Sectoral Wage-Setting and Prices in California

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Minimum Wages and Monopsony

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Innovative Minimum Wage Policy

- AB 1228, enacted on September 28, 2023, effective **April 1, 2024**
- $20 minimum wage for workers in two industries in California's
  - fast food restaurants
  - snack & nonalcoholic beverage bars
  - exempts chains with ¡60 locations nationwide
- New channel: an agreement negotiated by the governor, the legislature, the International Franchise Association (IFA), and the Service Employees International Union (SEIU)

Comparisons to Previous MW Increases

- The highest nominal minimum wage in the US
- 25 percent overnight increases in CA
  - San Francisco 2004, from \$6.75 to \$8.50
  - San Jose 2013, from \$8 to \$10
- Higher local MWs in 30+ CA cities $\Rightarrow$ nominal increase $< 25\%$
- First MW to exclude independents & small chains

In the Media

Gavin Newsom: Critics said California's minimum wage increase would be a job killer. The opposite happened

Our commitment to raising the minimum wage is a testament to California's values

OPINION By Gov. Gavin Newsom · Fox News

> **We believe in fairness, equity and the idea that everyone deserves a chance to succeed. And these results dispel the cynics who say we must choose between protecting workers and growing the economy.**

"A lot of people on the industry side and conservative economists predicted that this would be a huge job killer, that the industry would stop adding the number of jobs that it has done over the past decade, that companies would close, they would lay off workers, they would reduce hours, they would replace workers with automation, etc.," Logan told KTLA.

Forbes

The Unintended Consequences Of California's $20 Minimum Wage For Fast-Food Workers

Here are the restaurants that raised menu prices in California, from Chick-fil-A to McDonald's

- Some restaurant chains and franchisees have increased prices in California to cover a new pay law.
- Restaurants from Starbucks to Chipotle have marked up menu prices since the law took effect on April 1.
- Other chains have found alternatives to offset the higher wage costs.

Business Insider, June 1, 2024

Instead of raising prices, California fast food restaurants should do this, franchisee says

"[Increasing prices] is a risky response because the consumer is usually unwilling to accept the increase… A better answer is to reduce overtime by focusing on resources surrounding staffing levels" *KTLA 5 News*

Research Design

- **Outcomes & Data**
  - Pay: Glassdoor, Square, QCEW
  - Employment: monthly CES, QCEW
  - Prices: collected using online Uber Eats menus
- **Methods**
  - Difference-in-differences (DiD)
  - Triple difference (DDD) estimator
- **Treatment & controls**
  - Treated: covered fast food restaurants in CA
  - Control groups: same fast food chains in control states, full-service restaurants
  - Control states: 20 states with $7.25 MW since 2009

Preview of Results

- Pay increased by 12 percent
- Employment not significantly affected
- Prices increased 2.1 percent after six months
- Cost pass-through around 0.6
- Revenue likely increased
- Royalties paid by franchisees to franchisors increased

Minimum Wage Literature

- Latest findings
  - Large earnings gains and minimal effects on employment in most causal studies: Cengiz et al. (2019), up to MW of $12
  - Positive effects in recent studies, per monopsony models: Azar et al. (2024); Wiltshire et al. (2024); Derenoncourt & Weil (2025)
- Price pass-throughs– conflicting results for fast food restaurants
  - No significant price changes: Katz and Krueger (1992); Card and Krueger (1995a)
  - Partial pass-through: Ashenfelter and Jurajda (2022); Wiltshire et al. (2024)
  - Complete pass-through: Aaronson et al. (2008)
  - More than complete: Basker and Khan (2016)

Wage Data: Glassdoor & Square

- Glassdoor: job posting site
  - Self-reported hourly base pay for ¿ 50,000 jobs
  - Full-time or part-time, date, state & employer name
  - Give-to-get incentives
  - Allows to identify a sample of covered chains by state
  - 11,000 current job observations in fast food & full service, in CA & control states; 250-300 obs. per quarter for CA fast food
- Square: payroll service used by small firms
  - Payroll data (monthly pay and hours)
  - 475,000 workers in 24,200 small restaurants
  - None covered by the policy

