Trade and Market Power in Product and Labor Markets

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Motivation
Macro and Labor lit. — concerns over links between market concentration, market power, and labor shares
• In labor markets, ↑ labor market concentration → wages ↓ within a firm
Trade lit. — ↑ concentration following liberalization can be a key source of gains from trade
• Improved allocation of inputs ⇒ aggregate productivity ↑
• However, trade can increase labor market concentration and labor market power of large employers!

Market Structure
Assumption: finite and fixed number of firms in each (n, s)-pair in both countries
• Oligopoly competition in product markets
• Oligopsony competition in labor markets
⇒ Firms are large in their product and labor markets, variable price markups and wage markdowns

Proposition: Firm-level Outcomes
Assumption: α < β and θ < γ

Within an (n, s)-pair, compared to less productive firms, more productive firms:
• Have larger product and labor market shares
• Charge lower prices and offer higher wages
• Charge higher markups and markdown wages by more

Proposition: Aggregate Outcomes
Assumption: countries are symmetric in all markets

Accounting for labor market power:
• Welfare losses due to inefficient allocation of inputs across heterogeneous firms
• Additional gains from trade because trade alleviates misallocation

Methodology
In this paper:
• Quantitative trade model with variable market power in product and labor markets
• Calibrate and estimate model parameters using Indian manufacturing data
• Counterfactual experiments using model simulations to answer research questions

Model Building Blocks
1. Heterogeneous firm trade model
• Two countries (H and F)
• Multiple sectors → s ∈ [0, 1]
• Multiple production locations → n = 1, . . . , N
2. Roy model of worker’s choice of an employer:
• Mobile workers supply one unit of labor to chosen firm ω located in n that sells in sector s
• Idiosyncratic match-specific productivities drawn from nested Fréchet distribution
• α — similarity of draws across (n, s)
• β — similarity of draws within (n, s)
• Trade-off between firms’ wage offers and match-specific productivities ⇒ upward sloping firm-level effective labor supply curves:

\[ l_{n,s}(\omega) = \frac{w_{n,s}(\omega)^{\alpha}}{w_n^{\alpha}} \]

3. Nested CES preferences over consumption goods:
• Firms in each sector sell differentiated varieties in national product markets
• θ — substitution elasticity across s
• γ — substitution elasticity within s
• Frictionless trade within each country
• Downward sloping firm-level product demand curves in each country (H here)

\[ \frac{P_{n,s}^H(\omega)}{P_n^H} = \frac{l_{n,s}(\omega)}{\Lambda} \]

Trade and Firm-level Market Power
Effects of product market trade liberalization operate through changes in markups and markdowns

Trade-off between firms’ wage offers and

Aggregate Significance
Comparing models with and without oligopsony in LM

Oligopsony and Aggregate Outcomes in Autarky

Takeaways
Endogenous LMP is a source of input misallocation
• Reduces welfare relative to perf. comp in LM
• Mitigates losses caused by variable markups

Trade liberalization alleviates welfare losses arising from variable markups
• Misallocation losses smaller after liberalization
• Gains from trade are larger
• Wage gains are smaller because LMP increases for large firms → worse for workers!

Estimates from Indian setting suggest:
• Larger effects of trade on PMP than on LMP
• Aggregate effects of endogenous LMP are small

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