Import Competition, Productivity and Multi-Product Firms (Dhyne, Petrin, Smeets and Warzynski)

Comments

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Main findings

- Massive data effort: firm-product-*quarterly* data on output and inputs for Belgian manufacturing, 1995Q1-2007Q4 period (925,641 observations)

- Step 1: measuring firm-product level TFP with "hybrid" measure based on Diewert (1973)

- Step 2: regressing firm-product level TFP on import competition measures based on imports (in same product code)

- Main findings: TFP reacts positively on increased competition
  - mainly by improving TFP in production of core product
  - And less in "minor" products

Questions / Comments

Method:

The **requirements for the Diewert (1973) model to hold** are not innocuous:

- declining marginal rates of transformation of outputs for inputs (among at least some subset of inputs, Lau 1976): likely given (high) fixed costs?
- Substitution of inputs for inputs: will different products use same inputs in (*l*, *k* and *m*)? Short run substitution possibilities might be limited, given installed machinery.
- Did you test for assumptions to hold (locally) (Diewert and Wales 2005)?
- More involved: do assumptions imply the finding concerning lower ranked products?

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Questions / Comments

Data:

- Deflation of **intermediate inputs?**.
- The (dis)advantages of **high-frequency** data:
  - Role of inventories (differ across products)
  - Picking up effects of high-frequency shocks to demand on TFP

Results:

- What is the underlying mechanism driving productivity growth? Within firm specialisation?
- Long-run (dynamic) versus short-run (efficiency) effects: what do we want to pick up, for policy?
- Alternative interpretation: increasing (cheaper) intermediate imports improve measured TFP if price decline due to source switching is not accounted for (Houseman and follow up work)?

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Competing in what?

- Implicit underlying model of **competition in final products**

- Some basic stats for Belgian manufacturing in 2011
  - Value added / gross output ratio is 20% (17% cars to 42% in pharma) in 2011
  - Imported intermediate inputs / gross output ratio is 42%

- Belgium is competing in *tasks*, and price/quality of imports will be determinant of its competitiveness

- Future work: distinction between final and intermediate imports (based on BEC, 8-digit)?