Trade and Currency Weapons by Agnès Bennassy-Quéré, Mathieu Bussière and Pauline Wibaux

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Questions and policy context of the paper

- ▶ Can trade policy be used for macro-stabilization purposes in open economies?
- ▶ Can it substitute to exchange rate channel of monetary policy?

- ▶ Traditional view (past 50 years): exchange rate channel of monetary policy better instrument to move relative prices
- ▶ Only objective of trade policy should be trade liberalization
- ▶ WTO: Better to separate trade and exchange rate issues
- ▶ But boundaries between trade, fiscal and monetary policies are being blurred and trade wars may be back

Exchange rates, tariffs and other policies

Old and recently revived debate

- ▶ Keynes view: import tariffs + export subsidies can mimic devaluation in short term
- ▶ Recent literature (Farhi, Gopinath and Itskhoki, 2014; Erceg, Prestipino and Raffo, 2017) revisits fiscal devaluation and import tariffs+ export subsidies in NK models and defines conditions of replication:
    - ▶ can consumption and income taxes be used?
    - ▶ are tariff changes expected to be permanent? Is retaliation expected?
- ▶ Further condition: identical pass-through and trade elasticities for exchange rates and tariffs (discussion on VAT pass-through)
- ▶ This paper message: word of caution on equivalence when trade elasticities (pass-through) differ across instruments (see also Jeanne, 2018)

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International elasticity puzzle

- Starting point: empirically compares trade elasticities of tariffs and exchange rates to measure relative impact of expenditure switching
- The international elasticity puzzle (Ruhl, 2008):
  - Exchange rate ("macro"): lower than 1
  - Tariffs ("micro"): 2 and above

International elasticity puzzle

Standard trade and open macro models have same elasticity $(-\sigma)$ for trade costs, exchange rates and export prices because of pass-through to consumer prices:

$$X_{i,h,j} = \left(\frac{(1 + \tau_{h,j})}{\epsilon_{h,j}} p_{i,j}^x dist_j \right)^{-\sigma} P_j^{\sigma-1} Y_j$$

Export volume X, firm i, exporting country h, destination j

- ▶ Predict same export elasticity to tariff and exchange rates: not true in data
- ▶ Do export prices $(p_{i,j}^x)$ or intermediaries $(dist_j)$ absorb differently the two shocks?

Main empirical results

- The paper is not after a " *structural* " elasticity parameter but reduced form estimation of aggregate short term elasticity
  - exchange rate: 0.5
  - tariffs: 1.4
- However: sector level (HS6) trade elasticty may be different from the impact of a general tariff increase on all imports (price index effect; elasticity between foreign varieties may be different from elasticity between home and foreign)
- maybe use economic history: 1930s

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Comparison to existing literature

- Firm level:
  - Fitzgerald and Haller (2014) : 0.5 for exchange rates and between 3.8-5.4 for tariffs
  - Fontagné et al. (2017): 0.6 for exchange rate and 2 for tariffs (5 for instrumented export prices)
- sector level: exchange rate
  - Leigh et al. (2017): 0.7 (larger in economies with slack)
  - Bussière, Gaulier and Steingress (2017): 0.5
  - Boz, Gopinath and Plagborg-Moller (2017): 0 when controlling for dollar exchange rate : DCP means that for all -except US - countries depreciation only affects imports (like tariff)

Where does the trade elasticity difference come from?

- ► See Drozd and Nosal (2012): difference in volatility and persistence
- ► Importers, wholesalers and retailers absorb more volatile and less persistent shocks (need to costly build market shares by matching with their customers)
- ► Evidence for France (Fontagné et al. 2018)

	exchange rate	tariff
Trade elasticity	0.6	2
Coefficient of variation	7.8%	0.9%
Persistence (estimated coefficient on AR(1) process)	67%	88%

- ► Suggests that intermediaries may absorb markups a larger share of exchange rate movements than tariffs because of difference in volatility

Comments on model

- ▶ Very stylized model with two instruments and governement loss function on output gap and trade balance
- ▶ Use of tariff as macro stabilization comes from absence of monetary instrument (ZLB)

  Questions:
- ▶ What happens to tariff revenues? (bias against tariff)
- ▶ Why equal weight on internal and external objectives?
- ▶ In two country version what is a negative trade shock that affects both countries? $db = -db^*$

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- Demand equation:

$$Y = cY \left[E(1+\tau)\right]^{-\eta} + I_0(1+r)^{-\alpha}$$
$$+ X_0 E^\epsilon (1+\tau^*)^{-\zeta\epsilon} Y^{*\gamma^*} - M_0 E^{1-\epsilon}(1+\tau)^{-\zeta\epsilon} Y^\gamma$$

  with $C = cY/P^c$ and $P^c = \left[E(1+\tau)\right]^\eta$

- Implicit assumption is PCP (prices set and fixed in producer currency) and full pass-through of both exchange rate and tariffs changes to consumer prices

- Is it consistent with difference in trade elasticity?

Comments on model: present and missing ingredients

Empirical evidence

	exchange rate depreciation	tariff increase
Exp. switching (imports)	positive (small)	positive (large)
Exp. switching (exports)	positive (small)	zero
Household purchasing power	negative (small)	negative (large)
Markups absorption		
domestic intermediaries		
foreign exporters		

Who absorbs a tariff increase or depreciation of currency? How do they differ?

▶ if foreign exporters aborb then (unlitareal) tariff increase and depreciation trade or currency war more tempting

▶ French exporters absorb $1/3$ of tariff changes but little of exchange rate movements (Fontagné et al. 2018)

▶ Suggestion: test in your data difference in pass-through on exporter and importers prices of exchange rate and tariffs

▶ Domestic intermediaries may absorb exchange rate and tariffs differently

Comments on model

In Nash equilibrium, no possibility of one country using exchange rate and the other responding by tariff?

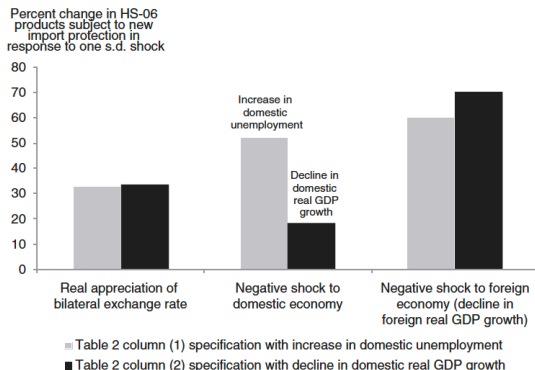Evidence (Bown and Crowley, 2013) : import tariffs more likely in response to RER appreciation

Fig. 2. Trade policy responsiveness to macroeconomic shocks, pre-crisis.

Variance of tariffs may change

- Suppose governments (Trump?) use tariffs to respond to macro shocks
- Tariff variance would increase
- Would elasticity of trade flows to tariffs fall?
- Could be tested: positive sign of interaction of variability of tariff with tariff

Concluding remarks

- Important to take into account heterogeneity of trade elasticities and pass-through in models comparing fiscal devaluations, trade policies and exchange rate channel of monetary policy
- Who (domestic or foreign) absorbs the tariff and exchange rate shocks is important
- Would favor micro-founded model where causes of heterogeneity built in with different pass-through and different markups absorption