Problem Set 5

14.02 Fall 2001

1 True or false, explain (4 pts. each)

1. It is always true that a real devaluation increases exports, both in gross and net terms.
2. Expansive fiscal policies that deteriorate the budget surplus, make domestic bonds relatively less attractive than foreign bonds and hence depreciate the currency.
3. Fixed exchange rates are good because no matter how much the government spends the real value of the currency never changes. Hence the government has no incentive to spend.
4. Fixed exchange rates do not allow a domestic economy to adjust to a fall in export due to a foreign recession.
5. If we start from balanced trade, and a devaluation causes a greater percentage increase in the value of exports than a percentage fall in the quantity of imports, the trade balance will always improve.
6. If a devaluation causes a greater percentage increase in the value of exports than a percentage fall in imports valued in domestic prices, the trade balance will always improve.

2 Policy Abroad Questions (4 pts. each)

Consider the goods market of an open economy described by the following behavioral equations.

$$C = c_0 + c_1(Y - T)$$

$$I = \overline{I} - k_0 i + k_1 Y$$

and government demand is exogenous. The behavior of imports is described by:

$$Q = q_0 Y - q_1 \epsilon$$

and the behavior of exports is given by:

$$X = x_0 Y^* + x_1 \epsilon$$

with Y^* denoting the income of the rest of the world, and all parameters are positive. Assume $P = P^* = 1$ and the nominal exchange rate is fixed and credible.

1. Suppose money demand abroad is very elastic to income. What does this imply for the IS and LM of the foreign economy?

2. What happens to the domestic economy's exports if the foreign government pursues an expansionary fiscal policy. Explain with graphs or equations. Give intuition.

3. Now suppose that the foreign economy is falling into a liquidity trap. Explain what that means intuitively and with graphs.

4. What happens to the domestic economy's exports if the foreign government pursues an expansionary fiscal policy. Explain with graphs or equations. Give intuition.

5. Now assume that the foreign economy's LM has a positive and finite slope. Assume that – abroad– investment is inelastic to the interest rate because it is decided by some king and his banker buddies. What does this imply for the IS and LM of the foreign economy? Give intuition.

6. What happens to the domestic economy's exports if the foreign central bank pursues an expansionary monetary policy. Explain with graphs or equations. Give intuition.

7. Now assume that the foreign economy's IS and LM have a positive and finite slope. Suppose that the domestic economy devalues at the same time that consumer confidence abroad is falling. Why are we devaluating the currency? Explain what is going on with graphs or equations. Give intuition.

8. Now assume that the domestic economy continues to have zero inflation but abroad there is inflation. People are arguing that we should devalue to protect the productivity of our exports. What do you think?

3 Trade Policy Questions (4 pts. each)

Consider the same economy as in part 2, only now the government decides to put quotas on imports. they want to protect domestic producers from foreign competition. So that the quantity of imports can never exceed a certain amount $\overline{Q}$.

1. Would this affect in any way the behavioral equations of the domestic goods market? How? Would this necessarily affect equilibrium in the domestic goods market? Why?

2. Show how this affects the DD, ZZ , AA and NX schedules.

3. Suppose that the economy is initially at an equilibrium where the quotas have not kicked in. Suppose, additionally, that there is currently a trade deficit. Do you think that a expansive fiscal policy will be more or less effective than it would be without the quotas? Why? What happens to the trade deficit? Explain with graphs and intuition.

4. Suppose that the rest of the world reacts to our quotas and retaliates with legislation that effectively closes their economy to our exports every time that our quotas become binding. Would this affect in any way the behavioral equations of the domestic goods market? How? Would this necessarily affect equilibrium in the domestic goods market? Why?

5. Show how this affects the DD, ZZ AA and NX schedules.

6. Suppose that the economy is initially at an equilibrium where the quotas have not kicked in. Suppose, additionally, that there is currently a trade deficit. Do you think that a expansive fiscal policy will be more or less effective than it would be without the quotas? Why? Explain with graphs and intuition.

4 Exchange Rate Questions (5 pts. each)

Consider a standard open economy IS-LM UIP (Mundell-Fleming) model for the Mexican economy (for Mexico, the US is the same as the "rest of the world"). Assume interest rates adjust instantaneously and output moves sluggishly. Assume that Mexico has a credible fixed exchange rate. Use figures and intuition to answer.

1. Describe the effects of fall in consumer confidence in the US.

2. Assume that Mexico has fixed exchange rates. Describe the effects, month by month, of fall in consumer confidence in the US followed, a month later, by a lowering of the interest rate by the Fed and then, a month later, by a fiscal stimulus package.

Suppose that suddenly and transitorily inflation is higher in Mexico than in the US (Prices in Mexico increase once, but they do not in the US). Suppose that although the exchange rate is fixed, there is uncertainty wether it will continue to be so.

3 What happens to exchange rate expectations? While the government decides, what happens to domestic interest rates?

4 What happens if they change to a flexible exchange rate regime? What happens if they do not?.