e-verify/e-verify-data/e-verify-usage-statistics

Enforcement Laws

Omnibus Immigration Laws (OILs)

Omnibus Immigration Laws are a collection of spending laws reinforcing, extending, putting in place immigration restrictions. The most stringent of these are the “show me your papers” laws.

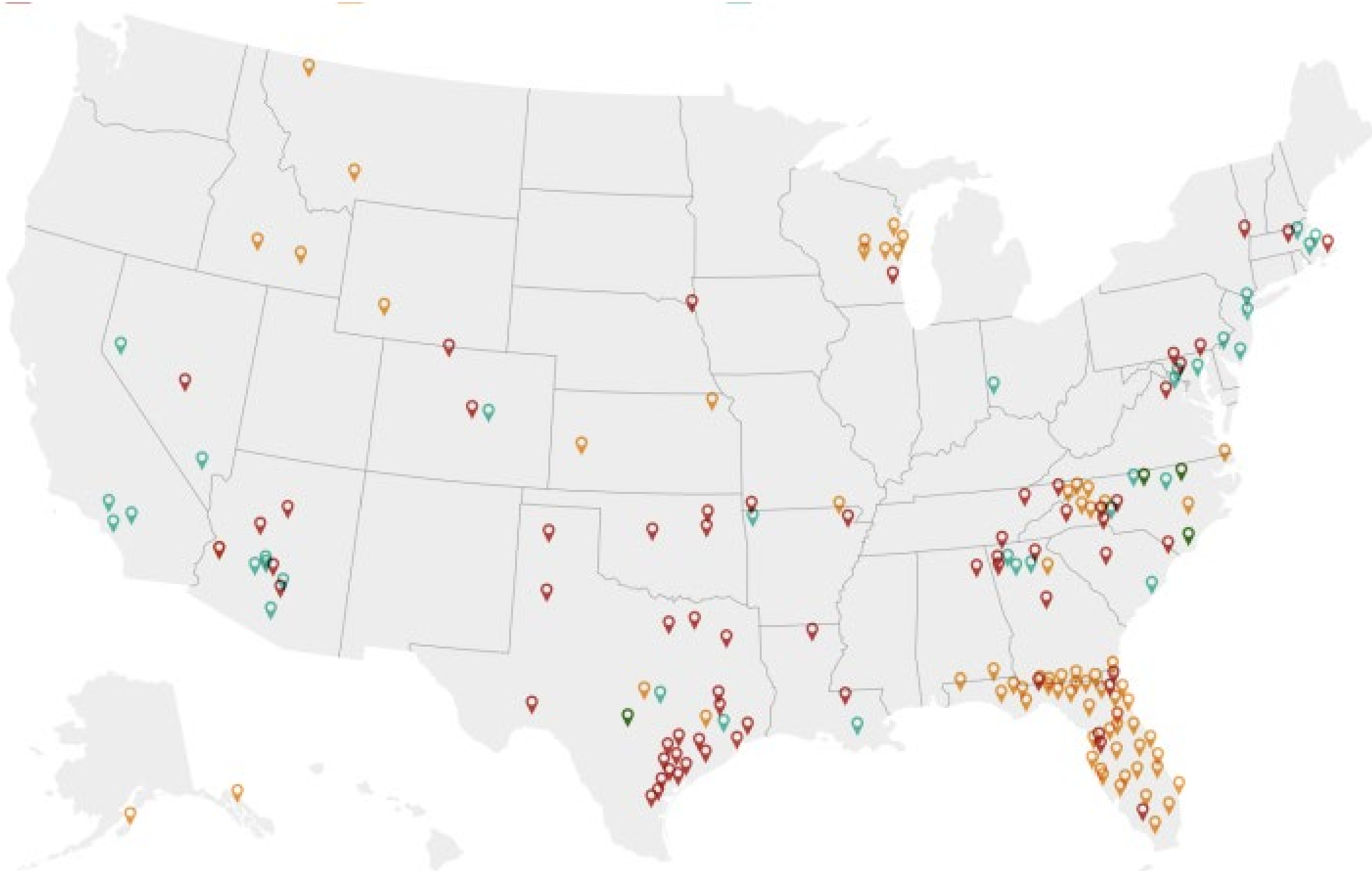
These laws were often associated with the Real ID Act.

