

Discussion of
“Dissecting the French Export Wage Premium”
by Eaton, Kortum, Kramarz and Sampognaro

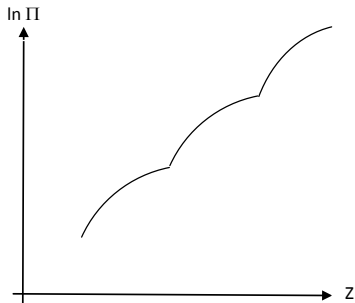
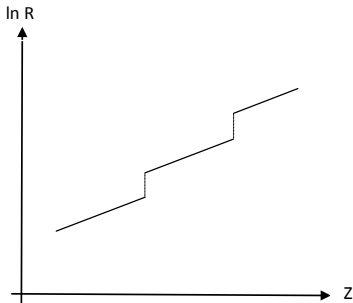
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Size and Exporter Wage Premium

- Robust empirical findings:
 - ① Size wage premium
 - larger firms pay higher wages
 - ② Exporter wage premium
 - controlling for size, exporters pay higher wages
- Robust to various controls for observable skill differences
- Unobservable skill?
- Evidence of rent-sharing (van Reenen, 1996)
- **Theoretical challenge:** how to make wages an increasing function of revenues or profits?

Size and Exporter Wage Premium



- Z is a measure of productivity or size
- R is revenues and Π is profits
- breaks represent entry into a new market

EKKS paper

- EKK + bargaining over wages
- Wages are increasing in profits (surplus)
- Matches a number of facts on wages across French firms
- This discussion: **assumptions**
 - ① Efficient vs inefficient bargaining
 - does not make a difference
 - ② Collective vs bilateral (Nash or Stole-Zweibel) bargaining
 - does not make a difference by itself, but rules out bargaining over fixed cost
 - ③ Bargaining over sunk and fixed costs: yes vs no
 - is crucial for the result

Notation

- Revenues in market n (z is productivity and ℓ is employment)

$$R_n = A_n(z\ell)^\beta$$

- Profits

$$\Pi_n = R_n - w\ell - f_n$$

- Workforce (union) surplus

$$U_n = (w - \underline{w})\ell,$$

- Total surplus of a firm and workers

$$S_n = \Pi_n + U_n = R_n - \underline{w}\ell - f_n$$

Efficient vs inefficient bargaining

- Efficient bargaining

$$\max_{w, \ell} \left\{ (1 - \gamma) \ln \Pi_n + \gamma \ln U_n \right\} \quad \Rightarrow \quad \max_{\ell} S_n,$$

$$\frac{\partial R_n}{\partial \ell} = \underline{w},$$

$$(1 - \gamma)(w - \underline{w})\ell = \gamma \Pi_n$$

- Inefficient bargaining

$$\max_w \left\{ (1 - \gamma) \ln \Pi_n + \gamma \ln U_n \right\}, \quad \text{where} \quad \ell = \arg \max_{\ell} \Pi_n,$$

$$(1 - \gamma)(w - \underline{w})\ell = \gamma \Pi_n,$$

$$(1 - \gamma) \frac{\partial R_n}{\partial \ell} = \underline{w}$$

Collective vs bilateral bargaining

Under inefficient bargaining

- Collective bargaining

$$w = \underline{w} + \frac{\gamma}{1-\gamma} \frac{\Pi_n}{\ell} = (1-\gamma)\underline{w} + \gamma \frac{R_n}{\ell} - \gamma \frac{f_n}{\ell}$$

- Bilateral Nash bargaining

$$\max_w \left\{ (1-\gamma) \ln \tilde{\Pi}_n + \gamma \ln(\tilde{w} - \underline{w}) \right\},$$

$$\tilde{\Pi}_n = R_n - w(\ell - 1) - \tilde{w} - f_n - \Pi_n(\ell - 1),$$

$$w = \underline{w} + \frac{\gamma}{1-\gamma} \Delta R_n \xrightarrow{\Delta \ell \rightarrow 0} \underline{w} + \frac{\gamma}{1-\gamma} \frac{\partial R_n}{\partial \ell}$$

- $\partial R_n / \partial \ell = \beta R_n / \ell$ under power revenue function
- Similar result under Stole and Zweibel bargaining

Bargaining over sunk and fixed costs

- Bargaining over fixed costs

$$w = (1 - \gamma)\underline{w} + \gamma \frac{R_n}{\ell} - \gamma \frac{f_n}{\ell} = \varphi \underline{w} - \psi \frac{f_n}{R_n}$$

— f_n/R_n decreases and w increases with firm productivity and size

- No bargaining over fixed costs

$$w = (1 - \gamma)\underline{w} + \gamma \frac{R_n}{\ell} = \varphi \underline{w}$$

— constant wage across all firms

Bargaining over sunk and fixed costs

Literature on misallocation

- Bargaining over fixed costs

$$w = (1 - \gamma)\underline{w} + \gamma \frac{R_n}{\ell} - \gamma \frac{f_n}{\ell} = \varphi \underline{w} - \psi \frac{f_n}{R_n}$$

$$\frac{R_n}{\ell} = \text{const} \quad \Rightarrow \quad \frac{R_n}{w\ell} \downarrow \text{ in firm size}$$

- No bargaining over fixed costs

$$w = (1 - \gamma)\underline{w} + \gamma \frac{R_n}{\ell} = \varphi \underline{w}$$

$$\frac{R_n}{\ell} = \text{const} \quad \Rightarrow \quad \frac{R_n}{w\ell} = \text{const}$$

Alternative story

- Surplus division: $(1 - \gamma)(w - \underline{w}) = \gamma \frac{\partial \Pi_n}{\partial \ell}$
- Cost of replacing a worker: $\frac{\partial \Pi_n}{\partial \ell} = b$
- Equilibrium wages

$$w = \underline{w} + \frac{\gamma}{1 - \gamma} b$$

- b must be an increasing function of firm size
 - Helpman and Itskhoki (2010), Cosar, Guner and Tybout (2010)
decreasing returns in hiring
 - Helpman, Itskhoki and Redding (2010), Sethupathy (2010)
match quality complementarity (unobservable skill)
- Nicely matches facts on misallocation: $\frac{R_n}{\ell} \uparrow$ and $\frac{R_n}{w\ell} = \text{const}$

Final remark

- Helpman, Itskhoki, Muendler and Redding: Brazilian data
- Firm (size and exporter) wage premia are not only significant, but account for much of wage distribution dynamics
- To the extent trade affects firm wage premia, this is an important channel through which trade affects income inequality