

Currency wars, trade wars, and global demand by Jeanne

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Overview

- How do we think about incentives / effects of currency wars
- **This paper:** simple model to think about these questions
 - ▶ Trade/currency war: conscious effort to shift spending to domestic good
 - ▶ Instruments: tariffs or capital controls
 - ▶ How costly are these wars? How valuable is cooperation?
- Two implications: at the ZLB
 - ▶ Trade wars very costly
 - ▶ “Capital-control” wars not costly at all

Ingredients

- Two periods $t = 1, 2$
- Continuum of countries produce differentiated goods
- Technology $Y = L$, $L \leq \bar{L}$
- Preferences:

$$U = u(C) + \beta \cdot C', \text{ where}$$

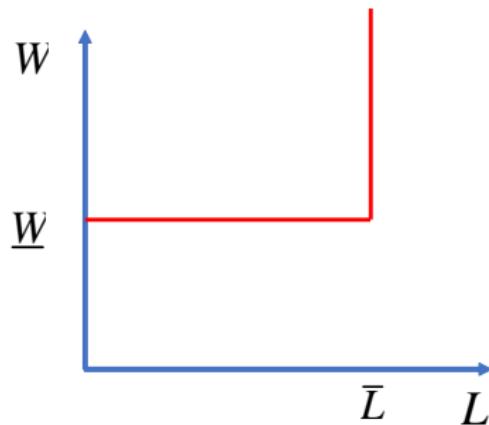
- ▶ C is Cobb-Douglas composite of domestic and a “global” good
 - ▶ Global good, in turn, composite of all differentiated goods
- International bond (zero net supply)
- In equilibrium:
 - ▶ How much does each country produce / consume / save?
 - ▶ Key “prices”:
 - ★ W (domestic) vs. P (global)
 - ★ $1 + i$ vs. $(1 + r) \cdot \frac{P'}{P}$

Two key differences between periods

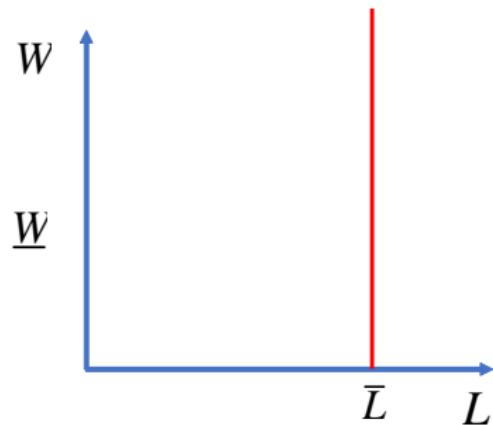
- Let $S = \frac{W}{P}$ denote relative price of domestic good
- Preferences
 - ▶ At $t = 1$: S endogenous
 - ★ domestic and global good are imperfect substitutes
 - ▶ At $t = 2$: $S = 1$
 - ★ domestic and global goods are perfect substitutes
- Nominal rigidities:
 - ▶ $t = 1$, $W \geq \underline{W}$

Labor market

$t = 1$

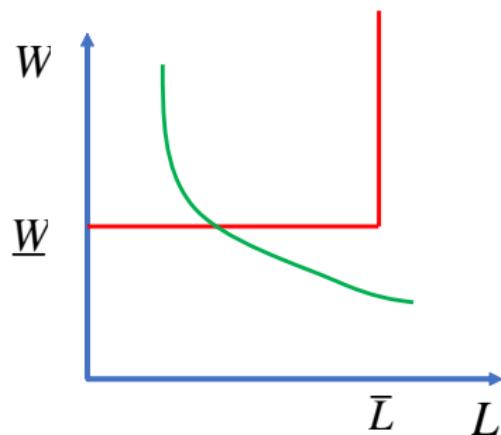


$t = 2$

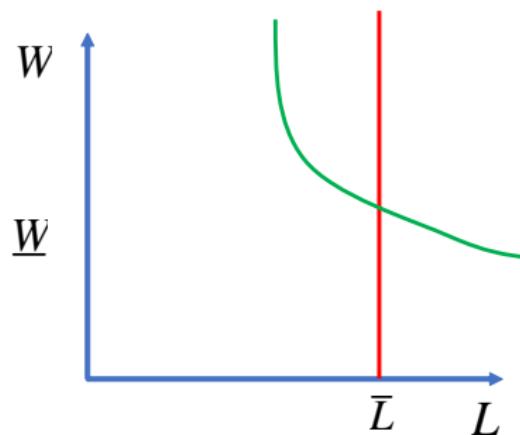


Labor market

$t = 1$



$t = 2$



Equilibrium

- Policy: monetary ($i \geq 0$), capital controls (τ^b), import taxes (τ^m)
 - ▶ outsize ZLB: improve ToT (standard)
 - ▶ at ZLB: raise employment
- Three key equations:

