Discussion of

"Firm Dynamics, Job Turnover, and Wage Distribution in an Open Economy"

Kerem Coşar, Nezih Guner and James Tybout

Oleg Itskhoki
Princeton University

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"New-new trade theory"

- Before 1980: Neoclassical trade theory
  - Ricardian productivity differences
  - Heckscher-Ohlin relative factor endowment differences
  - Focus on comparative advantage at the sectoral level and between-group inequality (skill premium)

- 1980-90s: New trade theory
  - Krugman and Helpman-Krugman models
  - Increasing returns and love of variety
  - Intraindustry trade and home market effects

- After mid-1990s: New-new trade theory
  - Melitz model, BEJK model
  - Comparative advantage at the level of the firm
  - Fixed cost of trade and selection into export market
  - Focus on within-industry between-firm reallocation and wage effects

"New-new trade theory"

- Late 1990s: Firm-level datasets and empirical facts
  "Exceptional Exporter Performance"
  - Large, productive, skill- and capital-intensive
  - Reallocation within industries across firms
  - Majority of changes in inequality also at this level
  - Size and exporter wage effects

- Early 2000s: Product market modeling
  - Focus on selection, revenue and employment effects
  - Structural estimation by EKK

- Late 2000s: Labor market modeling
  - Departures from competitive labor markets to capture wage distributional effects: new story for trade and inequality
  - Unemployment? Short-run versus long-run
  - This paper: structural estimation

Coşar-Guner-Tybout

- Ingredients
  - Two-sector small open economy, homogeneous workers
  - Nontradable service sector pins down outside option
  - Melitz tradable industrial sector with DMP search friction, firing costs, and stochastic idiosyncratic productivity
  - Stationary equilibrium
  - Unemployment = informality

- Trade liberalization and labor market deregulation lead to:
  (i) less job security (greater turnover)
  (ii) increase in informality/unemployment
  (iii) increase in average wages and welfare
  (iv) increase in wage inequality

Mechanisms

1. Firing costs: standard (more job creation and job destruction)
2. Trade and selection: amplification of shocks
3. Hiring costs:

$$C_h(\ell, \ell') = \gamma \left(\frac{\ell' - \ell}{\phi(\theta)\ell^{\lambda_2}} \right)^{\lambda_1}, \qquad \lambda_1 \geq 1, \ \lambda_2 \geq 0.$$

4. No exogenous separations: firing firms pay outside option
5. Informality: large pool of unemployment with low job finding rate

Wage inequality

- Assume separation rate $s = \delta + \sigma$ and no firing costs
- Labor market:

$$J^E - J^U = (w - rJ^U) + \frac{1-s}{1+r}(J^{E\prime} - J^{U\prime}),$$
$$J^F_\ell = \varphi'(\ell) + \frac{1-s}{1+r} J^{F\prime}_\ell,$$
$$J^F_\ell = J^E - J^U,$$

where $\varphi(\ell) = R(\ell) - w(\ell)\ell - f$, $R(\ell) = A(z\ell)^\beta$

Wage inequality

- Assume separation rate $s = \delta + \sigma$ and no firing costs
- Wage schedule (Stole-Zweibel):

$$w(\ell) = \frac{\beta}{1+\beta}\frac{R(\ell)}{\ell} + \frac{1}{2}rJ^U,$$
$$\varphi(\ell) = \frac{1}{1+\beta}R(\ell) - \frac{1}{2}rJ^U\ell$$

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- Equilibrium wage (close to firm optimal size):

$$\frac{1+r}{r+s}\varphi'(\ell') \approx J^F_{\ell'} = \frac{\partial}{\partial \ell'}C_h(\ell,\ell') = b\frac{(\ell' - (1-\sigma)\ell)^{\lambda_1 - 1}}{\ell^{\lambda_1\lambda_2}}$$

Wage schedule

$$w(\ell', \ell) \approx rJ^U + (r+s)b\frac{\left(\ell' - (1-\sigma)\ell\right)^{\lambda_1 - 1}}{\ell^{\lambda_1 \lambda_2}}$$

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- When $\lambda_1 = 1$ and $\lambda_2 = 0$:

$$w(\ell) = rJ^U + (r+s)b$$

Wage schedule

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- At optimal employment $\ell' = \ell$:

$$w(\ell) = rJ^U + (r+s)b\sigma^{\lambda_1 - 1}\ell^{\lambda_1 - 1 - \lambda_1\lambda_2}$$

  - 'Long-run' (optimal employment) effect: $\lambda_1 - 1 - \lambda_1\lambda_2 > 0$
  - Large firms pay more

