ECON 35101 International Macroeconomics and Trade: Comprehension Check 3

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1 Matsuyama (1992)

Start from equation (7).

$$C_t^A = \gamma L + \beta p_t C_t^M$$

Use market clearing conditions $C_t^A = X_t^A = AG(1-n_t)$ and $C_t^M = X_t^M = M_t F(n_t)$ to replace C_t^A and C_t^M.

$$AG(1-n_t) = \gamma L + \beta p_t M_t F(n_t)$$

Re-arrange terms.

$$G(1-n_t) - \beta \frac{p_t M_t}{A} F(n_t) = \frac{\gamma L}{A}$$

Finally, use equation (4) $AG'(1-n_t) = p_t M_t F'(n_t)$ to replace prices by marginal products.

$$\underbrace{G(1-n_t) - \beta \frac{G'(1-n_t)}{F'(n_t)} F(n_t)}_{\phi(n_t)} = \frac{\gamma L}{A}$$

2 Buera and Oberfield (2020)

2.1 Re-Exporting

Re-exports and "normal" exports and the associated import flows should play distinct roles in knowledge diffusion. Knowledge diffusion is likely to be more salient when there is positive value added from using imported inputs. In contrast to re-exporting, production with value added usually involves mixing (imported) intermediates and labor, which requires workers to learn about the technological content of the inputs. The process of learning generates knowledge spillovers. Hence, knowledge diffusion is expected to be more intensive when integrating imported and local inputs compared with re-exporting with no value added.

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2.2 Trade Imbalances

As mentioned in Lucas (1990), trade imbalances can be rationalized by capital market imperfection. For example, sellers in country i would not want to sell to a country j with substantial political risks for fear of the possibility that their contract may not be enforced. Country j in this example faces trade imbalance in which it exports more than it imports, and extra incomes are rebated as exogenous transfers as in Buera and Oberfield (2020).

If trade imbalances responded endogenously to trade, counterfactual outcomes are expected to change. In the example above, transfers to country j may shrink as it learns "advanced" contracting practices from country i through trade. Then, the estimated gains from trade or gains from lowering trade costs could be higher because by balancing trade, country j imports more from more productive country i, and the probability of having high productivity draws increases. (???)

2.3 Exogenous Paths for Physical and Human Capital

One possible way for knowledge diffusion to affect investment is that it could alter (increase) the return to investment. Knowledge diffusion could affect return to physical capital investment by increasing the efficiency of capital utilization, and it could affect return to human capital investment by improving worker skills. Moreover, when capital and labor are complements, there is a feedback loop where both returns are further increased.

Endogenizing physical and human capital accumulation is likely to change the quantitative-exercise results. Specifically, the estimated gains could be higher if we take capital accumulation into account, because the gains from having greater capital stocks from knowledge diffusion are not captured. (???)

References

Buera, Francisco J. and Ezra Oberfield, "The Global Diffusion of Ideas," *Econometrica*, 2020, *88*, 83–114.

Lucas, Robert E., "Why Doesn't Capital Flow from Rich to Poor Countries?," *The American Economic Review*, 1990, *80*, 92–96.

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