- ▶ Labor demand

$$L = \alpha_H \left(\frac{S}{1 + \tau^m} \right)^{-\alpha_F} C + (S)^{-\gamma} C_F^W$$

- ▶ UIP:

$$S = \frac{1 + i}{(1 + r) \cdot \Pi} \cdot \frac{1}{1 + \tau^b}$$

- ▶ Euler equation:

$$u'(C) = \beta \cdot \frac{1 + i}{\Pi} \cdot \left(\frac{S}{1 + \tau^m} \right)^{-\alpha_F}$$

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Preliminaries

- Benchmark cooperative policy: set i to attain full employment and $\tau^m = \tau^b = 0$
- Outside of ZLB ($i > 0$)
 - ▶ Textbook incentive to manipulate terms of trade
 - ▶ Set $\tau^b < 0$ to stimulate consumption

Main results (ZLB, $i=0$)

- Trade-wars: set $\tau^m > 0$, shift spending to domestic good, \uparrow employment
 - ▶ In symmetric equilibrium, only reduces global demand

$$u'(C) = \beta \cdot \frac{1}{\Pi} \cdot \left(\frac{1}{1 + \tau^m} \right)^{-\alpha_F}$$

- ▶ Fall in employment and output
- ▶ Welfare loss $>>$ than outside ZLB
- ▶ Large gains from trade cooperation

Main results (ZLB, $i=0$)

- Capital-wars: set $\tau^b > 0$ to depreciate exchange rate
- In symmetric equilibrium, no effect on welfare (i.e., $r \downarrow$)

$$1 = \frac{1}{(1+r) \cdot \Pi} \cdot \frac{1}{1+\tau^b}$$

- ▶ But symmetric equilibrium may not exist!
- In asymmetric equilibrium, two groups of countries:
 - ▶ Strong capital controls, weak currency, full employment
 - ▶ Weak capital controls, strong currency, unemployment
- In asymmetric equilibrium
 - ▶ Higher welfare
 - ▶ Cooperation irrelevant

General reaction

- Preliminary, but strengths are visible
 - ▶ Simple model
 - ▶ Basic ingredients
 - ▶ Good “lab” to think about currency / trade wars
- My discussion:
 - ▶ Simple points relating to paper
 - ▶ General question about literature

General comments

- “Temporary” nature of ZLB and of trade/currency wars
 - ▶ All action concentrated in first period
 - ▶ Policies to induce expenditure-switching also distort intertemporal allocation
- Argentine remark: nothing in the model prevents policy from raising Π !
 - ▶ Immediately brings world out of ZLB
 - ▶ Presumably unfeasible due to credibility, etc...
 - ▶ I would explicitly discuss this.

What I understand

- From each country's perspective, trade instruments \approx capital controls
- In principle, both lead to a fall in global demand
- But very different aggregate effects: in symmetric equilibrium
 - ▶ Capital controls distort intertemporal price of global good
 - ★ Fully offset by fall in global interest rate
 - ▶ Import tariffs distort consumption bundle
 - ★ Cannot be offset by global interest rate
- How does this result fit in the literature? (e.g. Caballero, Farhi, Gourinchas 2016)

What I do not understand

- Capital wars central component of the paper
 - ▶ But mechanics not entirely clear
 - ▶ In current version: one-paragraph discussion of the issue
- In symmetric equilibrium: all countries have same unemployment/output
- In asymmetric equilibrium: uneven distribution of unemployment
 - ▶ Employment \uparrow in depreciators, \downarrow in appreciators
 - ▶ Consumption \uparrow in appreciators, \downarrow in depreciators
- China-West in a ZLB world?
 - ▶ What drives positive / normative features of equilibrium?
- In any case, no currency “wars” in equilibrium
 - ▶ Non-cooperative outcome better than $\tau^b = 0$

What I would explore

- Right now, “partial” policy results at ZLB
- One policy instrument at a time: trade wars or currency wars
 - ▶ Benefits of cooperation in either one of them
- How does allowing for both instruments simultaneously change results?
 - ▶ Presumably both used in equilibrium
 - ▶ Less clear whether capital controls strengthen incentives for trade wars or not

Enough with Mantega!

- Currency wars: loose term to capture spillovers of loose monetary policy
 - ▶ Generically, these spillovers depend on circumstances
- Two options:
 - ▶ Option 1: “competitive devaluation” (this paper)
 - ★ Depreciates foreign currency
 - ★ Reduces demand for domestic good
 - ★ Fall in employment and output
 - ▶ Option 2: “hot money”
 - ★ Capital inflows
 - ★ Asset price and credit booms
 - ★ Increase in employment and output (risky?)
- Different phenomena:
 - ▶ Option 1 may be relevant in certain states (e.g., ZLB)
 - ▶ Option 2 is more relevant to think about EM



Conclusion

- Simple, transparent model to explore effects of currency wars
- Still in progress