Minimum Wages and Racial Infant Health Inequality: Evidence from the Fair Labor Standards Act of 1966

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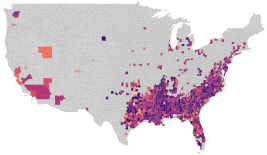
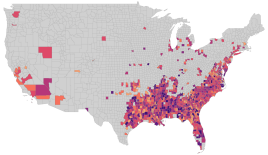
November 2026

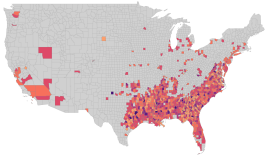
Racial Gaps in US Infant Mortality, per 1,000 Live Births



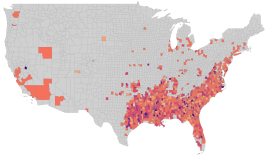
Non-white, 1966



Non-white, 1971



White, 1966



White, 1971

0-10 10-20 20-30 30-40 40-50 50-60 60+ Not in sample

Background and Motivation

- The gap between non-white and white infant mortality decreased substantially between the mid 1960s and the early 1970s.
- The desegregation of hospitals in the South may explain a portion of this decline (Almond, Chay, and Greenstone, 2006), though the evidence is contested.

Background and Motivation

- The Fair Labor Standards Act of 1966 increased the federal minimum wage in several previously excluded industries (agriculture, laundries, personal services, entertainment & recreation).
- These changes disproportionately affected Black workers, narrowing the racial wage gap (Derenoncourt and Montialoux, 2021) Details
- **What is the role of labor markets in improvements to Black infant health during this time?**

Related Literature and My Contribution

- Past work in economics has used state-level minimum wage variation post-1980 to show that minimum wages improve infant health (Komro et al., 2016; Wehby, Dave, and Kaestner, 2020).
- Rosenquist et al. (2020) finds descriptive evidence that the state-level minimum wage is associated with reduced infant mortality of children of non-Hispanic Black mothers.

My contribution:

- Evaluating how the minimum wage affects **racial gaps** in infant health with quasi-experimental methods.
- Measuring treatment county by county from the **1960 Census industry tables**, newly digitized for this project.
- Using nation-wide natality data from a period only recently digitized for public use.

Research Questions

- What were the effects of increased coverage of the federal minimum wage on infant mortality?
- Can any of the convergence in race-specific infant mortality rates be attributed to the Fair Labor Standards Act of 1966?

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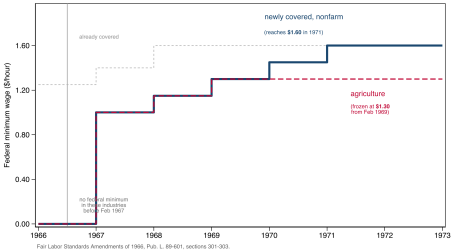
Preview of results:

A 1 p.p. increase in employment covered by the minimum wage decreased the gap in infant mortality by about 0.08 deaths per 1,000 births (or 9% of the pre-reform gap at the mean county's exposure).

The FLSA of 1966 Extended the Minimum Wage to Exempt Industries

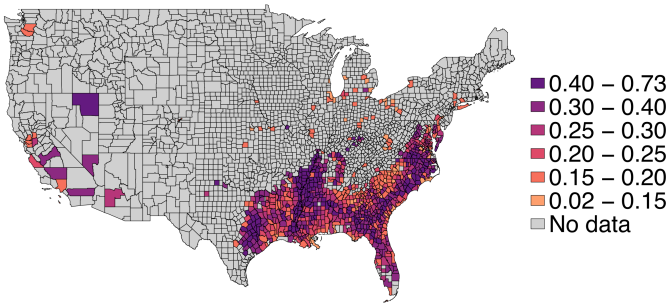
- Industries previously exempt: agriculture, restaurants, laundries, and personal services, entertainment, schools, hospitals, and nursing homes.
- Coverage disproportionately reached Black workers and narrowed the racial wage gap (Derenoncourt and Montialoux, 2021) ▸ More
- Phased in by statute: **nonfarm** reached $1.60 by 1971; **agriculture** plateaued at $1.30 in February 1969 (Pub. L. 89-601).



Data

- U.S. County-Level Natality and Mortality Data (Bailey et al., 2018)
- Vital Statistics NCHS Multiple Cause of Death Data (NBER)
- Vital Statistics Natality Data starting in 1968 (NBER)
- Employment by industry at the county level, 1960 Decennial Census Tables
- Minimum Wage Database (Derenoncourt and Montialoux, 2021)

Treatment: County Exposure to Newly Covered Industries



- Dose = share of 1960 county employment in newly covered industries.
- Built from the **1960 Census industry tables**, newly digitized for this project.
- **842 counties**, covering **71.3% of US non-white births** in 1966.

