Minimum Wage Effects and Monopsony Explanations

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Many recent MW studies detect small/no significant employment effects

Sample of studies that find small or no significant disemployment from min wage increases:

- Dube et al. 2010; Allegretto et al. 2011; Giuliano 2013; Dube and Zipperer 2015; Allegretto et al. 2017; Reich et al. 2017; Cengiz et al. 2019; Derenoncourt and Montialoux 2021; Dube and Lindner 2021; Azar et al. 2023; Wiltshire 2023; Wursten and Reich 2023
- Contrasts with the predictions of "neoclassical" theory

Min wage lit. offers various explanations for "elusive" employment effects (Manning 2021):

- Min wages help overcome employment-reducing monopsony power
- Price pass-through lowers the impact on employers' bottom line
- Increases too small to induce emp effects; inflation mitigates impacts; analyses are short-run

Which of these explanations is primarily responsible?

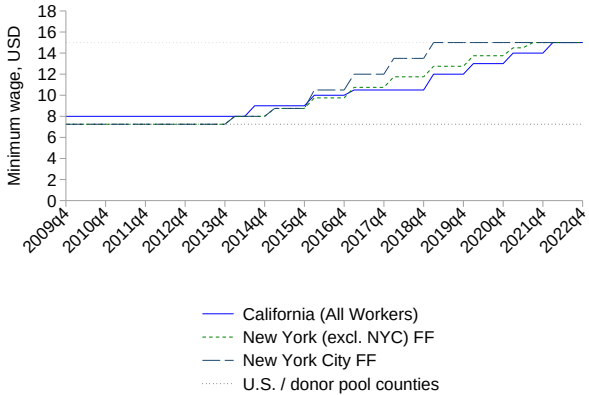
We use very large min wage increases to test these explanations

US fed min wage unchanged since reaching $7.25/hr in 2009q3

→ Consequently, 20 states have seen no increase since 2009

→ Several recent state and local MW polices contrast starkly w/ previous decades

→ We focus on CA and NY, where fast food MWs approx. doubled over 7.5 years



Our contributions

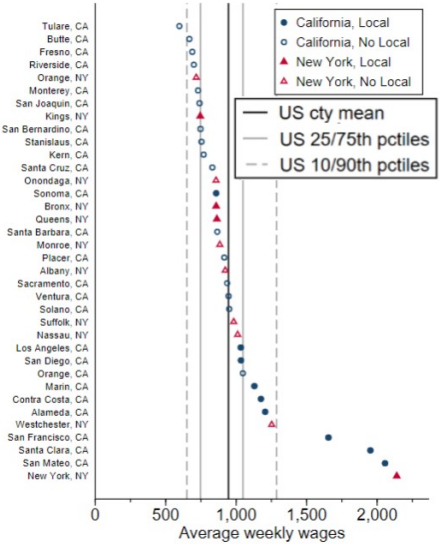
- First to estimate causal effects of recent near-doubling of minimum wages, up to $15
  - → Large, positive earnings effects
  - → No evidence of negative employment effects
  - → Reduced separation rates from low-wage restaurant employers
  - → Only partial (55%) pass-through to prices at McDonald's restaurants
- The evidence together indicates monopsony labor market dynamics in fast food sector
- Provide evidence that even lower-wage labor markets are **not** at risk of disemployment effects
- Stacked synthetic control estimates consistent with earlier-period results using other estimators
- Novel methodological approach to ameliorate local pandemic-response bias

We use very large min wage increases to test these explanations

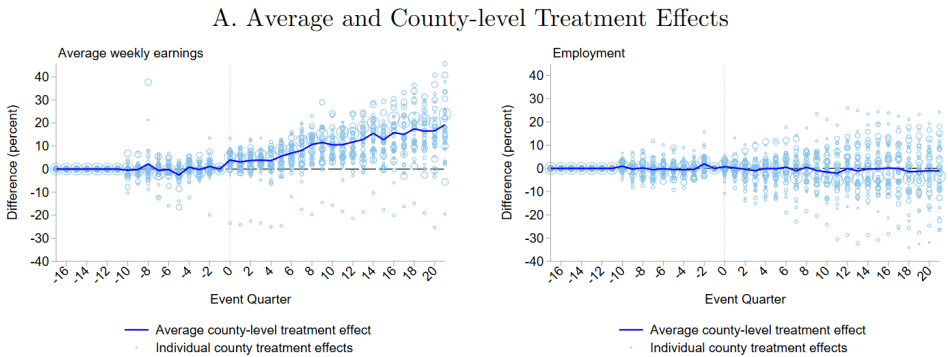
Primary research design, estimation strategy, outcomes:

- County-by-county stacked synthetic control estimating strategy (bias-corrected)
- Treatment starts in 2014q3 (2014q1) in California (New York) counties. Balance in event time
  - $\rightarrow$ Pre-pandemic estimates through event quarter 21 (50–107% increase in min wage)
  - $\rightarrow$ Pandemic-inclusive estimates through event quarter 33 (88–107% increases in min wage)
    - Novel pandemic-response correction due to spurious correlation with min wage policies
- QCEW county $\times$ industry $\times$ quarter data $\rightarrow >$ 95% of all workers. 2009q4–2022q4
- Also CPS ORG, QWI, LAUS, Google Community Mobility data, and McDonald's survey data
- Effects on fast food industry in large counties
  - $\rightarrow$ 36 treated counties in California and New York (min wage $\geq$ \$15 by 2022q1)
  - $\rightarrow$ 122 donor pool (control) counties from 18 states with no ΔMW since 2009q3
  - $\rightarrow \geq$ 5k restaurant workers in 2009: reduce measurement error, bias, chance of overfitting

We leverage economic variation among a diverse set of counties



Estimated effects for fast food workers (full sample, pre-pandemic)



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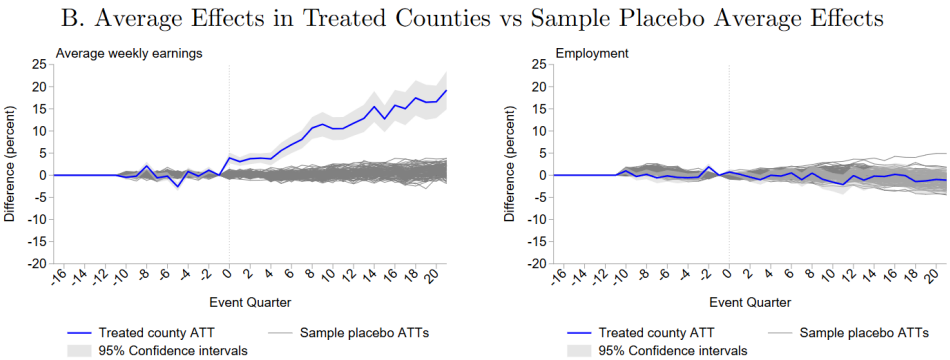
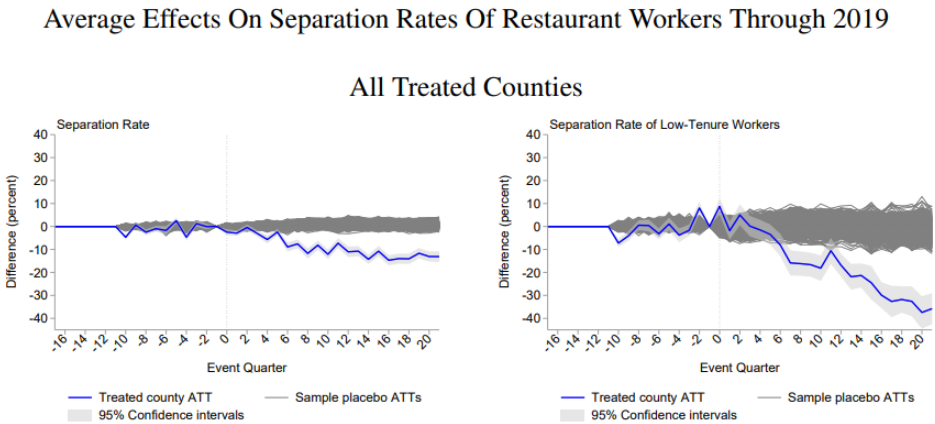


Avg earnings and employment effects over treated counties (pre-pandemic)

Average Effects Through 2019

	Average Weekly Earnings	Employment	Own-wage Elasticity
A. All Treated Counties			
Treatment Effect (%)	19.21	-1.11	-0.06
Elasticity	0.33	-0.02	
Placebo-variance-based 95% CIs	[0.28, 0.38]	[-0.07, 0.03]	[-0.21, 0.10]
RMSPE-based *p*-value	0.00	0.49	
B. Excluding Counties with Local Minimum Wages			
Treatment Effect (%)	15.45	0.29	0.02
Elasticity	0.31	0.01	
Placebo-variance-based 95% CIs	[0.25, 0.38]	[-0.07, 0.08]	[-0.22, 0.26]
RMSPE-based *p*-value	0.04	0.52	
C. Excluding Counties in the SF Bay Area and NYC			
Treatment Effect (%)	15.88	-0.22	-0.01
Elasticity	0.27	-0.00	
Placebo-variance-based 95% CIs	[0.22, 0.33]	[-0.07, 0.06]	[-0.24, 0.21]
RMSPE-based *p*-value	0.01	0.69	