Wage schedule

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  - Large firms pay more

- Away from optimal employment (assume $\lambda_1 - 1 - \lambda_1\lambda_2 = 0$)

$$w(\ell', \ell) \approx rJ^U + (r+s)b\left(\sigma + \frac{\ell' - \ell}{\ell}\right)^{\lambda_1 - 1}$$

  - 'Short-run' (convexity) effect: $\lambda_1 > 1$
  - Firms that are small relative to their optimal size pay more

Wage schedule

Estimated parameters

- Parameters

$$\lambda_1 = 2.2 \quad \Rightarrow \quad \epsilon_1 = \lambda_1 - 1 = 1.2 \gg 0,$$
$$\lambda_2 = 0.35 \quad \Rightarrow \quad \epsilon_2 = \lambda_1 - 1 - \lambda_1\lambda_2 = 0.43 \gg 0.$$

- Both short-run and long-run effects are huge:
  - ϵ_1 $\sim$ elasticity of wage with respect to firm growth rate
  - ϵ_2 $\sim$ elasticity of wage with respect to firm employment size

- Test: run a size-wage regression controlling for firm growth rate. Do large but decreasing firms pay less?

- Why such parameters:

$$corr(\ell, \ell') = 0.95 \qquad \text{while} \qquad corr(z, z') = 0.86$$

Additional comments

- Distance of firms from desired size explains inequality. How long is the transition to desired size relative to the persistence of shocks?
- Welfare results are very sensitive to no worker heterogeneity: Do workers move much around firms of different size and export status?
- Informality: Do workers move much between informal and formal sectors?
- No fixed cost heterogeneity
- Evidence on misallocation. Here $w \sim MPL$. Dispersion of employment?

Conclusion

- Right focus: within industry, between firms

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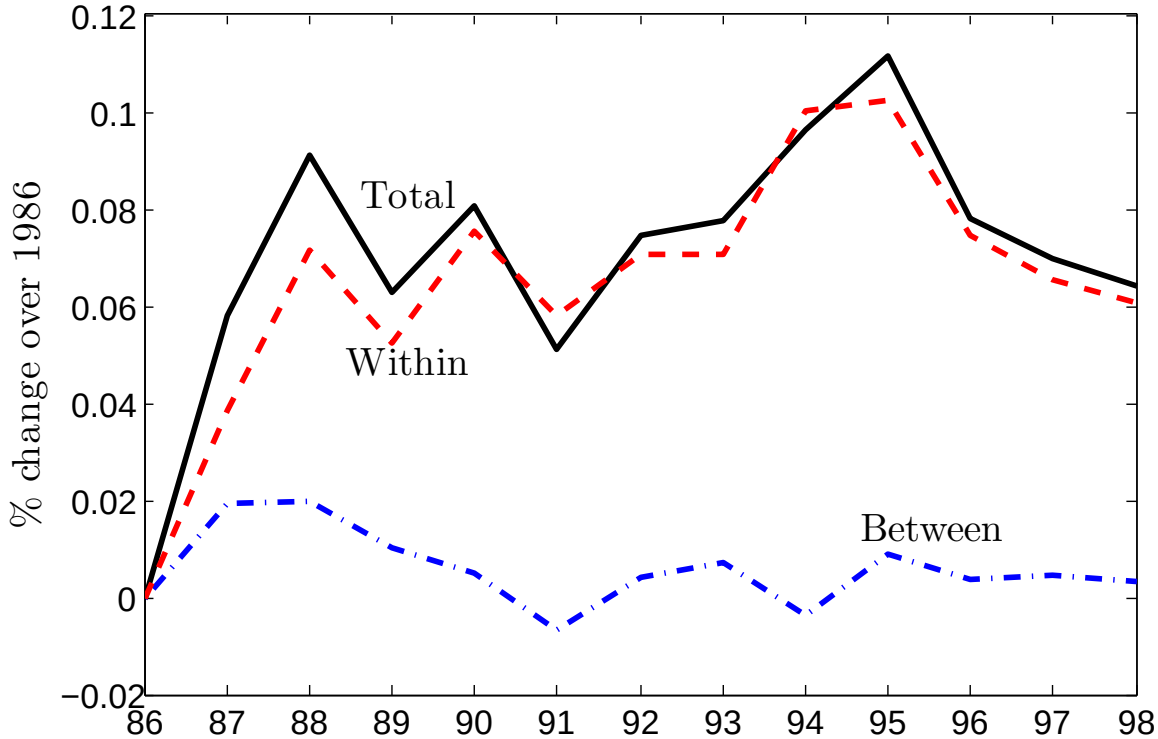

