Macroeconomics, Part I
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Supervision 8

Open Economy in the Short Run

Short questions (each 1 page max handwritten)

1. Suppose the price level falls. How would that affect the employment in a small open economy with a fixed nominal exchange rate? [Tripos 2009]

2. Explain what the Marshall-Lerner condition is. What would happen in response to a fiscal expansion in a small open economy with fixed prices and a floating exchange rate if the Marshall-Lerner condition is not satisfied? Explain your answer. [Tripos 2014]

3. Illustrate using diagrams the effects on output and the interest rate of a fiscal expansion in a small open economy with fixed domestic prices and a fixed exchange rate regime with: (a) perfect capital mobility, (b) zero capital flows. Briefly explain your answers. [cf Tripos 2012]

Problems

4. A small open economy with fixed prices is characterised by the following equations:

$$\begin{aligned} C &= C_0 + c(Y - T) \\ I &= I_0 - \delta r \\ G &= G_0 \\ NX &= X(e) - M(e) - m(Y - T) \end{aligned}$$

where Y denotes GDP, C consumption, T lump-sum taxes, I investment, r the real interest rate, G government purchases and NX net exports. The functions $X(e)$ and $M(e)$ satisfy $X'(e) < 0$ and $M'(e) > 0$, and C_0, I_0, G_0, c, δ and m are positive parameters, where $0 < m < c < 1$. The central bank is pegging the foreign currency price of domestic currency e at $\bar{e}$. Assume that there is perfect international capital mobility. In addition, assume that net factor payments and net unilateral income transfers from abroad are zero. Denote the world real interest rate by r^*.

   (a) Provide an economic interpretation of the terms in the equation for net exports NX. Explain why $m < c$.

   (b) Solve for equilibrium output Y. Explain how a higher value of m affects the slope of the IS curve in (Y, r) space.

   (c) Solve for net exports NX. Explain how they depend on G_0 and T.

   (d) Now assume that the country imposes capital controls such that there are no net international capital flows. What value(s) for the real interest rate r is the central bank able to choose? Explain how the capital controls affect the monetary policy options of this country.

5. Consider a small open economy with a floating exchange rate, sticky prices and perfect international capital mobility. Analyze the likely impact on this economy's GDP, nominal exchange rate and net exports of

   (a) a cut in taxes;

   (b) financial instability that increases the demand for money as a 'safe' asset;

   (c) a reduction in import tariffs as part of a new trade deal.

Main reading

- Mankiw and Taylor (2014), *Macroeconomics - European Edition*, chapters 13 and 17.

Supplementary references
- Blanchard and Johnson (2012), *Macroeconomics*, chapters 18-21.
- Jones (2014), *Macroeconomics*, chapter 20
- Sachs and Larrain (1993), *Macroeconomics in the Global Economy*, chapters 10, 13 and 14.
- Williamson and Milner (1991), *The World Economy: A Textbook in International Economics*, chapters 11-13