WTO/ESCAP Third ARTNeT Capacity Building Workshop on Trade Research

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Advances in Trade Theory and Policy Implications (1)

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Based on: “Firms in International Trade”
by Bernard, Jensen, Redding and Schott (2006)

What's new in the "third wave"?

- Traditional ("old") trade theories
  - **The sources of gains from trade:**
    - **Ricardo – productivity differentials**
    - **Heckscher-Ohlin – relative factor abundance**
  - **The distributional consequences of trade:**
    - **Stolper-Samuelson**

Theory of comparative advantage: trade among industries (inter-industry trade), driven by relative opportunity cost among countries, determined by productivity and factor endowments

What’s new (cont.)?

Old trade theory did not explain the most trade occurs within industries (intra-industry trade)

“New” trade theory

- Love of variety, horizontal differentiation and economies of scale drive trade
- Symmetric firms
- Welfare gains from increased variety, intra-industry trade

<u>But the “representative firm” – all firms are identical</u>

What’s new (cont.)?

Helpman and Krugman (1985) integrated old and new trade theory by embedding horizontal product differentiation and increasing returns to scale in a model featuring endowment-based comparative advantage. Empirical work suggests that integrated framework provides a reasonably successful explanation of patterns of international trade at the level of aggregate industries and factors of production

- **But role of the firm: a shift in emphasis from countries and industries to firms and products – new firm data available**

- **To explain these new empirical findings, new theories of heterogeneous firms and trade have been developed**

- **The new literature has identified new sources of gains from trade, new ways in which international trade may induce resource reallocation, and new distributional stories.**

“New new” trade theory: empirical findings

- Firms are heterogeneous (different MC and fixed entry - beachhead – costs in the models)
- Only few firms are exporting
- Exporters are different
- Trade liberalization raises industry productivity

Exporting is Rare

- There were 5.5 million US firms in 2000
  - 3 % of all of these firms exported
- There were 400,000 US firms in Manuf/Mining/Agriculture in 2000
  - Just 15 %of these firms exported
- Among exporters…
  - The top 10 percent accounted for 96 percent of aggregate US exports (0.3 % of all firms)

Exporters are Bigger, More Productive, Different (US data)

- Exporters are bigger than non-exporters in the same industry (91 % by employment, 105% for shipments)
- Exporters are more productive (14% v-a by worker, 3% for TFP)
- Exporters have higher wage bills (98%)
- Exporters are more capita- and skill-intensive than non-exporters (20% and 8% respectively)

Self-Selection or learning by exporting ?

- Why are exporters more productive?
  - High productivity → Exporting?
  - Exporting → High Productivity?

- What's the evidence?
  - Most studies indicate that high productivity precedes exporting
  - i.e., the most productive firms "<u>self-select</u>" into export markets

Productivity / capital and skill intensity

- Abundant evidence that firms entering exporting markets grow faster
- US exporters are more capital- and skill-intensive

(suggests that comparative advantage may be at work within industries)

- But true also in developing countries

(harder to explain with old theory)

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Policy implications: trade liberalization raises industry productivity

- Additional source of welfare gains driven by the contraction and exit of low-productivity firms and the entry into export markets of high-productivity firms

(ruled out by assumption in old and new trade models)

- Empirical evidence:
- plant deaths increase with a reduction of trade costs and lower-productivity plants are more likely to die
- more within industry reallocation of resources than between industry reallocation following trade liberalization
- Also some evidence of a link between falling trade costs and plant-level productivity growth

Some other policy implications of new new trade theory predictions

- Trade will lead to greater firm concentration – where does this leave SMEs?
- Implications for adjustment (firms, not sectors)
- Distribution effects: more research needed, but productivity growth could dampen downside of S-S
- Political economy: support/opposition sensitive to firm size and whether liberalization reciprocal