Price Data

- Burger segment of fast food (for comparability)
- Five waves: just before policy (end of '24Q1), '24Q2, '24Q3, '25Q1 (unprocessed)
- Uber Eats menus at individual locations
- Compared to prices on restaurants' own websites
- Sampled geographies— 25 largest CA counties; 95 largest counties in control states
- Current balanced panel sample: 2,050 locations, 810 in treated group

Number of Locations by Chain

	Overall		Sample	
	California	Non-California	California	Non-California
A. Fast-Food				
McDonald's	1,221	12,308	205	133
Jack in the Box	942	1,251	178	81
Carl's Jr and Hardee's	647	1,990	73	32
Burger King	534	6,193	126	141
Wendy's	297	5,711	125	190
The Habit	258	109	47	10
Five Guys	123	1,377	13	74
Sonic	82	3,430	12	70
Shake Shack	60	290	31	48
Total			810	779
B. Full-Service				
Denny's	358	996	38	131
Applebee's	106	1,430	18	93
Buffalo Wild Wings	99	1,199	7	71
Red Robin	57	438	8	47
Outback Steakhouse	44	632	6	63
Total			77	387

Empirical Strategy: DID

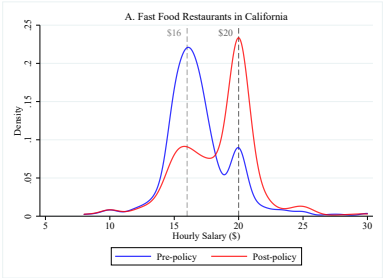
$$ln(Y_{i,t}) = \alpha_i + \tau_t + \sum_{k=T_0, k!=-1}^{T} \beta_k \times CA_i \times I\{t = k\} + \gamma X_i, t + \varepsilon_{i,t} \quad (1)$$

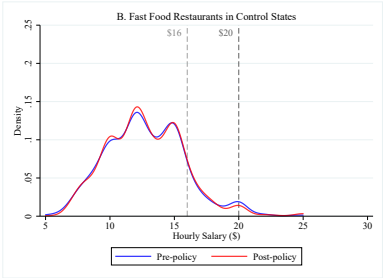
CA_i is an identifier equal to one for workers (locations) in California (i.e., subject to the policy); $I\{t = k\}$ is an indicator equal to one for the relevant period; β_k represents a causal effect of the \$20 minimum wage k quarters after the implementation. We use the quarter before the policy, $t = -1$, as our reference period.

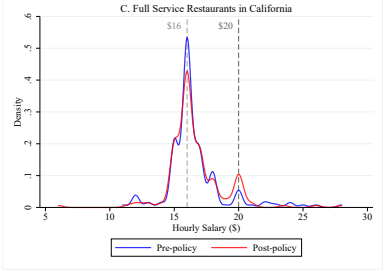
Data	Level of obs.	Fixed effects	Outcome (in logs)	Period $[T_0, T]$	Controls
Glassdoor	Worker	Chain-by-time, state, time	Hourly pay	[-4,2]	No
QCEW	County	County, time	Avg. weekly wages, epop	[-4,2]	Wages/epop for other industries
Price data	Restaurant	Restaurant, time	Price of an item	[0,2]	No

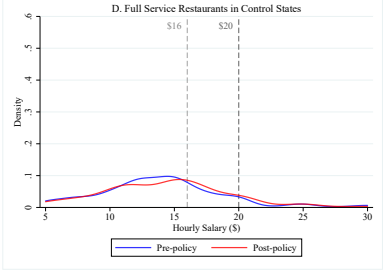
- Identifying assumption: parallel trends

