Tariff Rate Uncertainty and the Structure of Supply Chains

Discussion by Marco Errico

Summary

1. Expand standard model of procurement by Taylor and Wiggins (1997).
   Δ probability of trade restrictions $\rightarrow$ choice A(merican) vs J(apanese) systems.

2. Building on theoretical predictions, construct empirical proxies for A and J systems: $SPS = \frac{\#\text{of Sellers}}{\#\text{of Shipments}}$.

3. Document prevalence of J system and its increase after China access to WTO in 2001.

4. Embed mechanism in an EK2002 model to quantify impact of trade policy uncertainty.
   - Extreme uncertainty (no J system): lower welfare ($\approx$ 1/3 of autarky loss) and reallocation from ROW to China.
   - Removal of PNTR: decreases J system in China, but with minimal effects on welfare.

Transaction costs vs Buyers' Organizational Capability

- Competing hypothesis on sourcing strategies: buyer-level capabilities vs product/market characteristics.

- Variation in SPS driven by buyer FE (35%), but large share due to product, industry, country, mode FEs (12%, 10%, 8%, and 7%).

- Provide further evidence on determinants of sourcing strategies:
  - Rauch classification for differentiated good, ✓
  - Law enforcements (Antras and Foley 2015) and cultural affinity (Kukharskyy 2016).
  - Capital vs Intermediate vs Consumption goods (BEC classification).
  - Harvard Country & Product Complexity Indices.
  - Share of routing tasks (Costinot et al. 2011).
  - Relationship stickiness (Martin et al. 2023).

SPS and Buyer Characteristics

- Use of J strategy negatively (positively) correlated with inventories (size, payroll and wage).
  - Clarification on inventories measures: Inventories of (domestic vs imported) inputs vs final products? Benchmark: imported inputs over total purchases.
  - What about other observables? E.g. Import intensity, firm openness, capital intensity.

- More generally, a model of JIT supply chains may be observationally equivalent (Pisch 2020).
  - Supply chain more concentrated ($\approx$ lower SPS?), similar correlation with firm observables.
  - Q: Supply chains management/Information technology vs actual relational incentives?
  - Table 2: SPS (J strategy) decreasing (increasing) over time, across all countries.
    Q: Confounding role of improvements in ICT and its effects on rise of JIT supply chains?

On Dynamics

- Theoretical framework and empirical analysis are static.
  However, literature tend to consider trade relationships as dynamic and evolving.
  (Learning and accumulation of bilateral capital, trust, know-how, etc...)

- Differences in life cycle of quantities and prices, and separation rates depending on A vs J strategies?
  No need to microfound, but additional moments consistent with economic intuition.

Incentives vs Screening

- Implicit assumption of the model: buyer bears cost of non-compliance.
- Uniform Commercial Code Sections 2-513/2-601: The buyer often exercises its right to to inspect a shipment and may decide to reject delivery *without payment* if unsatisfied.

- Connection to trade credit: timing of payments (pre vs post shipment) as a mechanism for buyers to test/screen reliability of supplier.
  (Antras and Foley 2015; Benguria et al 2023; Garcia-Marin et al 2022)

  $\rightarrow$ SPS/relational trade correlated to measures of Accounts Payable vs Accounts Receivable?

Evidence on PNTR

- Triple-DiD to document that decrease in uncertainty following PNTR in 2001 led to:
  - decline in QPS and WBS, rise in UV;
  - weak increase in J strategy.

- Weak increase in J driven by increase in # of new Chinese exporters and buyers' experimentation? Condition SPS to pre-2001 set of sellers: theory would predict an increase in number of shipments from pre-existing sellers.

- What about buyers' characteristics? Do we observe a decline in inventories for those more exposed?

- Related to point on dynamics, interesting to check how quick firms/trade relationships responded. $\rightarrow$ Event study/LP strategy (rather than pre vs post periods).

Wrapping Up

- Great paper, providing key and novel insights on relational trade.
- Thank you for the invitation.