

Minimum Wages in Concentrated Labor Markets

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Discussion – Etienne Lalé (UQAM)

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An ideal setting to implement this test is one where:

1. We identify a set of jobs that earn a low wage (so that the minimum wage bites). These jobs are distributed across many labor markets
2. There is variation (time, space) in the minimum wage across labor markets for these jobs
3. Also, there is enough *natural* variation across the labor markets for these jobs to include more concentrated and less concentrated labor markets

Outline

1. Reviewing the empirical approach
2. How far from the ideal empirical setting?
3. Wage effects of the minimum wage

Empirical approach

$$\log Y_{jt} = \alpha \log \underline{w}_{st} + \beta \log \underline{w}_{st} \cdot HH_{iz} + X_{st} \gamma + \delta_j + \zeta_{zt} + \varepsilon_{jt} \quad (1)$$

where:

- ▶ j is the establishment, which belongs to an industry i and commuting zone z
- ▶ s is the sector, which is a grouping of 4-digit industry codes i
- ▶ δ_j denotes establishment fixed effects, ζ_{st} is a commuting zone trend
- ▶ t denotes time, annual data

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The focus of the analysis is on $\hat{\alpha} + \hat{\beta}HH_{iz}$. Is β statistically greater than 0?

How far from the ideal design

⇒ Studying a set of near minimum-wage-earning jobs

- ▶ Analysis is run on all jobs. Can you select a set of low-wage jobs within firms?
- ▶ Differences in firm productivity that are likely not picked up by fixed effects δ_j (although results are robust to controlling for a kind of AKM fixed effect)

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⇒ What is a labor market?

- ▶ Implicit assumption is that workers cannot move across markets. This might be a strong assumption with annual data
- ▶ Commuting zones define a partition of Germany into 51 CZs. Still too aggregated?
 - ▶ Petrongolo & Manning (2019): “the probability of a random job 5 kilometers distant being preferred to random local job is only 19 percent.”
 - ▶ Conditional on not moving, workers only search within very local markets

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⇒ Which variable to put on the left-hand side

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 - ▶ Run the regression for the employment of low-wage workers only
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- ▶ In Table 4, $\log Y_{jt}$ is the log of mean daily wages at the establishment level
 - ▶ Changes may be driven by changing composition of job-types within the firm
 - ▶ But even $\log Y_{jt} = \text{high wages}$ yields a statistically positive β (next slide)

Wage effects of the minimum wage

Table E3: Minimum Wage Effects on Earnings by Percentile

Dependent Variable \ Regressor	(1)	(2)	(3)
	Log P25 Daily Wages	Log P50 Daily Wages	Log P75 Daily Wages
Log Minimum Wage	0.126*** (0.017)	0.079*** (0.015)	0.039*** (0.014)
Log Minimum Wage × \overline{HHI}	0.174** (0.075)	0.284*** (0.066)	0.298*** (0.066)
Control Variables	Yes	Yes	Yes
Fixed Effects	Establishment Year × CZ	Establishment Year × CZ	Establishment Year × CZ
Labor Market Definition (Object)	NACE-4 × CZ (Employment)	NACE-4 × CZ (Employment)	NACE-4 × CZ (Employment)
Observations	2,700,155	2,700,155	2,700,155
Adjusted R ²	0.695	0.797	0.802

NOTE. — The table displays fixed effects regressions of log establishment-level percentiles of daily wages (of regular full-time workers) on log sectoral minimum wages as well as their interaction effect with labor market concentration (measured as average HHI). The set of control variables includes log overall employment per sector-by-territory combination, the sectoral share of establishments subject to a collective bargaining agreement, and sector-specific linear time trends. Standard errors (in parentheses) are clustered at the labor market level. CZ = Commuting Zone. HHI = Herfindahl-Hirschman Index. NACE-4 = 4-Digit Statistical Nomenclature of Economic Activities in the European Community. PX = Xth Percentile. * = $p < 0.10$. ** = $p < 0.05$. *** = $p < 0.01$. Sources: IEB + BHP + IAB Establishment Panel, 1999-2017.

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Maximum attainable gain (KS bargaining)	$p - \underline{w}$	$u(p)$

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The bargained wage is the maximum of \underline{w} and w^* , where w^* solves

$$(1 - \alpha) \frac{p - w^* - 0}{p - \underline{w} - 0} = \alpha \frac{u(w^*) - u(0)}{u(p) - u(0)},$$

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Define $H(w^*, \underline{w}, \alpha) = \alpha(p - \underline{w})(u(w^*) - u(0)) - (1 - \alpha)(p - w^*)(u(p) - u(0))$. Using the implicit function theorem, it can be shown that:

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- ▶ $\frac{\partial w^*}{\partial \underline{w}} > 0$
- ▶ $\frac{\partial w^*}{\partial \alpha} < 0$
- ▶ as well as $\frac{\partial^2 w^*}{\partial \underline{w} \partial \alpha} < 0$!

Concluding remarks

- ▶ This is really interesting work:
 - ▶ Great data to measure labor market concentration – Lack of such detailed data has hindered research on this topic
 - ▶ An empirical test of monopsony theory to explain the limited negative employment effects of the minimum wage
- ▶ An important effort to put findings from the minimum wage literature into perspective