Fig. 2. States with omnibus immigration laws (OIL) since 2005.

Enforcement Laws

287g Agreements

287(g) is a program for allowing state and local agencies to act as immigration enforcement agents. Under 287(g), ICE forms an agreement with a state or local agency - most often a county sheriff that runs a local jail - and this agreement delegates specific immigration enforcement authority to designated officers within the local agency.



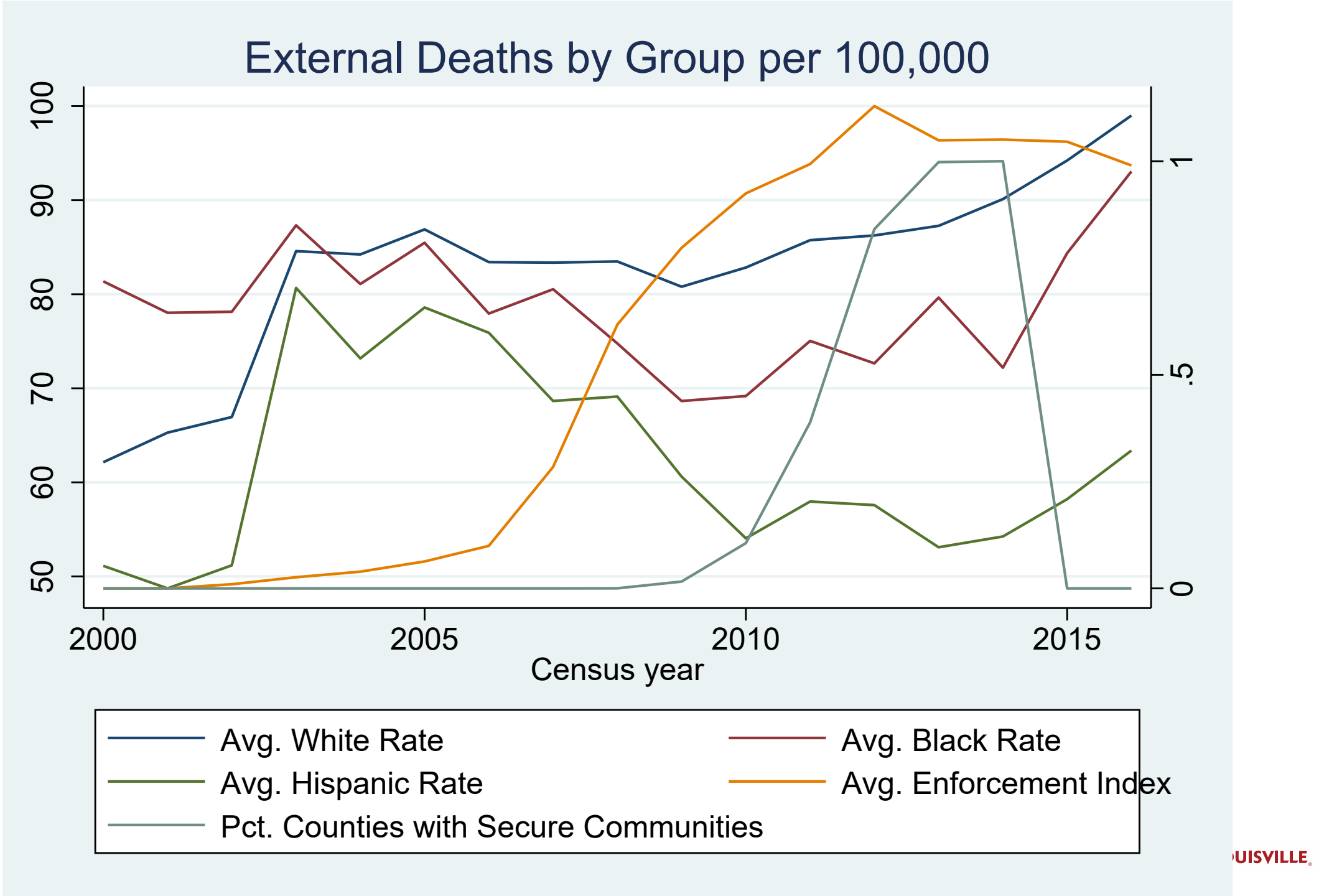
Mortality files

External Deaths

Homicides, Suicides, and Accidental Deaths per 100,000
- Separated by Race and Ethnicity
- Separate Hispanics by Mexican, Puerto Rican, and Cuban

Injury at Work Fatalities

Disaggregate External Deaths by place of birth.


External Deaths by Group per 100,000
100
90
80
70
60
50
1
.5
0
2000
2005
2010
2015
Census year
Avg. White Rate
Avg. Black Rate
Avg. Hispanic Rate
Avg. Enforcement Index
Pct. Counties with Secure Communities

Model

TWFE Model

$$y_{it} = \beta_1 OIL_{it} + \beta_2 E - Verify_{it} + \beta_3 287g_{it} + \beta_4 Pct\_SC_{it} + \alpha_i + \theta_t + e_{it}$$

OIL = Omnibus Laws indicator
E-Verify = Indicator for E-Verify Policies
287g = Indicator for 287g agreements allowed in state
Pct_SC = Percentage of counties with Secure Communities passage.

Table 2: External Death Rate per 100,000

VARIABLES	(1) White	(2) Black	(3) Hispanic
Pct Secure Communities	3.843**	-5.419	-11.65
	(1.724)	(4.693)	(8.399)
287g Agreement	-0.567	-2.376	-7.235
	(1.966)	(3.372)	(9.099)
