International Macroeconomics Microfounded models for policy analysis in open economy

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Roadmap

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- Short Recap

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- Microfounded models for policy analysis in open economy

Recap: Last session

Recap: "Economics of exchange rates"

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- The relative importance of relative non-traded goods prices in RER fluctuations is higher than we once thought.
- Better data based on individual relative prices yields different results for LoOP and PPP.
- Long-run real exchange rate movements are in line with Balassa-Samuelson effects.
- The simple overshooting model correctly predicts high volatility, but ultimately we don't have a good model for nominal exchange rates.

This session: Microfounded models for policy analysis in open economy

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- How about inflation targeting or ER stabilisation or currency union?

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- Instead: Simple analytically tractable model with role for monetary policy

Learning points

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- Tractable example of a NOEM model

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- Tractable example of a NOEM model
- Importance of pricing assumptions and pass-through for optimal monetary policy

Roadmap for this section

1. Ingredients of New Open Macroeconomics (NOEM) models and general issues in monetary modeling
2. A simple tractable model for policy analysis in open economy (Corsetti and Pesenti 2007)
3. The transmission of monetary and productivity shocks under different assumptions about pricing behaviour
4. Optimal monetary policy

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5. Inefficiencies: Monopoly distortion, sticky price distortion and policy externalities

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3. GE: potential for integrating other literatures (trade, ...)

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2. Optimal monetary policy
   - Inward- vs. Outward-Looking
   - Additional Targets?
   - Gains from coordination across countries?

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     In equilibrium, MRS between c and m/p needs to equal relative price: "user cost" $1/(1 - R_m/R)$. Velocity decreases with rising return on money. EE as usual (with m'/p in MUt).

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   - **Shopping time**

     ShT increases with c, decreases with m'/p. In equilibrium MU of higher saved time needs to equal MU of user cost.

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  - Real return on money: $\frac{p_t}{p_{t+1}}$
  - Difference, discounted: $1 - \frac{p_t}{p_{t+1}R_t} = 1 - \frac{1}{1+i_t} = \frac{i}{1+i_t}$

MIU model: HH problem and FOCs

$$maxE_0 \sum_{t=0}^{\infty} \beta^t \frac{c_t^{1-\sigma}}{1-\sigma} + \phi l_t^a + \psi ln(\frac{m_t}{p_t})$$

$s.t.$

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5. m': $\frac{U_m}{p} - \frac{\lambda}{p} = E[\beta \frac{\lambda'}{p'}] \Rightarrow U_m = U_c \frac{i}{1+i}$

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5. With flexible prices:
   - Money is neutral (once for all increase in MS has only price, no real effect)
   - Money may not be "superneutral": money growth affects inflation, and therefore i

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3. Since monopoly prices are higher than marginal cost ($p^{monop} > MC$) means producer optimally meets higher than expected demand.

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  - With commitment, monetary policy stabilises markup around flex-price level.

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- Third case: Asymmetric "Dollar" pricing.

Corsetti and Pesenti (2005,2007): A tractable NOEM model for policy analysis

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4. So efficient allocation is $l_t^{eff} = c_t / Z_t = 1/\kappa$

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4. FOC: $p_i = \frac{\theta}{1-\theta}\frac{W_t}{Z_t}$ - with flexible prices producers charge markup over marginal cost.

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2. Implies demand for good i is

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3. "Monopolistic Competition": Producer sets p_i to maximise nominal profits using $c_i = Z_t l_t$ and taking w_t, P_t as given

$$max_{p_i}(p_i - MC)c_i = (p_i - \frac{w_t}{Z_t})(\frac{p_i}{P})^{-\theta} c \tag{2}$$

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6. $\Rightarrow l_t^{flex} = \frac{\theta}{\kappa\theta-1} < l_t^{eff}$ - labour is constant in flex price equilibrium, but too low.

Corsetti and Pesenti (2005,2007): A tractable NOEM model for policy analysis

International Macroeconomics Microfounded models for policy analysis in open economy

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