Discussion of "Equilibrium Effects of the Minimum Wage: The Role of Product Market Power" by Salvatore Lo Bello and Lorenzo Pesaresi

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1. Build a structural model with

   - Oligopolistic Product Market (PM) + Frictional Labour Market (LM)
   - Endogenous, firm-specific, markup and markdowns in equilibrium

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3. Run a sequence of experiments to study

   - The role of MW on labour share and aggregates (welfare, unemployment, ...)

   - How these quantities differ in a world with and without oligopolistic product market

Key findings:

1. The response of the labour share to an increase in the MW is *hump-shaped*
   - Small increase of MW: Erodes firm's monopsony power
   - Large increase of MW: Firm exit $\rightarrow$ Reallocation of shares $\rightarrow$ Higher PM concentration

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    - Large increase of MW: Firm exit $\rightarrow$ Reallocation of shares $\rightarrow$ Higher PM concentration

2. Neglecting PM power $\rightarrow$ overestimation of productivity gains

    - Reallocation to more productive firms: efficiency gain

    - Increased concentration: efficiency losses

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My assessment:

- Exciting paper, intuitive, policy-relevant!

- Makes two contributions:

  1. Framework to quantify efficiency and redistribution effects of MW reforms in presence of product market power

  2. A structural model of product and labour market power with different boundaries for product and labour markets

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- Makes two contributions:

  1. Framework to quantify efficiency and redistribution effects of MW reforms in presence of product market power

  2. A structural model of product and labour market power with different boundaries for product and labour markets

- Three comments and suggestions to help improve the paper further:

  1. The (missing) role of labour market power

  2. Estimation of Product Market Elasticities

  3. Definition of Markets

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Consider an alternative framework:

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To the best of my knowledge, the alternative framework will:

- Reproduce the hump-shaped response of labour share

- Aggregates will behave similarly as in the setup with endogenous product market power

- Different boundaries of labour and product markets

Question: Why is the framework in the paper is preferred over other alternatives?

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A suggestion: it will be helpful to provide some empirical evidence to justify modelling:

- Concentration in product and labour markets

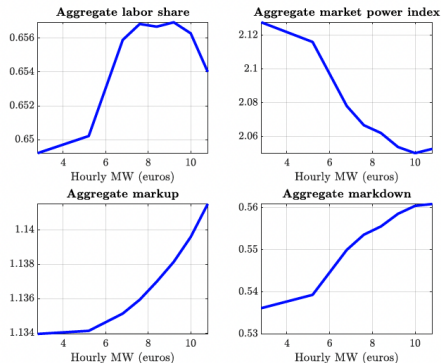- Product market concentration matters more compared to labour markets

In the simulation exercise, as MW increases:

- Aggregate markdown "increases" (labour market power of firms declines)

Figure 10: Effects of minimum wage reforms on labor share and market power indexes

Source: Model. *Note*: the blue lines represent the equilibrium values of each variable in a counterfactual equilibrium with the minimum wage being set to the value shown in the x axis.

In the simulation exercise, as MW increases:

- Behavioural effect dominates reallocation effect for aggregate markdowns

Table 5: Behavior vs. selection: decomposition of main aggregate effects

Variable	Overall change (log points)	Due to policy change (perc.)	Due to reallocation (perc.)
Panel a. Small reform (.68 Kaitz index)			
Average wage	10.610	64.5 %	35.5 %
Average firm size	-10.626	116.2 %	-16.2 %
Average vacancies	-22.387	103.4 %	-3.4 %
Log wage variance	-37.509	82.6 %	17.4 %
Labor share	1.298	221.8 %	-121.8 %
Average markup	0.101	33.3 %	66.7 %
Average markdown	3.077	165.3 %	-65.3 %
Average market power index	-2.976	169.8 %	-69.8 %
Panel b. Large reform (.92 Kaitz index)			
Average wage	22.732	58.4 %	41.6 %
Average firm size	-27.471	124.5 %	-24.5 %
Average vacancies	-57.411	104.1 %	-4.1 %
Log wage variance	-57.481	81.1 %	18.9 %
Labor share	1.607	398.5 %	-298.5 %
Average markup	0.358	32.2 %	67.8 %
Average markdown	5.007	224.3 %	-124.3 %
Average market power index	-4.649	239.0 %	-139.0 %

Source: Model. *Note*: the share of change due to behavioural effects is computed by using the new policy functions but keeping the distribution constant as in the baseline; the share of change due to reallocation is computed by using the new distribution, but keeping the policy functions as in the baseline.

Comment 1: The (missing) role of labour market power
B. "Atomistic" Monopsony vs. Estimated Parameters

Question: Why does agg. markdown increase even with large minimum wage reforms?

- Exit of low productive firms should increase LMP: lower competition, slower "job ladder"

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A suggestion: Helpful to clarify why this happens. Is this due to:

1. Firms being atomistic in the labour market (an assumption of the model)?

2. Estimated separation and job-to-job transition rates in the data (specificity of the data)?

COMMENT 2: ESTIMATION OF PRODUCT MARKET ELASTICITIES

Key driver of hump-shaped labour supply: heterogeneous markups, $\sigma > \rho$

Hump-shape disappears if output market is:

- Monopolistically competitive: $\sigma \to \rho$
- Perfectly competitive: $\sigma, \rho \to \infty$

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These critical parameters are currently pinned down by targeting two moments:

- Average value-added weighted share of total sales accounted by top 4 firms
- Profit-to-labour share ratio

Current estimates: $\sigma = 10.6$, $\rho = 1.4$

Question: Are these parameters identified without any exogenous variation?

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Endogeneity: log revenues equation (using inverse demand curve + prod function)

$$\ln r_{ikt} = \frac{\sigma - 1}{\sigma} \ln[a_j l_{jt}] + \left(\frac{1}{\rho} - \frac{1}{\sigma}\right) \ln Y_{kt} + \ln Y_t^{\frac{1}{\rho}} P_t + \frac{\sigma - 1}{\sigma} z_{ikt} + \varepsilon_{ikt}$$

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- These applications are for the labour market, but can be adapted to product markets

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Suggestions:

- Put some structure on z_{ikt} (Markov or AR 1) to generate internal instruments
- Experiments to check if elasticities parameters are recovered using simulated data

COMMENT 3: DEFINITION OF MARKETS

In the model:

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- Product market: 4-digit Ateco aggregation $\implies$ narrowly defined industry, <u>no geography</u>

    - A good description of tradeable goods. But not so much for non-tradeables (haircuts, restaurants, hospitals)

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Getting market definitions correct is key: z mismeasured if markets mismeasured

A suggestion: incorporate geography into definition: trad w-out geo & non-trad with geo

SOME MINOR ADDITIONAL COMMENTS

- What is the effect of the minimum wage on earnings inequality?
  - Both Haanwinckel (2021) and Engbom and Moser (2022) address this question
  - However, without oligopolistically competitive market
- The role of capital?

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2. Thinking more carefully about the estimation of product market elasticities

3. The role of geography in market definitions

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For future:

- Apply the model to an economy where recent minimum wage reforms took place (ex: Germany)

- Quantify the gains in productivity and its overestimation