Omnibus Immig. Laws	-0.955	-3.486	-2.629
	(0.976)	(4.722)	(3.091)
E-verify	-1.604	-1.340	-12.71**
	(1.467)	(3.214)	(5.413)
Observations	867	867	867
R-squared	0.800	0.659	0.794

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1, external deaths include deaths from suicides, accidents, and homicides

Table 3: External Death Rate per 100,000 by Hispanic Group

VARIABLES	(1) Hispanic	(2) Foreign Born Mexican	(3) Mexican	(4) Puerto Rican	(5) Cuban
Pct Secure Communities	-11.65	-134.0*	-24.46*	-219.3	-105.7*
	(8.399)	(78.48)	(13.68)	(216.3)	(58.30)
287g Agreement	-7.235	-20.78	-5.007	-71.89	11.79
	(9.099)	(25.54)	(7.010)	(75.84)	(18.30)
Omnibus Immig. Laws	-2.629	1.254	-0.358	6.804	-10.11
	(3.091)	(8.153)	(4.159)	(13.98)	(11.72)
E-verify	-12.71**	-45.59**	-16.35***	-29.85	0.356
	(5.413)	(21.69)	(5.008)	(24.59)	(14.90)
Observations	867	861	867	865	834
R-squared	0.794	0.660	0.740	0.779	0.313

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1, external deaths include deaths from suicides, accidents, and homicides

Table 4: Accidental Death Rate per 100,000

VARIABLES	(1) All	(2) White	(3) Black	(4) Hispanic
E-verify	-2.918	-1.530	-1.044	-10.51**
	(2.300)	(1.415)	(2.733)	(4.618)
287g Agreement	-2.482	0.261	-1.309	-4.457
	(2.462)	(1.541)	(2.169)	(6.135)
Omnibus Immig. Laws	-1.282	-1.092	-2.277	-1.248
	(1.130)	(0.896)	(2.616)	(2.631)
Pct Secure Communities	-0.618	2.976*	-2.722	-5.129
	(1.493)	(1.625)	(3.300)	(4.268)
Observations	867	867	867	867
R-squared	0.833	0.801	0.600	0.789

