

International finance

Problem set 3

1. Argentina real exchange rate vis-à-vis its main competitor, Brasil, was too high until the devaluation of the Argentinian peso in 2000. Many argue that since the Argentinian nominal exchange rate was fixed at 1 *peso*/\$, Argentina could only eventually devalue its currency with respect to the dollar in order to reestablish its competitiveness against Brazilian goods. Think about which model people were using to conclude that the Argentinian real exchange rate was overvalued. Noticing that the *peso/real* nominal exchange rate can be thought as the ratio of the *peso*/\$ and the \$/*real* nominal exchange rates (the *real* is the Brazilian currency), discuss if there were other ways other than devaluation to reestablish Argentina's competitiveness.
2. Sinn and Reuter (2001)¹ have argued that the ECB should make sure that there is no deflation (a fall in the aggregate price level) in each European countries. The same author has argued that this may require that the ECB ensures that the price of tradeables increases if any country experiences higher rates of productivity growth in the non-tradeable than in the tradeable sector. Express the aggregate price level as a function of the price of tradeables and the relative productivity in the tradable (versus nontradable) sector to validate this argument.
3. In 2000 the Council of European Ministers blamed an excessively expansionary fiscal policy for the higher inflation rate in Ireland with respect to the European average. Some economists argued that this was nothing more than the Balassa-Samuelson effect at work. Blanchard (2000)² uses the Balassa-Samuelson model to establish an upper bound for the difference between the Irish and Euro-wide rates of inflation. He assumes that in Europe productivity grows at the same rate in the tradable and nontradable sector, while in Ireland the rate of productivity growth is respectively 8% and 2% in the tradable and nontradable sectors³. He uses following estimated equation by Gregorio and Wolf (1994)

$$\log\left(\frac{EP^*}{P}\right) = 0.179 \log(A_T/A_N) + 0.485 \log(P_X/P_M) + 3.458 \log\left(\frac{G}{Y}\right), \quad (1)$$

where $EP^*/P = RER$, A_T and A_N are Irish productivity in the tradable and nontradable sectors, P_X/P_M is the exports/imports price ratio and G/Y is the share of government expenditure in GDP. He concludes that if E is fixed (single currency) the inflation differential attributable to the Balassa-Samuelson effect is at most $0.179 \cdot 0.06 = 0.01$.

Conduct the same analysis using the model introduced in class under the assumption that the share of tradables α is the same in Ireland and the rest of the Euro zone. Use the same numbers for productivity growth as Blanchard and discuss whether

¹<http://papers.nber.org/papers/w8085.pdf>

²<http://econ-www.mit.edu/faculty/blanchar/files/files/latecb.pdf>

³The fact that this choice of numbers understates the growth in relative tradable productivity in Europe and overstates it in Ireland is what makes the result an upper bound.

0.01 is really an upper bound for the inflation differential (Hint: which parameter determines how much of the relative productivity growth differential translates into an inflation differential?)