Firm-to-Firm Trade: Imports, Exports, and the Labor Market

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What do we want? What do we need?

- How do input-output relationships shape labor outcomes?
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▶ In a model with a lot of heterogeneity
  ▶ Markets served
  ▶ Number of clients served in a market
  ▶ “Productivity”
▶ Input intensity (int. goods, labor, capital) (by industry?)
Production labor shares

Dist. of the Share of Production Labor

Dist. of the Share of Non-Skilled Production Labor
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► Do we need international trade?
  ► Maybe: It’s a way to discipline the heterogeneity
Heterogeneity

- Supply side: innate ability + random matching
  - Hicks neutral productivity, $z(j)$
  - Input mix: labor vs. intermediate goods

- Demand side: random matching
  - Number of buyer matches
  - Size of buyers

Comment: What does each assumption do?
Comment: No link between type of labor and good produced
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Two levels of results

1. Aggregate labor outcomes
2. Worker- and firm-level labor outcomes
Aggregate labor market outcomes

- Characterized as production cost shares
- Nice result on aggregate production cost shares
  - Share depends on wages and goods’ prices
- Very CES-like result

\[ \beta_i^L = \sum_k \beta_{i,k}^L \]
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  - Wages and prices move in systematic ways
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- The Kaldor-Gollin facts? **Massive disclaimer**
Export shares and GDP per capita

Labor share (Gollin, 1992)

GDP per capita
Export shares and GDP

Labor share (Gollin, 1992)

log GDP
Export shares and tariffs

Labor share (Gollin, 1992)

Weighted average manufacturing tariff
Firm- and worker-level labor market outcomes

▶ A model of make vs. buy

▶ Key parameter: ability to outsource labor type, $\lambda$

$$e_{ki}(c) = \lambda_{ki}c^{-\phi}$$

▶ For worker outcomes: How easy can a cheap intermediate be found?

▶ Bigger countries

▶ More open countries

Comment: Use closed economy to isolate size.
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- How to discipline this choice?
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- Literature on outsourceability
  - Jensen and Kletzer; Brandle and Koch
- Brandle and Koch 2013
  - German survey data on occupations
  - Principle components analysis
Brandle and Kock 2013
How outsourceable is a profession?

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- In the data: probability of outsourcing
- Or a LLN result about observed outsourcing
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- Missing heterogeneity (what?!)  
  - Heterogeneity in international outsourcing costs
  - A cheap way to do it: $d_{ni}^k$