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 5: Accident Death Rate per 100,000 by Hispanic Group

VARIABLES	(1) Hispanic	(2) Mexican	(3) Puerto Rican	(4) Cuban
E-verify	-10.51**	-13.87***	-33.56	7.578
	(4.618)	(4.334)	(22.40)	(10.27)
287g Agreement	-4.457	-5.315	-40.72	16.23
	(6.135)	(5.429)	(48.76)	(11.39)
Omnibus Immig. Laws	-1.248	0.481	9.336	-7.589
	(2.631)	(3.370)	(10.76)	(5.455)
Pct Secure Communities	-5.129	-22.91**	-99.93	-43.46
	(4.268)	(10.86)	(95.64)	(37.81)
Observations	867	867	865	834
R-squared	0.789	0.724	0.790	0.292

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 6: Suicide Rate per 100,000

VARIABLES	(1) All	(2) White	(3) Black	(4) Hispanic
E-verify	-0.506	-0.160	-0.501	-1.230
	(0.632)	(0.324)	(1.058)	(0.918)
287g Agreement	-1.285	-0.625	-0.614	-1.639
	(0.919)	(0.737)	(0.825)	(1.889)
Omnibus Immig. Laws	0.219	0.309	-0.613	0.213
	(0.322)	(0.261)	(0.733)	(0.299)
Pct Secure Communities	-1.220	0.467	-0.607	-3.877
	(0.920)	(0.506)	(2.216)	(4.355)
Observations	867	867	867	867
R-squared	0.819	0.787	0.291	0.785

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 7: Suicide Rate per 100,000 by Hispanic Group

VARIABLES	(1) Hispanic	(2) Mexican	(3) Puerto Rican	(4) Cuban
E-verify	-1.230	-1.134	-3.122	1.174
	(0.918)	(0.927)	(4.364)	(7.776)
287g Agreement	-1.639	0.142	-15.00	-16.57
	(1.889)	(1.076)	(13.92)	(10.54)
Omnibus Immig. Laws	0.213	0.286	-0.796	-1.350
	(0.299)	(0.494)	(2.397)	(5.743)
Pct Secure Communities	-3.877	-0.339	-52.35	-50.81
	(4.355)	(1.642)	(55.41)	(54.68)
Observations	867	867	865	834
R-squared	0.785	0.578	0.736	0.129

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

Table 8: Homicide Rate per 100,000

VARIABLES	(1) All	(2) White	(3) Black	(4) Hispanic
E-verify	0.469	0.184	0.768	0.153
	(0.646)	(0.391)	(1.208)	(1.794)
287g Agreement	-0.281	0.160	-0.916	-0.679
	(0.214)	(0.282)	(1.317)	(0.987)
Omnibus Immig. Laws	-0.0218	0.0365	0.352	-1.192*
	(0.201)	(0.0958)	(0.976)	(0.642)
Pct Secure Communities	-0.424	0.274	-0.431	-1.438
	(0.367)	(0.326)	(2.730)	(1.239)
Observations	867	867	867	867
R-squared	0.869	0.741	0.736	0.730

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 9: Homicide Rate per 100,000

VARIABLES	(1) Hispanic	(2) Mexican	(3) Puerto Rican	(4) Cuban
E-verify	0.153	-0.735	7.197	-1.509
	(1.794)	(1.803)	(9.661)	(4.420)
287g Agreement	-0.679	0.0119	-14.05	5.420
	(0.987)	(0.917)	(11.70)	(4.476)
Omnibus Immig. Laws	-1.192*	-0.982	-0.407	-2.577
	(0.642)	(0.815)	(3.082)	(1.766)
Pct Secure Communities	-1.438	0.195	-54.76	-3.927
	(1.239)	(1.489)	(54.70)	(6.016)
Observations	867	867	865	834
R-squared	0.730	0.637	0.707	0.215