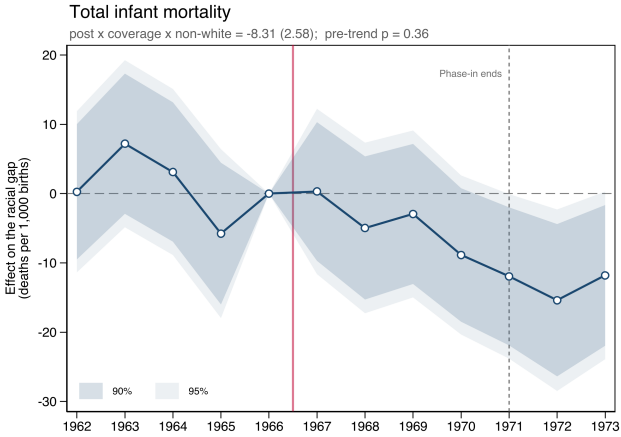
Empirical Strategy

Triple difference on a county × race × year panel, 1962–1973:

$$y_{crt} = \beta\,(\text{post}_t \times \text{dose}_c \times \text{nonwhite}_r) + \alpha_{cr} + \gamma_{srt} + \delta_c t + \varepsilon_{crt}$$

- α_{cr} county × race; γ_{srt} **state** × **race** × **year**; $\delta_c t$ county linear trends.
- So the comparison is high- vs low-dose counties *within a state, race, and year*.
- SEs clustered on county × race; weighted by race-specific births. Details

The Racial Gap Narrows After 1966



No pre-trend (joint test $p = 0.36$); the effect deepens through the early 1970s.

A 1 p.p. Increase in Covered Employment Narrows the Gap

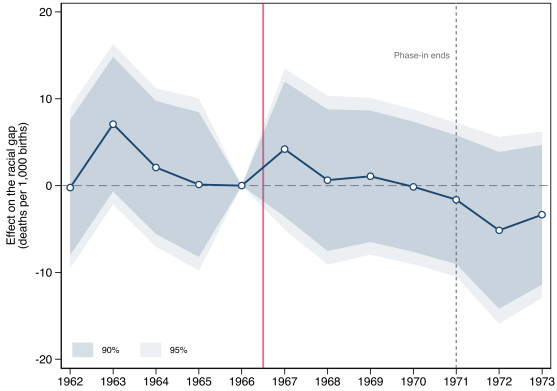
	(1)	(2)	(3)	**(4)**
Post × Coverage × Non-white	-14.34***	-7.92**	-15.46***	**-8.31*** **
	(2.90)	(3.18)	(2.27)	**(2.58)**
County × Race FE	Yes	Yes	Yes	Yes
Year × Race FE	Yes	No	Yes	No
State × Race × Year FE	No	Yes	No	Yes
County linear trends	No	No	Yes	Yes
Counties	842	842	842	842

SEs clustered on county × race in parentheses. *** p<0.01, ** p<0.05, * p<0.1

At the mean county's exposure (0.22), the gap narrows by **1.86 deaths per 1,000 births** — about **9%** of the pre-reform racial gap of 19.9.

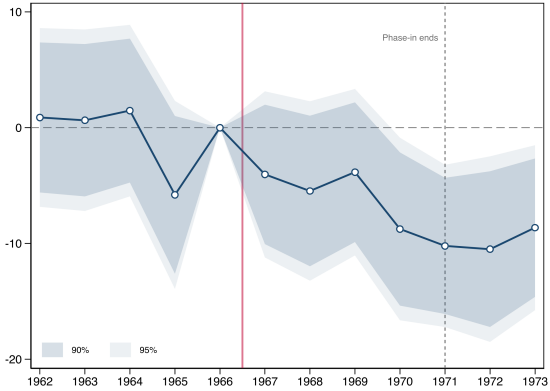
The Effect Is Concentrated in Postneonatal Mortality

Neonatal (under 28 days)



-2.10 (2.01) n.s.

Postneonatal (28 days to 1 year)



-6.52*** **(1.53)**

Postneonatal deaths are ∼30% of infant deaths but carry ∼80% of the effect.

Robustness: Concurrent Changes in Medical Care

Two changes in medical care coincided with the reform.

1. **Neonatal technology.** Deaths from underdeveloped lungs split into the share of infants born *premature* and mortality *given* prematurity. Only the second moves when intensive-care technology improves, so I control for it directly (Kleinman et al., 1978; Williams and Chen, 1982) ▸ How

   $\Rightarrow \quad -3.06^{**}$ (1.23), on a racial gap of just 2.08 per 1,000.

2. **Desegregation.** Title VI of the 1964 Civil Rights Act (Almond, Chay, and Greenstone, 2006; Anderson, Charles, and Rees, 2026). Drop the five states it most affected: Alabama, Georgia, Louisiana, Mississippi, and South Carolina.

   $\Rightarrow \quad -9.98^{***}$ (3.73), against -8.31 on the full sample.

