

ECON 202  
MACROECONOMIC THEORY  
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**Final Exam**

1. (20 Points) Suppose that the following equations describe an open economy:

$$C = 18.5 + (0.85)(Y - T), T = 10, I = 10, G = 10, X = 15, M = 1 + (0.01)Y, \text{ and } \epsilon = 1/5.$$

**Hint:** Do not forget to take into consideration the real exchange rate,  $\epsilon$ . And do not forget to follow the notation of your course textbook, namely **Macroeconomics (Blanchard)**.

- (a) Find the **multiplier** and equilibrium **GDP** values of this economy (10 Points)
- (b) Find the equilibrium **net export** value of this economy. (5 Points)
- (c) What should be equilibrium GDP to make net exports 5 (for given  $\epsilon$  and  $X$ )? (2.5 Points)
- (d) What should be equilibrium GDP to make net exports 10 (for given  $\epsilon$  and  $X$ )? (2.5 Points)



2. (25 Points) Please do solve the following short questions.

### 2.1 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 in (real dollars) \$140,000, \$160,000, and \$80,000 during your young-adulthood, old-adulthood and retirehood, respectively. Given that you do not like any deviation in your consumption level (=you want your consumption to be perfectly smooth), what should be your consumption per period? The real rate of interest is 2% per period.

### 2.2. Investment

Suppose that the cost of investment project is \$200. Both the first year and the second year the return is \$111. The project ends in the two years. If the real rate of interest is 10%, should the firm make the investment?

### 2.3 RER

Suppose that 1 kg of apple was \$2.5 in the United States, €1.245 in Spain, and the nominal exchange rate was €0.79/\$ in 2009. In 2010, the nominal exchange rate became \$1.12/€ and the price of apple did not change in both countries. Did the real exchange rate appreciate or depreciate from the viewpoint of US?

### 2.4 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 1%. How much and in which direction should Japanese Yen change for the investor to prefer to invest in Japan (prefer to use the approximation rule)?

### 2.5 Marshall-Lerner Condition

Suppose that a 1% depreciation leads to a proportional change in exports of 0.9% and to proportional change in imports of -0.5%. How does the trade balance change? Improve or deteriorate? Calculate!

**3. (25 Points)** Compare and contrast the **trade balance impact** of a decrease in taxes versus increase in exports in a simple Keynesian framework. Support your answer by extensive discussion and illustrations.

**Hint: Use the simple Keynesian illustration tools.**

**Remark: This is a 25 point question. I expect extensive discussion**

4. (20 Points) Suppose that the following equations describe the Home and Foreign economies:

Home:

$$C = 18.5 + (0.85)(Y - T), \quad T = 10, \quad I = 5, \quad G = 5, \quad X = (0.10) \cdot Y^f, \quad M = (0.05) \cdot Y, \\ \text{and } \epsilon = 1.$$

Foreign:

$$C^f = 15 + (0.75)(Y^f - T^f), \quad T^f = (0.1) \cdot Y^f, \quad I^f = 10, \quad G^f = 10, \quad X^f = (0.05) \cdot Y, \\ M^f = (0.075)Y^f.$$

(a) Find the equilibrium **GDP** values of both HOME and FOREIGN (15 Points)

(b) Find the equilibrium **net export** value of both HOME and FOREIGN. (5 Points)



**5. (15 Points)** Compare and contrast the impact of an increase in money supply under **IS-LM** and **EXPECTATIONS AUGMENTED IS-LM frameworks**. Do not forget to discuss in detail and support your answer by illustrations.



6. (5 Points) Evaluate the course in your own words (no Turkish please).