Discussion: Productivity and Trade Dynamics in Sudden Stops

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Overview (firm dynamics and sudden stops)

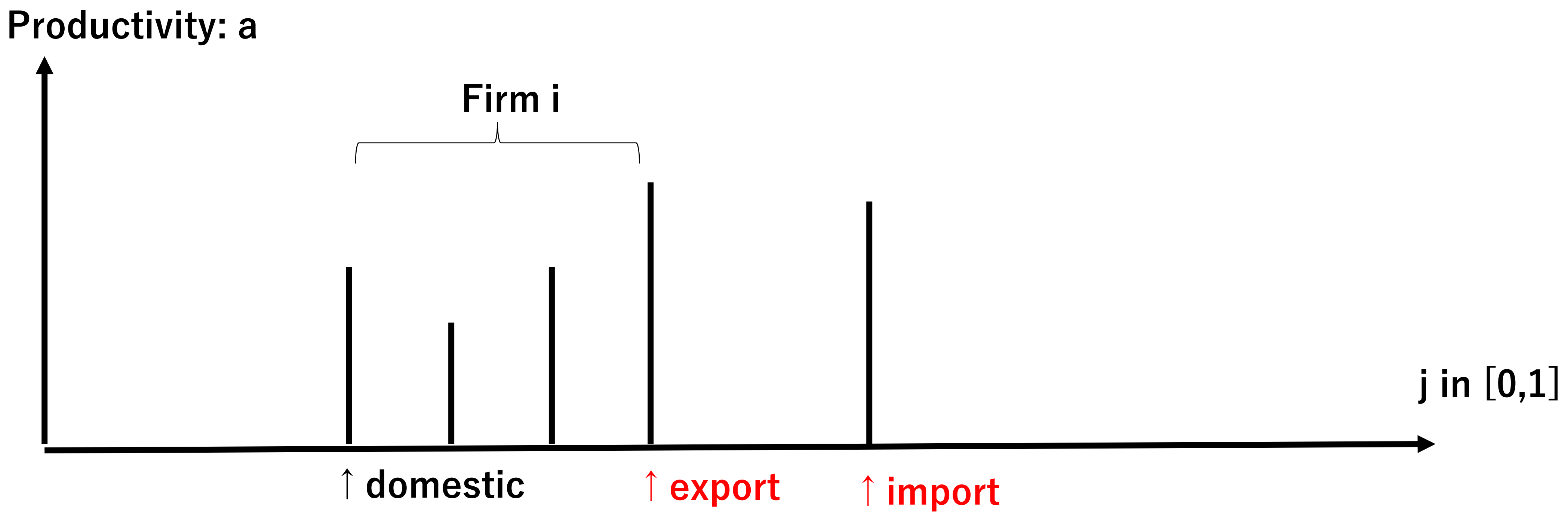
- Build an endogenous growth model (e.g. Klette and Kortum) and trade
- Study sudden stops (TFP and interest rate shocks)
  - Innovation in new product lines falls during sudden stops
  - More switching to export product lines
- Validated by Chilean plant-level data with product information

Model structure

- Final good (tradable) producer taking intermediate j in [0, 1]
  - working capital constraint and thus need to borrow
- Bertrand competition in each product line (intermediate j)
  - Innovations, if successful, let the firm become a new producer over a random product line h in [0, 1], thus increasing the number of product lines of the firm
  - Existing product lines for the firm are subject to creative destruction shocks

→→→ Firm as a collection of product lines

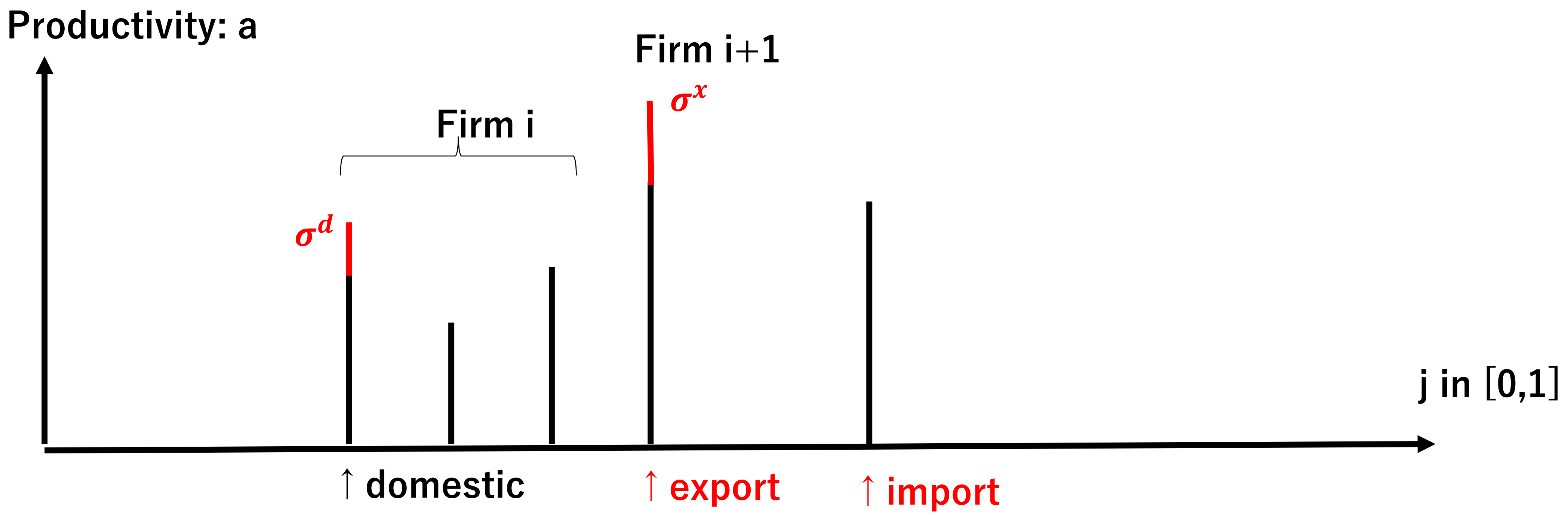
Klette and Kortum with trade



- Product line gives constant profit flow

$$v(n_d, n_x) = n_d v(1,0) + n_x v(0,1)$$

Klette and Kortum with trade



- A firm can take a product line from another firm.
- Step size of innovations $\sigma^x > \sigma^d$

Implications

- A sudden stop leads to:
    - a decrease in demand for intermediate goods in domestic market
    - firms responding by cutting innovation
    - firms switching innovation efforts towards exports

---> Productivity slowdown due to low innovation

Comment 1: Productivity and selection

Klette and Kortum type model:

--> not much to learn about allocative issues like selection

1. Distribution of firms relevant - reallocation effects often discussed in macro literature (e.g. Gilchrist and Williams, 2000)

2. Selection is not at work (e.g. exit is not endogenous).

3. Variety is fixed.

Comment 2: Firm debt and slow recovery

Working capital assumption is a bit stark.

1. how does leverage evolve before and after sudden stops?

2. how efficient is the default protocol in countries where sudden stops are relevant?

3. debt overhang isn’t an issue for slow recovery in those countries?

Concluding remarks

* A very nice paper nicely putting ingredients in the model to study trade

* A clear contribution to the literature, distinguishing it from other papers

- *Where to go from here?*
    - competition
    - market structure

- *More to learn about "products -v- firm"?*
    - within firm dynamics of plants and products