Figure: Wage inequality in Brazil: Within vs Between Occupations

Conclusion

- Right focus: within industry, between firms

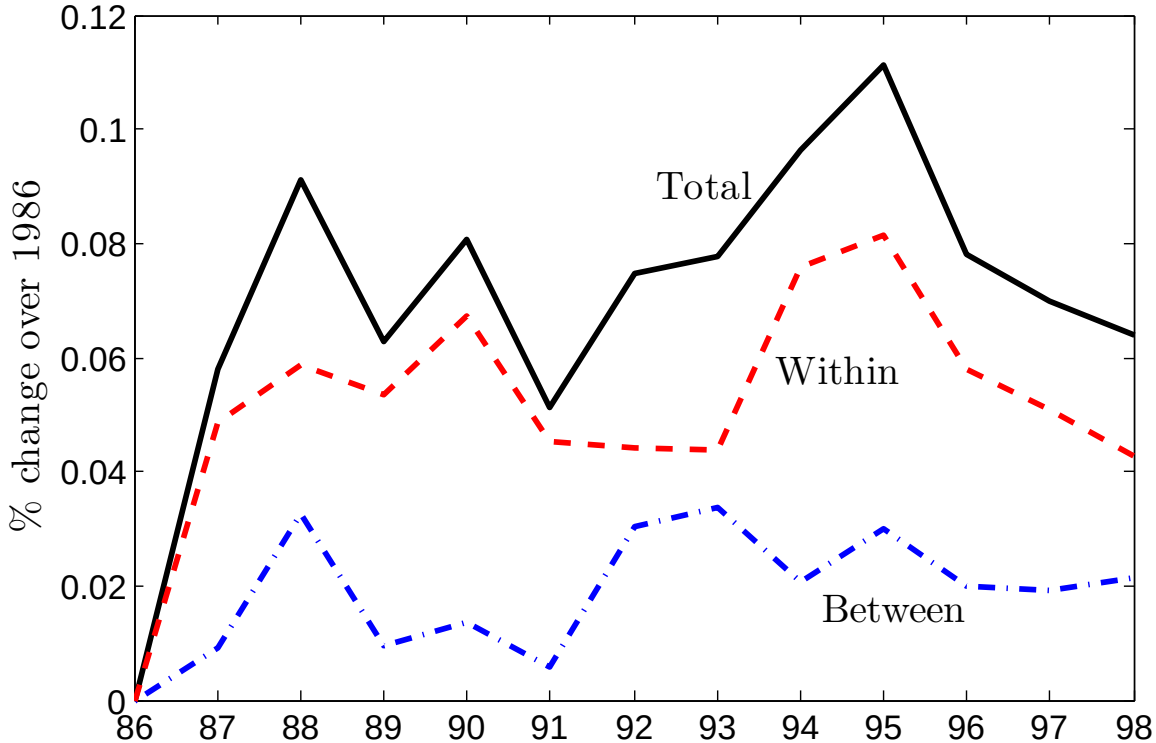

Figure: Wage inequality in Brazil: Within vs Between Sectors

Conclusion

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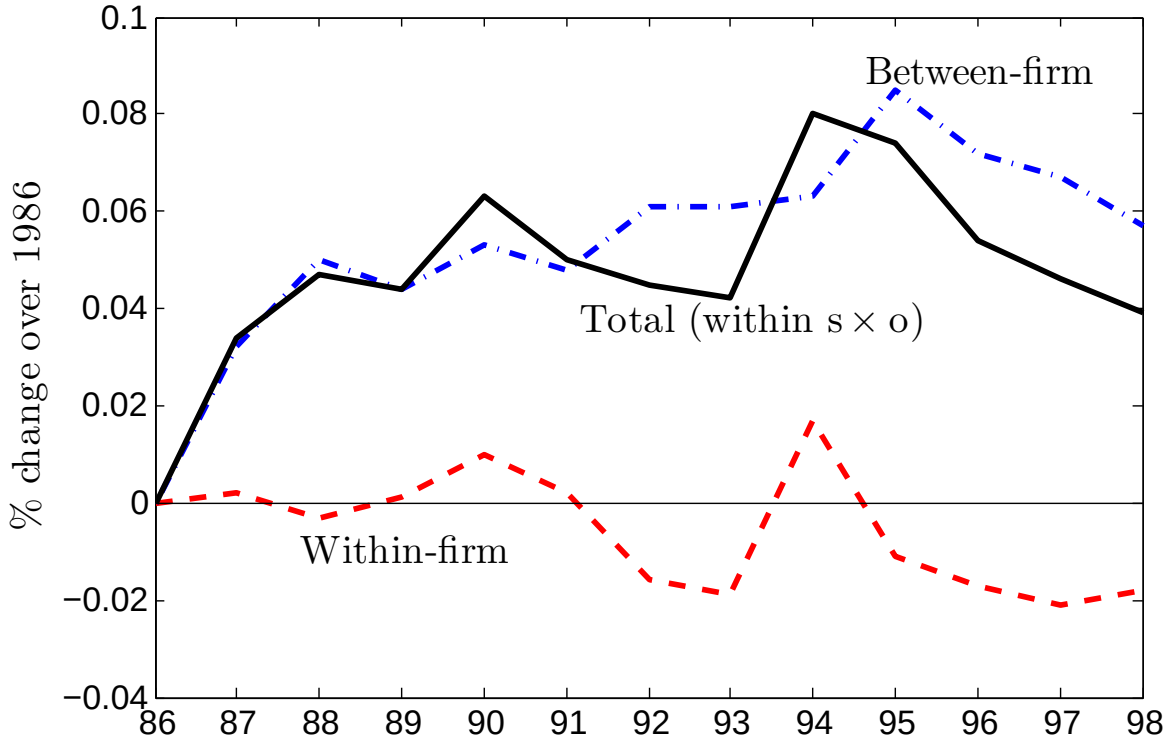