Effects on separation rates of workers (full sample, pre-pandemic)



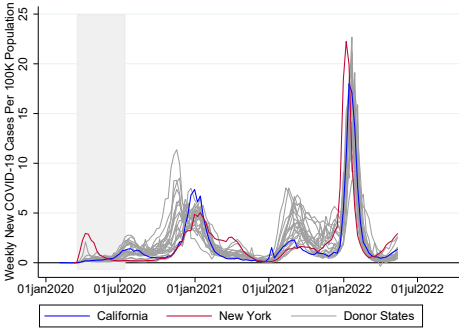
McDonald's wages, Big Mac prices, and price pass-through

Average Effects For Additional Outcomes Through 2019

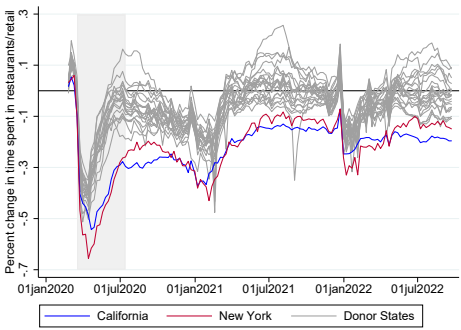
	McDonald's Establishments		
	Average Hourly Wage	Price	Pass-Through
A. All Treated Counties			
Treatment Effect (%)	21.65	3.57	0.55
Elasticity	0.75	0.12	
Placebo-variance-based 95% CIs	[0.67, 0.83]	[0.07, 0.17]	[0.32, 0.78]
B. Excluding Counties With Local Minimum Wages			
Treatment Effect (%)	16.36	2.78	0.57
Elasticity	0.71	0.12	
Placebo-variance-based 95% CIs	[0.60, 0.82]	[0.05, 0.19]	[0.21, 0.92]

Negative pandemic-related shocks in CA, NY more severe than in donors

A. Change in detected Covid cases



B. Change in time spent in restaurants and retail establishments



▸ Pandemic-response index by county

Pandemic-response (PR) correction procedure

Effectively, for each treated unit:

(1) Estimate synthetic control weights

(2) Estimate effect of PR index (plus predictors) on each Y_t using only *untreated counties*, OLS

(3) Residualize all $Y_{i,t}$ (including treated unit) using coefficients estimated in (2)

(4) Apply weights from (1) to results of (3), then difference to obtain PR-corrected estimates

Requirements for validity of procedure:

A) No causal relationship between MW and effects of pandemic-response

$\rightarrow$ Shut down by estimating pandemic coeff using **only** untreated counties

B) Pandemic-response index is not correlated with pre-pandemic outcomes

$\rightarrow$ Uncorrected and pandemic-corrected results are same, on avg., $\forall\ t < 2020q1$

▸ Plot

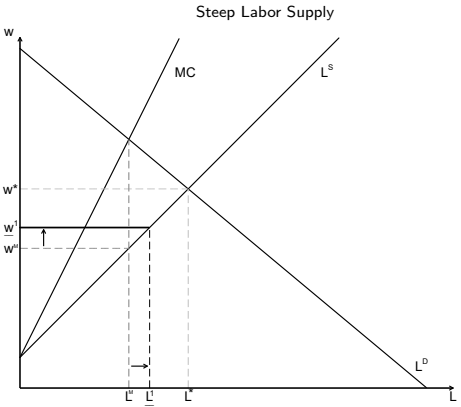
Avg earnings and emp effects over treated counties (pandemic-inclusive)

