

Problem set 2
Macroeconomics II
Grado Economía y Finanzas
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1. **Stabilisation policies under fixed and flexible exchange rates** In this exercise we compare the policy response to a strong contraction in aggregate demand in small open economies with fixed and flexible exchange rate systems.
 - a. Explain the potential for countercyclical policies in a small open economy with a flexible exchange rate.
 - b. Repeat the exercise in (a) for the case of a small open economy with a fixed exchange rate.
 - c. In the European Monetary Union the bilateral exchange rates between the currencies of the member states are irrevocably fixed. Does this mean that the EU cannot engage in countercyclical monetary policy?
2. **Risk premia** Consider the case of a small open economy with a fixed exchange rate vis-à-vis the U.S. dollar. After years of comparatively high inflation rates and growing current account deficits, investors anticipate that the Central Bank will have to devalue the currency relative to the dollar.
 - a. Explain why a persistent inflation gap causes tensions in a fixed exchange rate system.
 - b. Use the condition for uncovered interest rate parity to explain how the expected devaluation affects the the interest rate on sovereign bonds.
 - c. Use the Mundell-Fleming model to analyse the short-run equilibrium effects of the rise in the risk premium on all relevant aggregates.
 - d. Suppose that the Central Bank decides to resist the pressure of the financial markets. What are the risks associated with this strategy?
 - e. Analyze the pros and cons of the alternative option of a devaluation.
3. **Gains from coordination*** Consider a small open economy with the following characteristics. The real exchange rate is fixed and equal to 1. Aggregate consumption, C , investment, I , public expenditure, G and lump sum taxation, T are given by

$$C = 10 + 0,8(Y - T); I = 10; G = 10; T = 10$$

Total imports and exports (expressed in units of the local good) are equal to

$$IM = 0,3Y; X = 0,3Y^*$$

where Y^* denotes the income level in the rest of the world.

- a. Derive the equilibrium level of income and production for any given value of Y^* .
 - b. What is the value of the fiscal multiplier assuming Y^* is unaffected by a domestic fiscal expansion? Explain why this multiplier is smaller than the closed-economy fiscal multiplier.
 - c. Suppose that the world consists of two countries that are described by the same set of equations. Use the two sets of equations to derive the general equilibrium level of income in both countries [*Hint*: Use the expressions for the foreign country to derive the value of Y^* as a function of Y and substitute this solution into the expression for Y]. Derive the corresponding value of the fiscal multiplier. Why do we obtain a different answer than before?
 - d. Suppose the two countries fully coordinate their fiscal policies. What level of public expenditure would allow both countries to reach an income level of 125? What would be the implication of this joint fiscal stimulus for the trade accounts of both countries?
- * Besides Mankiw's textbook you may also wish to consult Chapter 14 of the Core textbook. It contains a very useful discussion on the concept of multiplier effects in open and closed economies as well as the gains from coordination.