Figure: Wage inequality in Brazil: Within vs Between Firms

Conclusion

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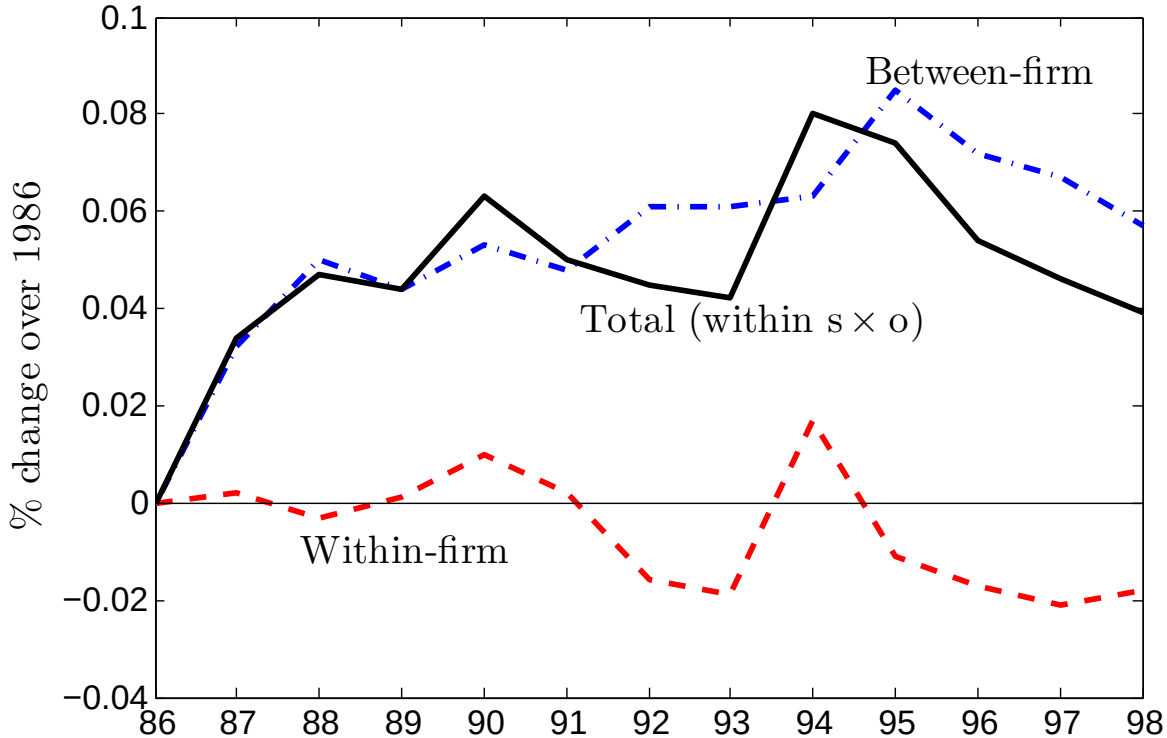

Figure: Wage inequality in Brazil: Within vs Between Firms

- How much does this mechanism (short-run convexities) contribute to inequality?