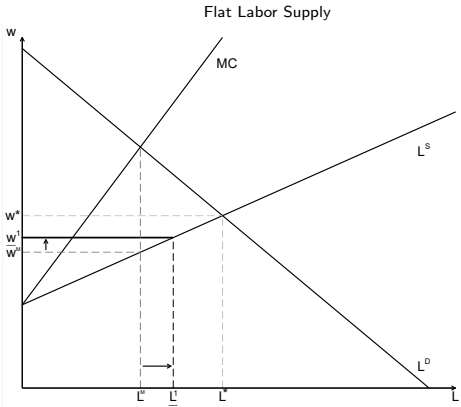
Average Effects Through 2022

	Average Weekly Earnings	Employment	Own-wage Elasticity
A. All Treated Counties			
Treatment Effect (%)	9.61	6.79	0.71
Elasticity	0.11	0.08	
Placebo-variance-based 95% CIs	[0.06, 0.15]	[0.03, 0.12]	[0.18, 1.24]
RMSPE-based *p*-value	0.02	0.06	
B. Excluding Counties with Local Minimum Wages			
Treatment Effect (%)	9.58	12.87	1.34
Elasticity	0.11	0.15	
Placebo-variance-based 95% CIs	[0.05, 0.17]	[0.09, 0.21]	[0.44, 2.24]
RMSPE-based *p*-value	0.11	0.03	
C. Excluding Counties in the SF Bay Area and NYC			
Treatment Effect (%)	11.30	10.85	0.96
Elasticity	0.13	0.12	
Placebo-variance-based 95% CIs	[0.07, 0.18]	[0.06, 0.18]	[0.33, 1.58]
RMSPE-based *p*-value	0.04	0.05	

Tighter monopsonistic labor markets $\Longrightarrow$ larger employment effects

Tighter post-pandemic labor markets (Autor, Dube and McGrew 2024) mean an increased labor supply elasticity (flatter labor supply curve)





Complementary results I won't discuss today

- No net employment effects, using a SC wage bin-by-bin approach we developed
- Significant increases in 10^{th} percentile wage
- Significant, positive effects on hours, employment, wages, earnings for teens
- Conclusions robust to using DiD and SDiD research designs and estimators
- Conclusions robust to expanding the treated sample to include smaller counties
- We also examine potential confounding impact of federal/state fiscal and labor market policies

Evidence indicates monopsony labor market dynamics in fast food sector

Price pass-through only accounts for about half of the MW increase. How to explain the rest?

Evidence does not support non-monopsony explanation:

- The minimum wage nearly doubles: any possible negative emp effect should be clear, here
- The treated period continues for 7.5 years: more than long enough for capital to adjust

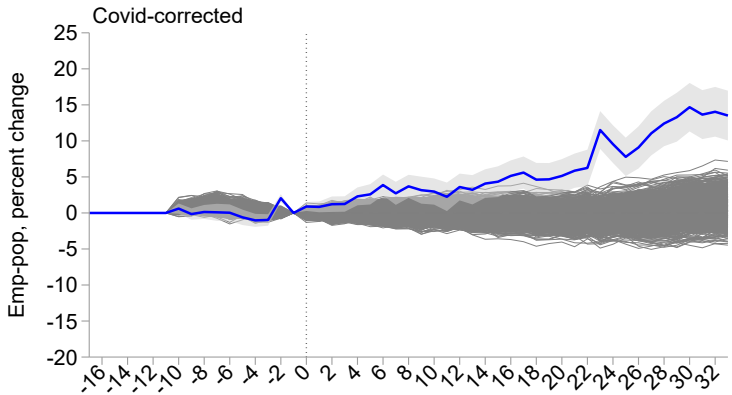
Evidence is consistent with monopsony predictions:

- Null or positive employment effects
- Even without correcting for pandemic-response bias, emp estimates are zero (positive, non-sig)
- Declining separation rates
- Incomplete price pass-through

Sneak peak at future work

California and New York resident populations grew slower than US as a whole

Using the employment-population ratio, instead



Summary

We examine the impact of California and New York $\sim$ doubling the MW, to $15, over 7.5 years

- Primarily use a stacked (county-level) synthetic control estimation strategy
- Consistent with lit. on smaller increases over shorter treated periods, we find large positive earnings effects and no negative emp effects

We then further evaluate non-monopsony explanations for non-negative emp effects

- Find sharp reductions in treated restaurant worker separation rates
- Price pass-throughs account for only $\sim$ half of MW increases
  - $\rightarrow$ The rest cannot be explained by too-small min wage increases or analysis being short-run. Monopsony/employer power is the only explanation consistent with our results

The results hold among only poorer counties and only counties without higher local min wages