Both survive; dropping the five states strengthens the estimate. ▸ Results

Conclusions & Policy Implications

- In 2024, Black infant mortality was 11.0 per 1,000 births, 2.5× the white rate of 4.4 (CDC).
- A central challenge in addressing racial health disparities is separating economic inequality from direct discrimination in accessing care.
- A 1 p.p. increase in covered employment narrowed the gap by about 0.08 deaths per 1,000 births — 9% of the pre-reform gap at the mean exposure.
- The federal minimum wage has important spillover effects on the children of wage earners.
- Implications for current debates on the minimum wage and other anti-poverty programs.

APPENDIX

Why Lung Deaths Separate Income from Medical Technology

Mortality from underdeveloped lungs factors into two parts (Kleinman et al., 1978; Williams and Chen, 1982):

$$\underbrace{\frac{\text{lung deaths}}{\text{births}}}_{\text{outcome}} = \underbrace{\frac{\text{lung deaths}}{\text{low-weight births}}}_{\substack{\textbf{technology} \\ \text{survival given prematurity}}} \times \underbrace{\frac{\text{low-weight births}}{\text{births}}}_{\substack{\textbf{maternal condition} \\ \text{share born premature}}}$$

Only the first term falls when neonatal intensive care improves. Controlling for it leaves the **prematurity share** as what the minimum wage is free to move.

Birth weight is reported only from 1968; pre-1968 values are set to the county × race average of 1968–69, since the technology to reduce survival-given-prematurity was limited before the Babybird ventilator spread in 1970.

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Alternate Specifications Results

	All causes	Underdeveloped lungs	No Deep South
post × industry share	−0.650	0.004	−1.171
	(2.27)	(1.02)	(2.86)
post × non-white	−8.308***	−3.059**	−9.980***
× industry share	(2.58)	(1.23)	(3.73)
Observations	20,064	19,719	11,112
Counties	842	836	463
County × Race FE	Yes	Yes	Yes
Year × Race × State FE	Yes	Yes	Yes
County linear trends	Yes	Yes	Yes

Outcome is infant deaths per 1,000 births. SEs clustered on county × race in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

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More on Derenoncourt and Montialoux (2021)

- The 1966 amendments extended coverage to agriculture, restaurants, hotels, laundries, personal services, entertainment, and recreation, nursing homes, and hospitals.
- They use a difference-in-differences design across treated and untreated industries to tie the FLSA of 1966 to the decline in the racial earnings gap.
- They estimate negligible effects on Black employment.

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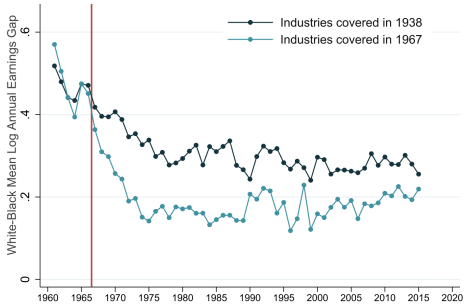

Specification Detail

- County $\times$ race $\times$ year panel, **1962–1973**; post $=$ year $>$ 1966.
- Counties with more than 5% of their land in reservation or trust land are excluded, as are counties below 5% non-white in 1960.
- Balanced panel: both races observed in all twelve years.
- Outcome winsorized at the race-specific 99th percentile, upper tail only.
- Weighted by race-specific births; SEs clustered on county $\times$ race.

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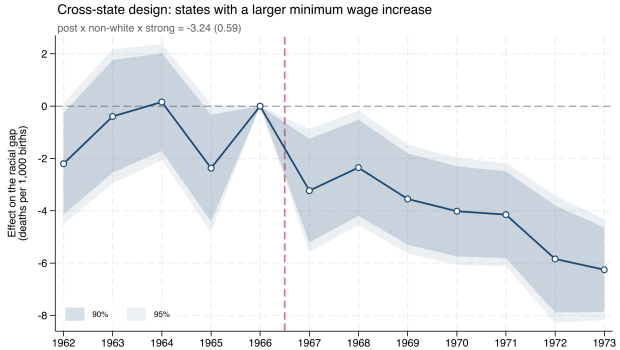
Sample Construction

Counties in the mortality panel	3,106
with a digitized 1960 dose	1,471
reservation land $\leq 5\%$	1,430
1960 non-white share $\geq 5\%$	983
balanced 1962–1973	**842**

The binding constraint is the availability of race-specific births rather than the dose. The published volumes report race detail only for counties with a sizeable non-white population, which concentrates the sample in the South. Back

Cross-State Evidence

A complementary design uses state-level minimum wage variation in place of county industry composition.



Treatment is at the state-group level, following Derenoncourt and Montialoux (2021): a group is strongly treated if no state minimum wage law applied to more than half its population in 1966, so the federal reform bit hardest there. Each point is the change in the non-white–white infant mortality gap in those groups relative to the rest, measured against 1966.

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Sensitivity to Specification Choices

Across 21 variants the estimate ranges from -4.99 to -10.27, and each is significant at the 10% level or better. The variants differ in:

- the weight;
- the treatment of the outcome's upper tail;
- the estimation window;
- which counties are excluded (reservation land, 1960 non-white share, panel balance);
- the level of clustering.

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