

Impact of Minimum Wage Increases on Unemployment: A Case Study of Limited Service restaurants along the border of Missouri and Kansas

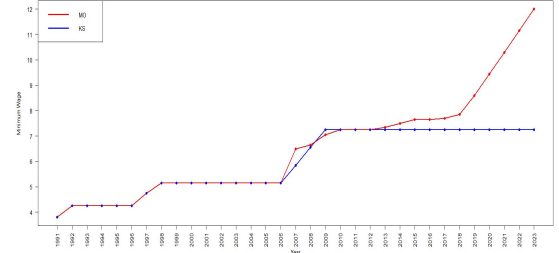
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Introduction:

Our Puzzle:

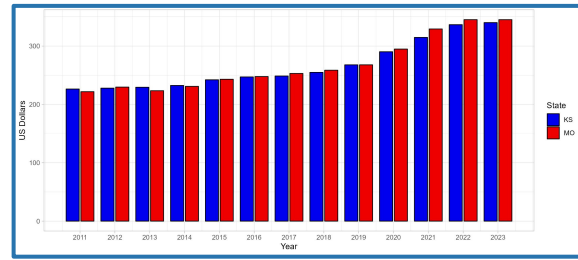
- Efforts to increase the federal minimum wage past \$7.25 have failed due to resistance from those concerned with its potential negative effect on employment levels.
- **Do increases in Missouri's minimum wage lead to increases in unemployment not seen in Kansas?**

Minimum Wage for Kansas and Missouri

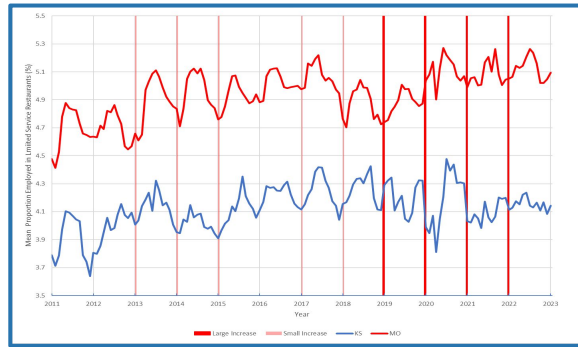


Results:

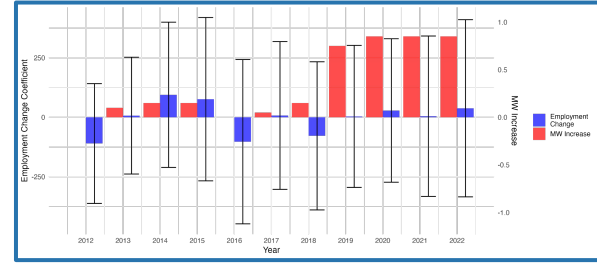
Plot 1: Average Weekly Wages in Kansas and Missouri Limited Service Restaurants, 2011 - 2023



Plot 2: Mean Proportion Working in Limited Service Restaurants in Kansas and Missouri Counties, 2011 - 2023

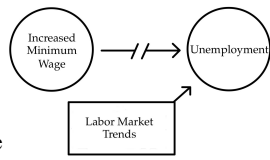


Plot 3: Limited Service Restaurant Employment and Minimum Wage Change in Missouri, 2012 - 2023



Hypothesis:

Increases in the minimum wage will have little to no effect on unemployment. Any changes in employment can be attributed to other labor market trends external to the raise

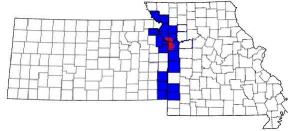


Existing Literature:

- No evidence that the rise in minimum wage will cause a rise in unemployment → Card and Krueger (1993).
- When minimum wage rises, employment growth decreases in low-wage industries compared to high-wage ones → Even and Macpherson (2017).

Methodology:

- Analysis of potential effects of minimum wage increases on limited service restaurant employment between 2012 and 2022.
- Observations taken from border counties of Kansas (KS) and Missouri (MO) including both the Kansas City Metropolitan Area and rural border counties.
- Natural experiment observing KS as our control state and MO as our treatment state, with the treatment being minimum wage raises
- Data was extracted from the Bureau of Labor Statistics.



Legislation:

- Fair Labor Standards Act (2009) → Set the federal minimum wage to \$7.25.
- Missouri Proposition B (2006) → Set Missouri's minimum wage increases to match the Consumer Price Index (CPI) from 2007-2018.
- Missouri Proposition B (2018) → Set Missouri's minimum wage to \$12.00 by 2023 in \$0.85 increases from 2019-2023.

Regression Results for Treatment and Year Interactions

Year	Regression Coefficient	Standard Error	t Value	P Value
2012	-110.30	127.60	-0.86	0.39
2013	6.81 **	124.40	0.06	0.96
2014	94.41 †	154.70	0.61	0.54
2015	75.99 †	174.00	0.44	0.66
2016	-102.90	175.00	-0.59	0.56
2017	-7.62 *	157.40	0.05	0.96
2018	-78.05 †	157.80	-0.50	0.62
2019	3.542 ††	151.20	0.02	0.98
2020	28.62 †	152.90	0.19	0.85
2021	4.47 †	170.90	0.03	0.98
2022	37.83 †	188.80	0.20	0.84

Note. Minimum wage increase sizes vary by year.
*\$0.05, **\$0.10, †\$ 0.15, ††\$0.75, †††\$0.85

Discussion:

- In 2020, the average weekly wage began increasing more rapidly in MO, but not much more than in KS (Plot 1).
- Employment trends in MO and KS followed relatively parallel trends prior to 2019, when the largest raise occurred (Plot 2).
- Linear regression: no clear causal relationship between minimum wage increases and limited service restaurant employment level.
- Regression coefficients: change in employment level in limited service restaurants is not statistically significant (Plot 3).
- This supports the hypothesis that minimum wage raises do not affect employment in limited service restaurants, potentially providing evidence for the monopsony labor market model.
- However, between 2018 and 2022, MO saw a slight increase in limited service restaurant employment that our analysis could not capture (Plot 2).
- Future research could analyze the longer-term trends.

References:

Card, and Krueger. "Minimum Wages and Employment: A Case Study of the Fast-Food Industry In ..." *Davidcard.Berkeley.Edu*, 1993, davidcard.berkeley.edu/papers/njmin-aer.pdf.

Djohnson85. 2023. "Kansas and Missouri Map." *Wikipedia*. Retrieved December 3, 2023, https://en.wikipedia.org/wiki/Kansas_and_Missouri#/media/File:Kansas_city_metro_counties.jpg.

Even, and Macpherson. "California Dreamin' of Higher Wages." *Employment Policies Institute*, 14 Dec. 2017, epionline.org/studies/california-dreamin-of-higher-wages/.