

ECON 202
MACROECONOMIC THEORY
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Final Exam

1. (15 Points) Suppose that the following equations describe an open economy:

$$C = 18.5 + (0,85)(Y - T), T = 10, I = 10, G = 10, X = 10, M = (0,3)Y \text{ ve } \epsilon = 3.$$

Hint: Do not forget to take into consideration the real exchange rate, ϵ , as it is done in your major textbook, namely Macroeconomics (Blanchard).

- Find the **multiplier** and equilibrium **GDP** values of this economy.
- Find the equilibrium **net export** value of this economy.
- What should be equilibrium GDP to make net exports balanced (=zero).

2. (20 Points) Compare and contrast the impact of a **decrease in taxes** under small open economy for both fixed exchange and flexible exchange regimes. **Do not forget to support your answer by illustrations.**

3. (30 Points) Please do solve the following short questions.

3.1 Consumption

Let's assume that you have 4 periods of life: **younghood**, **young-adulthood**, **old-adulthood** and **retirehood**. During younghood, you do not earn any income. You earn \$140,000 (real dollars) and \$160,000 (real dollars) per period, when you are young-adult and old-adulthood, respectively. Again there is no income during your retirehood. Given that you do not like any deviation in your consumption level (=you want your consumption to be smooth), what should be your consumption per period? The real rate of interest is 2% per period.

32. Investment

Suppose that the cost of investment project is \$200. The first year, the return is \$100 and the second year, the return is \$120. The project ends in the two years. If the real rate of interest is 10%, should the firm make the investment?

3.3 Real Exchange Rate (RER)

Suppose that 1 kg of apple is \$2.5 in the United States and €1.245 in Spain. Given that the nominal exchange rate is €0.79/\$, find the real exchange rate and interpret it.

3.4 Interest Parity condition

Consider a financial investor choosing between US bonds and Japanese bonds. Suppose that one year interest rate on US bonds is 5% and the one-year interest on Japanese bonds is 14%. Suppose that the current (nominal) exchange rate is 100 (1 dollar is worth 100 yen) and the expected exchange rate a year from now is 110 (Yen depreciates!). In which bond should the investor invest?

3.5 Real interest rate versus nominal interest rate

Suppose that real interest rate is 5% and expected inflation is 2%. What is the nominal rate of interest?

3.6 Marshall-Lerner Condition

Suppose that a 1% depreciation leads to a proportional increase in exports of 0.9% and to proportional decrease in imports of 0.8%. How does the trade balance change? Improve or deteriorate? By what percentage?

4. (15 Points) An increase in government spending leads to an increase in output and to a trade deficit; however, an increase in exports leads to an increase in output and to a trade surplus. Do discuss and illustrate this statement. Hint: Use the simple Keynesian framework.

5. (20 Points) Compare and contrast the impact of an **increase in money supply** under large open economy for both fixed exchange and flexible exchange regimes. **Do not forget to support your answer by illustrations.**