

Discussion of „Can Tariffs Spur Innovation?“ by Harun Alp & Sina T. Ates

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Summary I

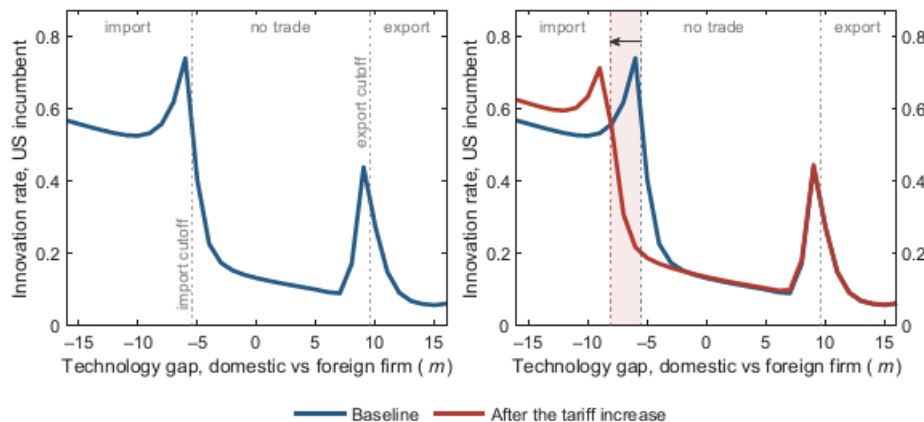
- A quality-innovation model, in which two countries compete
- Firms invest in R&D for quality
- Bertrand competition: for each good, only the firm with the lowest quality-adjusted price serves the market
- Additional costs occur to reach foreign markets: iceberg costs and tariffs

Potential outcomes

- Home firm lags far behind in terms of quality: Foreign firm serves both markets
- Home firm is cheapest at Home, but not at Foreign (iceberg costs, tariffs): both firms serve their own market
- Home firm is cheapest at Home and Foreign: serves both markets

Summary II

Figure 3. Incumbent innovation effort as a function of the technology gap (U.S. perspective).



Effects on innovation depend on technology gap

- More, if firm closer to threshold of winning Home/Foreign market
- Less, if firms face lower threat from Foreign (complacency effect)

Tariff increases shifts import cut-off, changing innovation incentives

Empirics show that, due to tariffs, relative patenting increases in those products, in which firms had been lagging behind

Comment I: A very intuitive model mechanism

The model ...

- ... captures important aspects of the tariff effects
- ... includes dynamics, not just comparisons of steady states
- ... useful for a range of policy simulations (tariff duration, foreign retaliation)

Open questions

- How do transitional dynamics look for strategically important sectors?
- Leaving aside general equilibrium effects, what are the aggregate effects, taking sector weights into account?
- Predictions different for low tariff increases for all trading partners vs. large increases for one (China) -> Calibration assumes the former
 - How would model predictions differ if calibrated to China only?

Comment II: Model assumptions

Model assumptions and calibration maximize innovation incentives below thresholds

- **Bertrand competition:** US firms that jumps over threshold takes over entire markets in Japan, Korea, Germany, China, Canada, UK, France
 - In reality, very similar goods are im- and exported at the same time
 - Introducing Armington/love of variety aggregator would smooth innovation incentives
- **Firms capture markets immediately**
 - Double production in one year
 - Considering production bottlenecks would reduce innovation incentives, change dynamics
- **Price competition**

Firms often capture markets with initial discounts: could reduce innovation incentives as initial profits lower

=> Strength of innovation effects likely an upper bound

Comments III: Empirics

Do innovations of laggards also increase in absolute terms?

- Triple-difference coefficient only identifies relative effects to other groups

Does increase in patents measure increase in innovation?

- Short post-tariff window may fail to identify real innovations that may take longer to arrive at patents