Glassdoor Hourly Pay Distribution, Before & After

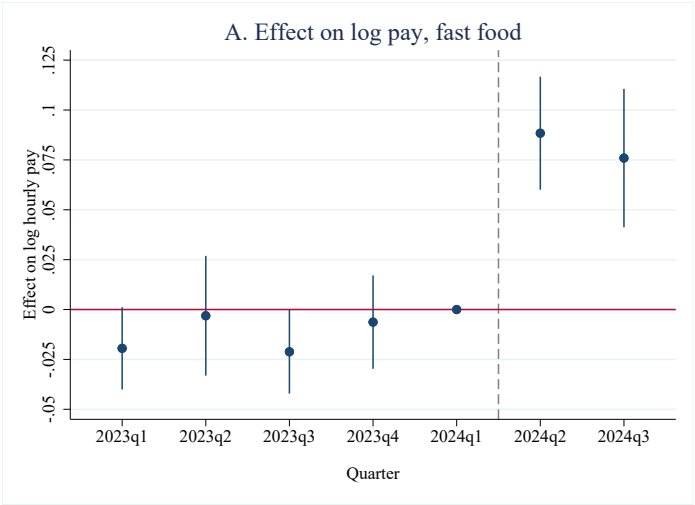


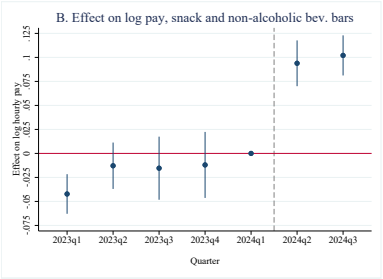


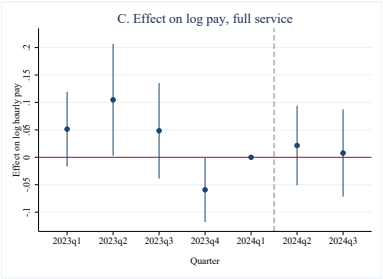




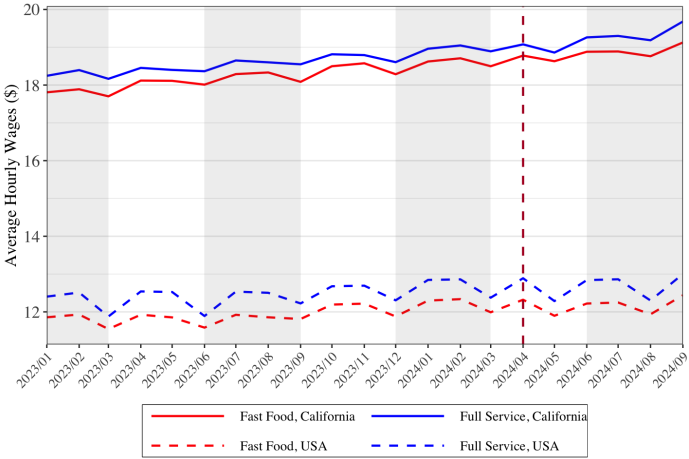
Pay Effects By Industry (Glassdoor Data)





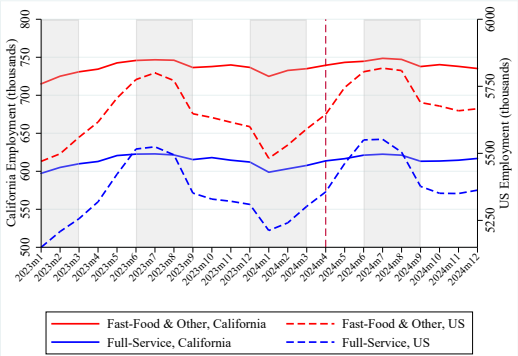


Pay Trends in Small Restaurants, CA & U.S. (Square)

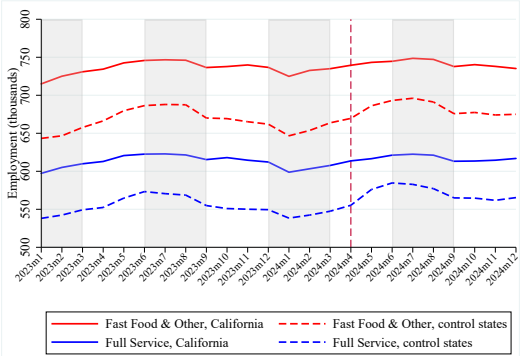


Employment Trends (CES): Less Seasonality in CA

A. California and U.S.



B. California and available control states



DiD Results Using QCEW Data

MW effects on average weekly earnings, employment rate and own-wage elasticity in fast food