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

Table 10: Injury Deaths at Work per 1 million Workers

VARIABLES	(1) All Workers	(2) Hispanic	(3) White	(4) Black
Pct Secure Communities	-11.65**	-16.28	-9.682**	-3.055
	(4.437)	(26.66)	(4.729)	(23.44)
E-verify	-3.564*	-4.780	-2.156	-24.89*
	(2.067)	(11.88)	(2.437)	(13.06)
287g Agreement	0.284	10.34	0.256	-10.79
	(2.268)	(16.24)	(2.249)	(11.03)
Omnibus Immig. Laws	-0.373	-0.459	0.0380	4.202
	(1.429)	(7.050)	(1.432)	(9.950)
Observations	867	867	867	867
R-squared	0.713	0.310	0.657	0.183

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 11: Injury Deaths at Work per 1 million Workers by Hispanic Group

VARIABLES	(1) Mexican	(2) Puerto Rican	(3) Cuban	(4) Hispanic (Non- Mexican)
Pct Secure Communities	-57.60	-8.434	51.20	36.53
	(45.64)	(15.00)	(49.96)	(29.48)
E-verify	-31.20**	-78.80	-35.92	16.80
	(14.97)	(76.47)	(49.24)	(21.05)
287g Agreement	-15.66	38.79	56.58	35.50
	(11.78)	(35.87)	(43.70)	(31.06)
Omnibus Immig. Laws	7.127	45.39	12.17	-0.814
	(11.20)	(43.33)	(31.54)	(6.721)
Observations	867	863	825	867
R-squared	0.433	0.495	0.097	0.156

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Staggered Dif-in-Dif estimation with multiple treatment effects

The current analysis suffers from various issues

- Two way fixed effects estimation in a staggered dif-in-dif setup is biased (Goodman-Bacon 2021; Borusyak, Jaravel, and Spiess 2021; Callaway and Sant'Anna 2021; Strezhnev 2018; Liu, Wang, and Xu 2020).

- Most of the current solutions to the above problem do not account for multiple treatment dummies.

- Some do accommodate for "dose" effects

Enforcement Index

$$Index_{it} = OIL_{it} + E - Verify_{it} + 287g_{it} + Pct\_SC_{it}$$

The above index will be used as a “dose” effect to capture immigration enforcement.

Each variable will used as an indicator variable. The index will capture the sum of these indicators, which means the value will range from 0 to 4.

Several issues
- not all OIL’s are created equal
- the order of the laws may matter
- the marginal effects are likely heterogenous by mix of laws.

Gardner (2021)