The results hold both pre- and post-pandemic

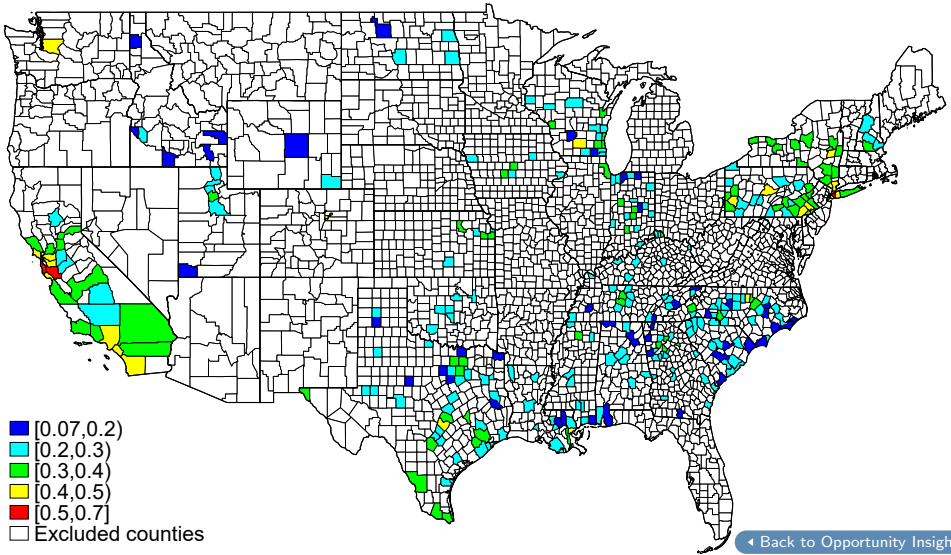
- The pandemic-inclusive results are biased by a spurious correlation with local pandemic responses
- Introduce a novel methodology to ameliorate this bias. Employment estimates grow more positive

Representativeness of treated counties suggests the results can be extrapolated across the U.S.

Thanks

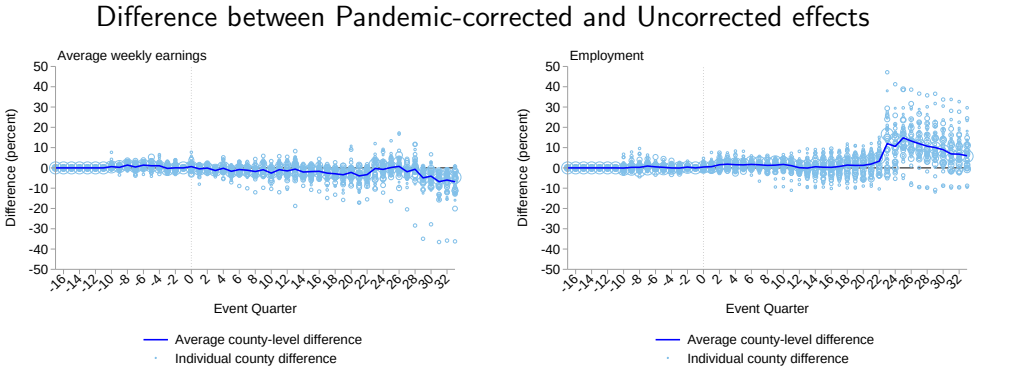
Pre-print at https://www.journals.uchicago.edu/doi/10.1086/735551

These data inform our county-level pandemic-response index



Back to Opportunity Insights plot

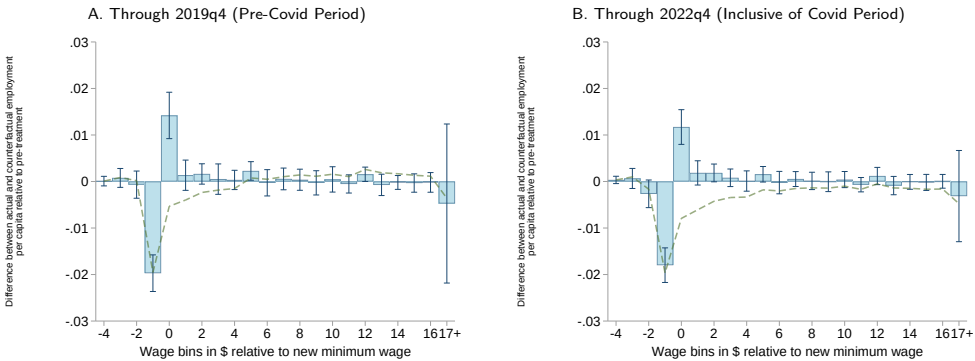
Pandemic index isn't correlated with pre-pandemic outcomes



Back to pandemic correction details

Pandemic index isn't correlated with pre-pandemic outcomes

Stacked Synthetic Control Bin-by-bin Effects* using state-level data, all workers



* Our pandemic-correction cannot be applied using state-level data; thus the Covid-inclusive estimates are biased downward