	DID			DDD		
	(1) Wages	(2) EPop	(3) OWE	(4) Wages	(5) EPop	(6) OWE
Q2*Treat	0.044 [0.009, 0.067]	-0.006 [-0.21, 0.014]	-0.136	0.061 [0.011, 0.105]	0.002 [-0.171, 0.173]	0.033
Q3*Treat	0.084 [0.015, 0.135]	-0.012 [-0.036, 0.025]	-0.143	0.085 [-0.021, 0.169]	-0.007 [-0.349, 0.339]	-0.082
N	1,029	1,029		2,044	2,044	
County FE	X	X		X	X	
Quarter FE	X	X		X	X	
Industry-by-qtr FE				X	X	
Controls	X	X		X	X	

Note: Columns (1)-(2) are estimated using Equation 3, while columns (4)-(5) using Equation 4. Columns (3) and (6) are derived using delta method. All columns include county and quarter-fixed effects. Columns (4)-(5) additionally use time-by-industry fixed effects. Standard errors are clustered at the state level. 95% confidence intervals, reported in parentheses, are obtained using Rambachan and Roth (2023) procedure with a bound parameter $\bar{M} = 1$. All regressions use as controls the outcome of interest outside the restaurant industry, county population, and quarterly state-wide GDP growth .

Accounting for Coverage

- 38,519 fast food restaurants in CA in 2024
- 66 percent in chains with 60 or more locations
- Average fast-food establishment employs 15.4 employees
- Chain restaurants must meet franchisors' minimum sales & employee thresholds, independents do not
- We estimate that 71.8 % of all California fast food employees are employed in covered restaurants
- Then, average weekly wages increased by 11.6% (8.4%/0.72)

DiD Log Price Effects by Group and Item

Difference-in-differences log price effect by item and group

	(1) Hamburger	(2) Specialty burger	(3) Combo	(4) Average of main items
A. All fast food				
Q2	0.068***	0.055***	0.038***	0.066***
	(0.006)	(0.003)	(0.001)	(0.005)
Q3	0.002	0.008***	0.015***	0.021***
	(0.004)	(0.002)	(0.003)	(0.005)
B. Lower-price chains				
Q2	0.069***	0.055***	0.036***	0.066***
	(0.006)	(0.004)	(0.001)	(0.005)
Q3	0.000	0.007***	0.015***	0.020***
	(0.004)	(0.002)	(0.003)	(0.006)

Note: Estimated using Equation **??**. Each outcome is a log price of the stated item. Treatment effects are weighted by the number of locations in California of a given franchise. Each specification includes restaurant and time fixed effects. Missing cells represent variables that do not have enough data for estimation. Standard errors are clustered at the state level. Statistical significance is marked as follows: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Effects on Prices

- Effects vary by item and chain
- Average increase across five main items
  - 6.6% in Q2
  - 2.1% in Q3 (cumulative)
- Lower-price chains raised prices less, on average
- Similar results with triple difference
- Cost pass-through to prices $= \frac{\%\Delta P}{s_\ell \times \%\Delta w}$
- $s_\ell = 0.3$ is labor share of cost in the fast-food industry
- The pass-through is 0.60 two quarters after the policy

Conclusion and Next Steps

- Findings
  - Policy raised wages without reducing employment
  - Prices increased 2.1% (8 cents on a $4 item)
  - Cost pass-through is 0.6-0.7
  - Franchisee revenues likely increased => parent companies' profits increased
- Next Steps
  - Analyze data on traffic at fast food to assess effects on sales
  - Explore heterogeneity in price effects by chain & areas with local MWs