Two stage difference in differences

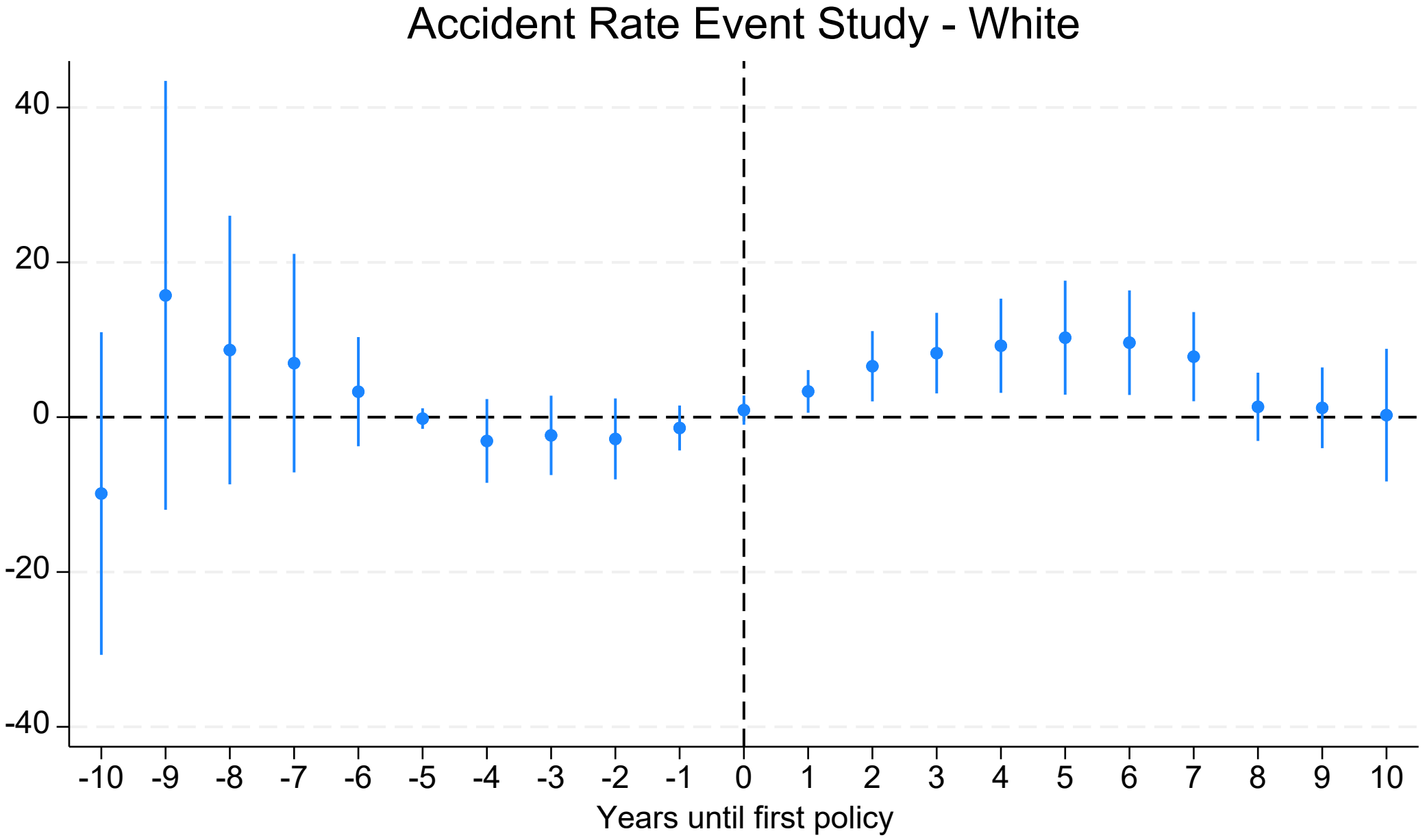
- First stage: estimate a two-way fixed effects model using only the control periods.
- Next, use the estimates to predict “counter factual” observations for all observations
- Second stage: difference the observed and the predict Y, Yo – Yp.
- Third, regress this new difference on the treatment variables.

