5EN 253
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Ex. session #10
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Exercise session #10 - IS-LM in small open economy

Problem 1 - H 272/1

Country Alpha is a small open economy with **floating exchange rate**. The goods and services market, exchange rate market and money market is in equilibrium when domestic product is Y_1, exchange rate is E_1 and interest rate r_1. Then the government increases taxes.

- Describe the effect on the goods and services market
- Describe the effect on the money market.
- Describe the effect on the exchange rate market, and how does this change feed back to goods and services as well as money market.
- Using Mundell-Fleming model illustrate how the equilibrium on IS*-LM* market changes.

Problem 2 - H 272/2

Country Alpha is a small open economy with **fixed exchange rate**. The goods and services market, exchange rate market and money market is in equilibrium when domestic product is Y_1, exchange rate is E_1 and interest rate r_1. Then the government increases taxes.

- Describe the effect on the goods and services market
- Describe the effect on the money market.
- Describe the effect on the exchange rate market, and how does this change feed back to goods and services as well as money market.
- Using Mundell-Fleming model illustrate how the equilibrium on IS*-LM* market changes.

Problem 3 - H 272/3

Country Beta is a small open economy with **floating exchange rate**. The goods and services market, exchange rate market and money market is in equilibrium when domestic product is Y_1, exchange rate is E_1 and interest rate r_1. Then the government increases import tariffs with goal to increase net exports and domestic product.

- Describe the effect on the exchange rate market.
- Describe the effect on the goods and services market.
- Using Mundell-Fleming model illustrate how the equilibrium on IS*-LM* market changes. Was this trade policy efficient?

Problem 4 - H 272/4
Country Beta is a small open economy with **fixed exchange rate**. The goods and services market, exchange rate market and money market is in equilibrium when domestic product is Y_1, exchange rate is E_1 and interest rate r_1. Then the government increases import tariffs with goal to increase net exports and domestic product.

- Describe the effect on the exchange rate market.
- Describe the effect on the money market.
- Describe the effect on the goods and services market and how does this feed back to money market.
- Using Mundell-Fleming model illustrate how the equilibrium on IS*-LM* market changes. Was this trade policy efficient?
- Explain, whether this trade policy is efficient in the long run.

Problem 5 - D-F 536/6
Show, graphically, the short and long run effects of a monetary expansion when both exchange rates and prices are flexible and capital is perfectly mobile. What happens during the period of adjustment from the short run to the long run?

Questions for review:

Lecture 10: IS-LM model in Small Open Economy

- Explain why is the interest rate on the small open economy on the level of the world interest rate. Describe the mechanism of adjustment in case of short term deviation (what is the role of perfect capital mobility?).
- Describe and explain the relationship between real exchange rate and net exports.
- Write down the expression for nominal exchange rate and real exchange rate (with the cotation from the lecture). Explain what they measure.
- Write down the equation describing goods and services market in the small open economy. Derive the IS^* curve. Why is it downward sloping?
- Write down the equation describing money market in the small open economy. Derive the LM^* curve. Explain the slope.
- Compare the regime of floating and fixed exchange rates. Give the examples of countries that use each regime.

- Depict and explain the effect of **fiscal expansion** in the regime of **floating exchange rates**. Explain what happens on the each of the markets and what is the final outcome.
- Depict and explain the effect of **monetary expansion** in the regime of **floating exchange rates**. Explain what happens on the each of the markets and what is the final outcome.
- Depict and explain the effect of **trade policy** in the regime of **floating exchange rates**. Explain what happens on the each of the markets and what is the final outcome.
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- Depict and explain the effect of **monetary expansion** in the regime of **fixed exchange rates**. Explain what happens on the each of the markets and what is the final outcome.
- Depict and explain the effect of **trade policy** in the regime of **fixed exchange rates**. Explain what happens on the each of the markets and what is the final outcome.
- Why do we observe interest-rate differentials between countries?
- Explain what happens when the perceived riskiness of the country has increased. Explain what happens on the each of the markets and what is the final outcome.
- The result that income rises when the risk premium rises is counter-intuitive. What effects might mitigate this result and why?
- Derive the AD curve from the $IS^* - LM^*$ model (small open economy).