Minimum Wage Effects by Industry

Evidence From The QCEW

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AEASP 2025

June 10, 2025

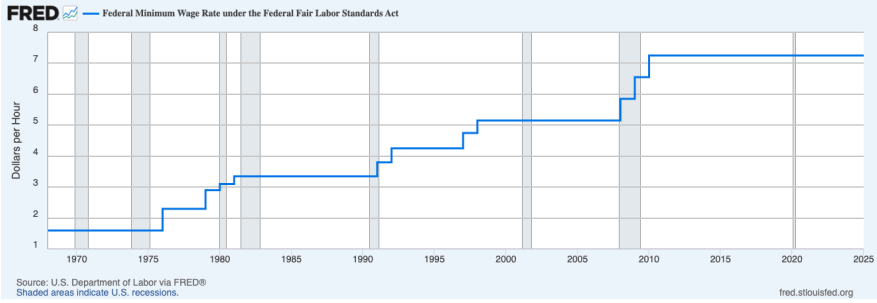
Overview

1. Background, Question & Lit Review

2. Data & Model

Background

- Minimum wage used as a tool to reduce poverty and improve standards of living
- Highly debated
- The federal minimum wage was first established in 1938 under the Fair Labor Standards Act (FLSA) at \$0.25/hour.
- Current federal minimum wage at \$7.25.
  - Binding: Alabama, Louisiana, Mississippi, South Carolina, Tennessee, Georgia and Wyoming



Question & Lit Review

Questions:

- How does minimum wage affect employment at the industry level?
- Which industries are most affected by the minimum wage and how do they react?

United States:

- Fast-food industry in New Jersey and Pennsylvania noticed minimum wage increased employment (Card & Krueger, 1994).
- Minimum wage hikes lead to higher wages for part time workers but full time jobs reduced to part time (Yonezawa et al, 2022).
- Firms saw that as state minimum wages increased IT budget rose while there was more allocation to technology where replacing routine occupations (Dai & Qiu, 2023).
- Comparing county pairs in the United States minimum wage saw no adverse employment effects (Dube 2010).

Literature Review Cont.

Other Countries:

- In China minimum wage hikes lead to automation of routine tasks previous performed by minimum wage workers, importantly affecting those firms that are technologically underdeveloped and cannot sufficiently pass on labor costs to consumers (Geng et al, 2022).
- In Ireland the impact of minimum wage on hours worked was different by sector for example seeing a greater effect in the accommodation and food sector (Redmond and McGuinness, 2023).

Data

- Data Source:
  - Our data comes from the Quarterly Census of Employment and Wages (QCEW) by the U.S. Bureau of Labor Statistics.
- Data Gathered:
  - Aggregate data at the two-digit NAICS code level by county and quarter from 2014 to 2024.

Model

- Using state-level data by industry, we want to run a diff and diff model where we look at how different industries reacted to the increase in labor costs through the minimum wage increase.
- Some major concerns in using state-level data are that changes to minimum wage are not random, thus there are great selection issues.

Model: Fixed Effects

Kaitz Index

$$Kaitz_{it} = \frac{MW_t}{\bar{W}_{it}} \tag{1}$$

$$\text{MW} = \text{Minimum Wage } \bar{W} = \text{Average Wage}$$
$$i = \text{County } t = \text{time}$$

Regression

$$\log(\text{Employment}_{it}) = \beta \log(\text{Kaitz}_{it}) + \gamma_i + \varepsilon_{it} \tag{2}$$

Model: Results

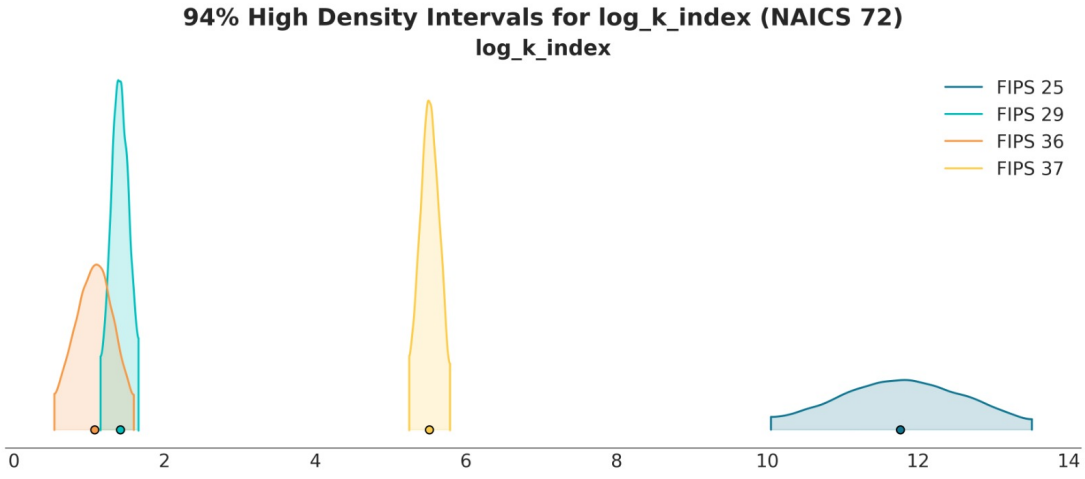


Figure: Accommodation and Food Services

Model: Results

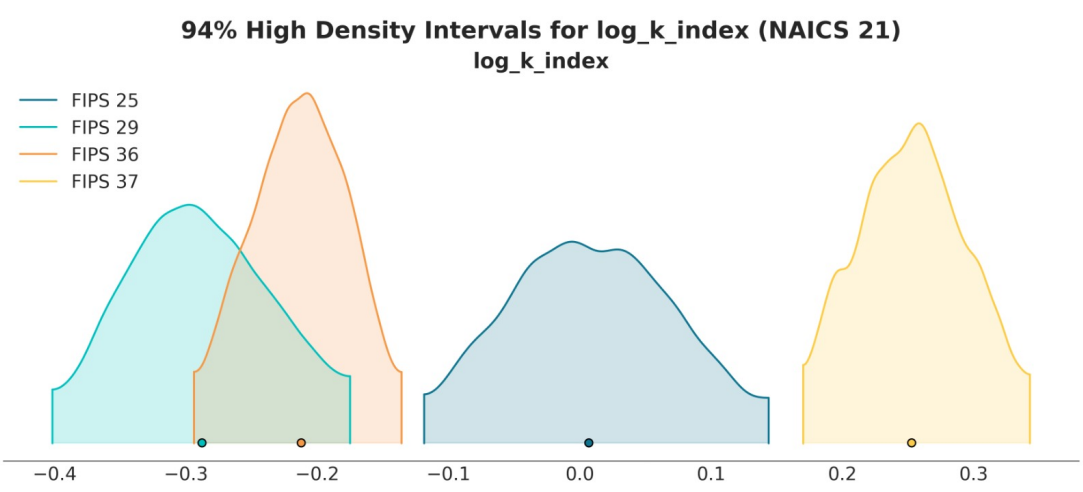


Figure: Mining, Quarrying, and Oil and Gas Extraction sector

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