Discussion:

Protectionism and the Business Cycle

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Recap: overview

What are the macroeconomic consequences of protectionism?

Renewed fervor for protectionism (e.g. Brexit, Trump's NAFTA threats) makes this a timely, important question

This paper: empirical and quantitative analysis of macroeconomic responses to temporary "protectionism shocks"

- ▸ Empirical: VAR evidence on effects of increased tariffs and antidumping investigations
- ▸ Quantitative: Small open economy model of dynamic response to protectionism shocks in/out of ZLB, with floating/fixed x-rate

Nice example of how quantitative analysis using general equilibrium models can complement empirical analysis

Recap: results

Empirical results

- ▸ Protectionism shocks act like negative supply shocks: reduce GDP, increase inflation
- ▸ Little impact on trade balance (protectionism doesn't promote rebalancing)

Quantitative results

- ▸ Consistent with empirical results along all dimensions
- ▸ Protectionism shocks are harmful even when ZLB binds and in countries with fixed exchange rates
- ▸ Producer heterogeneity, investment dynamics crucial model ingredients to understand effects of protectionism shocks

Recap: economic mechanism

Inflationary effects of protectionism are straightforward

Real effects come through three channels:

1. Expenditure switching (expansionary)
   - Foreign goods more expensive ⇒ switch to domestic goods
   - Mitigated by endogenous appreciation
2. Reduction in real income (contractionary)
   - Inflation lowers real wages since nominal wages are sticky (macro)
   - Investment dynamics (macro)
   - Appreciation lowers exports ⇒ reallocates resources towards less productive domestic producers (micro)
3. Monetary policy response (potentially ambiguous)
   - Inflation rises, output falls ⇒ tradeoff
   - In calibration, response to inflation sufficiently aggressive to induce contractionary MP response
   - Consistent with empirical results; interest rate rises in monthly analysis of AD shocks

Macroeconomic impact of antidumping (AD) investigations

Empirical finding: increase in AD investigations acts like negative supply shock

- ▸ Investigations often lead to tariffs. . .
- ▸ . . . but they affect individual firms or narrow industries that account for small fraction of total trade
- ▸ Could investigations have broader impact other than through eventual tariff increases?

Ruhl (2014): *possibility* of AD investigations ↓ output, ↑ prices

- ▸ Productive firms that charge low prices more likely to be investigated
- ▸ Raise prices above marginal cost/standard markup to reduce likelihood of investigation
- ▸ Misallocates resources away from productive firms, lowering output and raising aggregate prices

Conjecture: ↑ in number of AD investigations ↑ probability individual firm will be investigated ⇒ negative supply shock

Richer trade adjustment dynamics needed

Widely known that trade flows adjust slowly to changes in prices

- ▸ Short-run deviations from Marshall-Lerner (J-curve)
- ▸ Alessandria and Choi (2017): short-run Armington elasticity ≈ 0.18
- ▸ Alessandria et al. (2017): large macro/welfare implications

BCG model abstracts from trade adjustment dynamics

- ▸ Overstates substitution towards domestic goods in response to protectionism shocks?
  - ▸ Trade balance increases more in model than in empirical analysis
- ▸ Understates inflationary response?

Conjecture: trade adjustment dynamics would amplify negative supply shock effects

Would make BCG's quantitative contribution more compelling; paper is all about short-run dynamics!

How to get them

Option 1: Forward-looking export participation decisions

- ▸ Need sunk cost of entering export market
- ▸ Alessandria and coauthors: DSGE models with sunk costs deliver realistic trade elasticity dynamics
- ▸ With iid firm productivities, need only keep track of export participation rate (Alessandria and Choi, 2007)

Option 2: Convex cost of adjusting aggregate imports

$$\psi \left(C_{X,t}^{T*}/C_{X,t-1}^{T*} - 1 \right)^2$$

- ▸ Calibrate ψ to match short-run Armington elasticity
- ▸ Elasticity not time-varying when exporters pay adjustment cost as in Krugman (1986), Drozd and Nosal (2012)

Other comments on the quantitative analysis

- No intermediate input linkages

  - Johnson and Noguera (2017): rising importance of intermediate input trade

  - Roundabout production would amplify supply-side consequences of protectionism shocks

  - Easy to incorporate in Melitz-style models

- Role of nontradeable sector?

  - Main modeling contribution relative to Ghironi-Melitz

  - No discussion of why it is important!

    - Reallocation towards nontradables?

    - Appreciation driven by RERN or RERT? (Engel, 1999)

Suggestions for future research

Protectionism in large open economies

- US, EU use TTBs substantially more than Canada (Bown, 2011)
- Are the implications different than for SOEs?
- Effects on trade partners (e.g. Canadian macro dynamics in response to US protectionism)
- Effects/optimality of retaliation?

Protectionism on the third side of the trilemma triangle

- Quantitative result: protectionism shocks are expansionary with fixed x-rate and financial autarky
- China's TTB use similar to Canada's
- Protectionism shocks + capital controls?