Treatment Effect

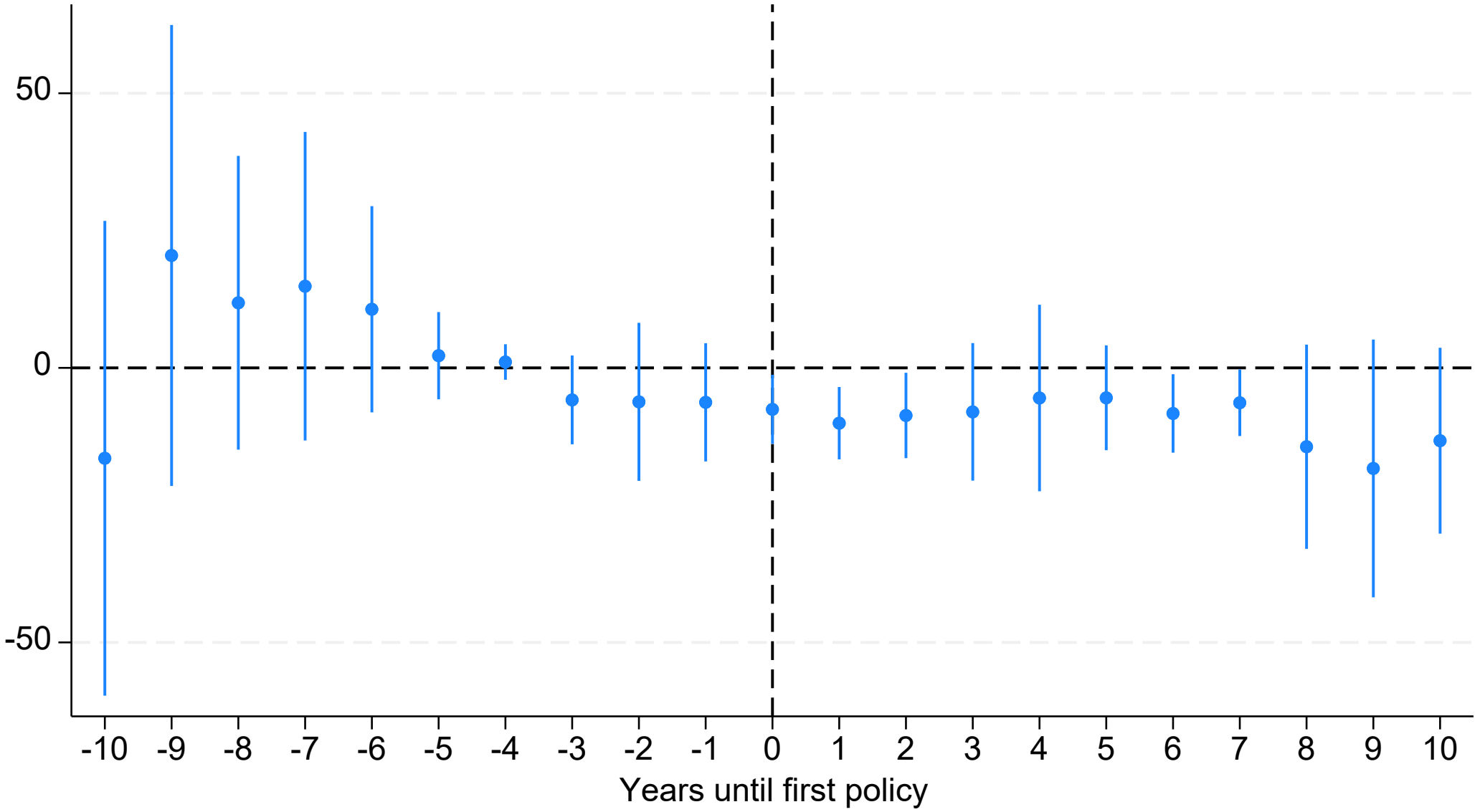
	All	White	Black	Hispanic	Mexican
Accidents	1.639	6.766***	-3.385	-9.639***	-21.33***
Suicides	.5125	2.378***	-1.07	-1.99	-.321
Homicides	-.3365**	.3307	-2.107	-2.415***	-.3202
Injury at Work	-3.44*	-2.045	-7.029	-13.40	-58.77*

These treatment effects are with respect to 100,000 people.

