Unbalanced Trade

Discussion by

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Global Rebalancing with Gravity: Measuring the Burden of Adjustment

Discussion of Dekle, Eaton and Kortum

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Outline

- **Simplified version of the model**
- Comments

Technology

$$Y_i\left(i\right) = A_i L_i$$

$$Y^i\left(i\right) = \sum_{k=1}^{N} d^{ki} C^k\left(i\right)$$

$$P^i\left(i\right) = W^i / A^i$$

$$P^i\left(k\right) = d^{ik} P^k\left(k\right)$$

Intratemporal preferences

$$C^i = \left[\sum_{k=1}^{N} C^i(k)^{\frac{\eta-1}{\eta}} \right]^{\frac{\eta}{\eta-1}}$$

$$P^i = \left[\sum_{k=1}^{N} P^i(k)^{1-\eta} \right]^{\frac{1}{1-\eta}}$$

$$C^i(k) = \left[\frac{P^i(k)}{P^i} \right]^{-\eta} C^i$$

- with $\theta = \eta - 1$ and $T_i = s_i A_i^{\eta-1}$

Equilibrium given absorption patterns

$$P^i C^i - P^i(i)\, Y^i(i) = D^i$$

$$P^i = \left[\sum_{k=1}^{N} \left[\frac{d^{ik} W^i}{A^i} \right]^{1-\eta} \right]^{\frac{1}{1-\eta}}$$

$$A^i L^i = \left[\frac{W^i}{A^i} \right]^{-\eta} \sum_{k=1}^{N} \left[\frac{d^{ki}}{P^k} \right]^{1-\eta} \left[D^k + W^k L^k \right]$$

Quantitative exercise of this paper

$$P^i C^i - P^i(i)\, Y^i(i) = 0 \;\forall i$$

$$P^i = \left[\sum_{k=1}^{N} \left[\frac{d^{ik} W^i}{A^i} \right]^{1-\eta} \right]^{\frac{1}{1-\eta}}$$

$$A^i L^i = \left[\frac{W^i}{A^i} \right]^{-\eta} \sum_{k=1}^{N} \left[\frac{d^{ki}}{P^k} \right]^{1-\eta} \left[0 + W^k L^k \right]$$

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Intertemporal preferences

$$U^i = \sum_{t=0}^{\infty} \sum_{s^t} \beta^t \pi_t \left(s^t\right) L_t^i u \left(C_t^i \left(s^t\right) / L_t^i\right)$$

Intertemporal comparative advantage

- A process for $A_t^i \left(s^t\right)$

Sequential budget constraint

$$P_t^i\left(s^t\right)C_t^i\left(s^t\right)-P_t^i\left(i,s^t\right)Y_t^i\left(i,s^t\right)$$

$$=\left[\mathbf{R}_t\left(s^t\right)+\mathbf{Q}_t\left(s^t\right)\right]\mathbf{B}_t^i\left(s^{t-1}\right)-\mathbf{Q}_t\left(s^t\right)\mathbf{B}_{t+1}^i\left(s^t\right)$$

$$\mathbf{B}_{t+1}^i\left(s^t\right)\in\mathcal{B}_i\left(s^t,\mathbf{B}_t\left(s^{t-1}\right)\right)$$

- Example: An Eaton-Gersovitz world

Intertemporal first order condition

$$P_t^i\left(s^t\right) = \frac{1}{\mu_t^i\left(s^t\right)} u_C\left(C_t^i\left(s^t\right)\right)$$

- With log utility

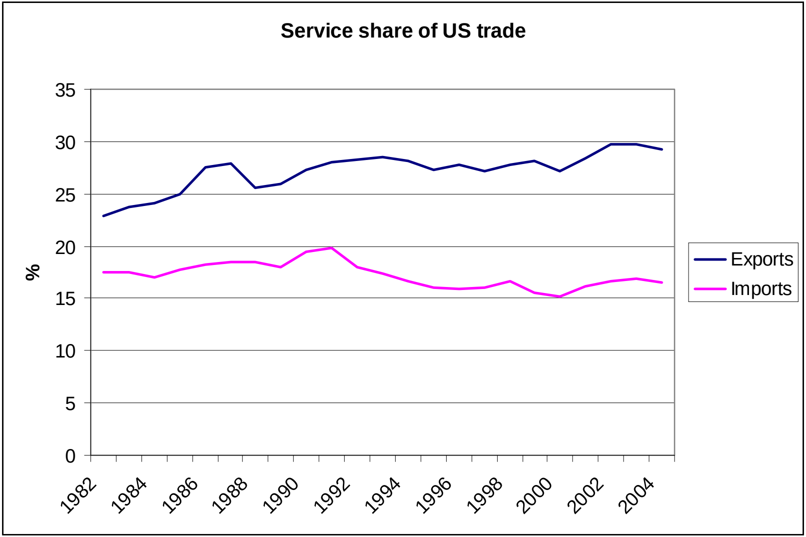
$$P_t^i\left(s^t\right) C_t^i\left(s^t\right) = \frac{1}{\mu_t^i\left(s^t\right)}$$

Other potental complications

- Capital accumulation
- Endogenous labor supply

Trade in services

- Focus on manufacturing
- Services are an increasing share of US trade, expecially exports
- Data on bilateral service trade for OECD countries (doesn't include China)



Source: US Department of Commerce