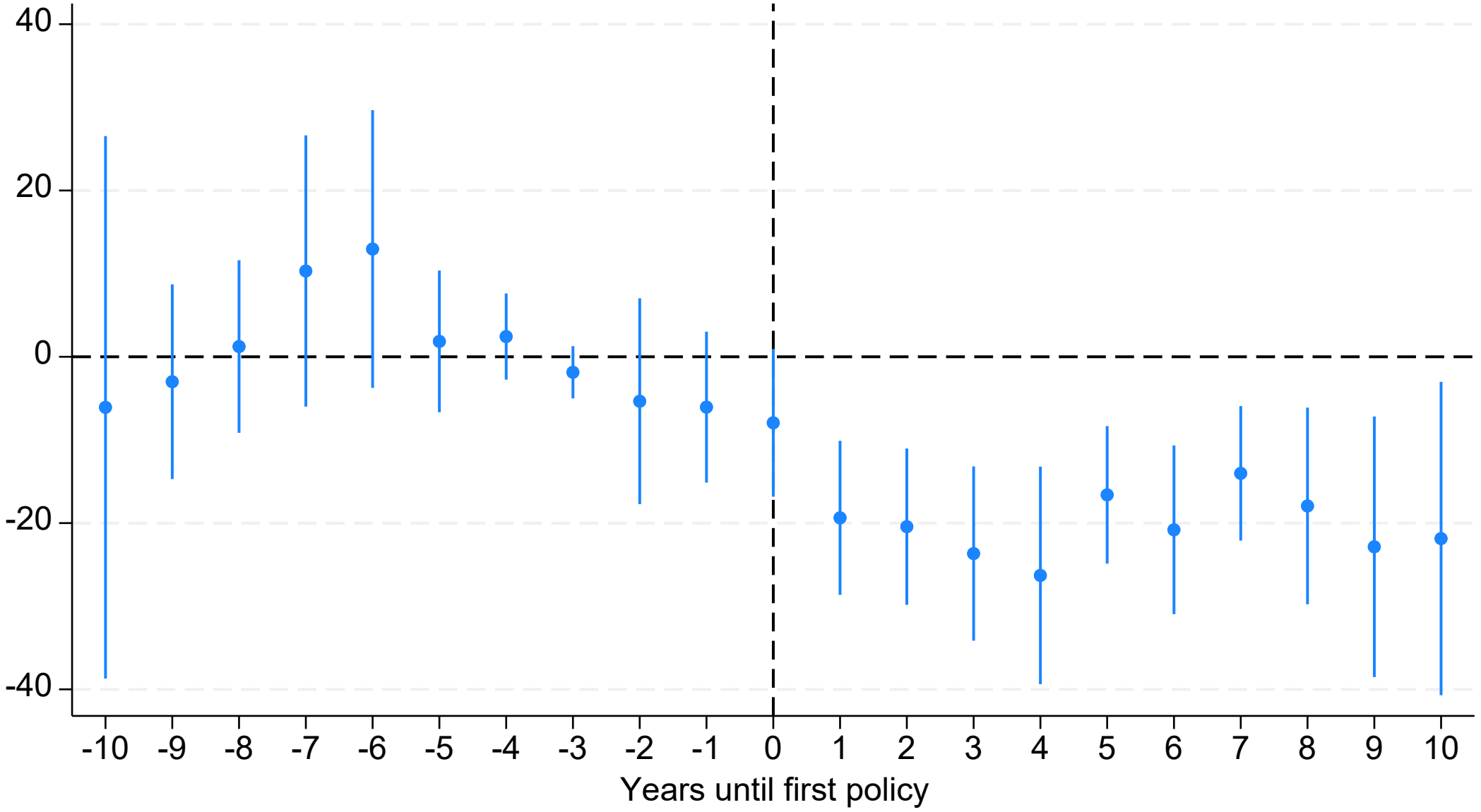
Injury at work is relative to 1 million workers.


Accident Rate Event Study - White
40
20
0
-20
-40
-10
-9
-8
-7
-6
-5
-4
-3
-2
-1
0
1
2
3
4
5
6
7
8
9
10
Years until first policy

Accident Rate Event Study - Hispanics



Accident Rate Event Study - Mexicans



Dose Effect: Using the Index instead of an indicator

	All	White	Black	Hispanic	Mexican
Accidents	.9071	3.612***	-1.947	-5.018***	-11.14***
Suicides	.4059**	1.356***	-.7007	-.7687	-.2205
Homicides	-.0879	.1451	-.8241	-1.09***	-.4709
Injury at Work	-2.476**	-1.705	-4.811	-6.66	-29.41**

These treatment effects are with respect to 100,000 people.

Injury at work is relative to 1 million workers.

Conclusion

We find weak evidence that Secure Communities *decreases* the number of external deaths among Hispanics.

We find stronger evidence that E-verify *decreases* the number of external deaths for Hispanics.

These effects are strongest among Mexicans and even stronger among Foreign Born Mexicans.

We find little evidence that Immigration Laws affect suicide or homicide rates.

Thank You!!

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