

Second challenge: Review
Eco 212: Spring 2006

The challenge is closed book. All questions come from class notes. Additional study materials are chapters 6 (consumption only), 8, 9, 10, 15 (foreign exchange only), and 16, homeworks 2 and 3, and this review sheet. These formulas may be useful.

$$\frac{M}{MB} = \frac{k+1}{k+rrr}, \quad MV = PY, \quad \text{money multiplier} = \frac{k+1}{k+rrr}, \quad \Delta M = \text{multiplier } \Delta MB$$

$$k = \frac{CU}{D}, \quad BR = rrrD, \quad M = CU + D, \quad MB = CU + BR, \quad M = (k+1)D$$

$$NFI = \text{outflows} - \text{inflows} = X - M = \text{net exports}, \quad S = I + X - M, \quad e = \frac{P \cdot E}{P_f}$$

$$\text{growth rate } Y = \frac{1}{3} \text{ growth rate } K + \frac{2}{3} \text{ growth rate, } N + g_T$$

$$\text{growth rate, } Y/N = \frac{1}{3} \text{ growth rate, } K/N + g_T$$

$$\text{contribution, } T = \frac{g_T}{\text{growth rate, } Y/N}$$

$$\text{contribution, } K/N = \frac{\frac{1}{3} \cdot \text{growth rate, } K/N}{\text{growth rate, } Y/N}$$

$$MPC = b = \frac{\Delta C}{\Delta Y}, \quad C = a + bY, \quad C = a + bY^D, \quad Y^D = Y - T + TR$$

$$Y = \frac{1}{1-b} (a + I + G + X - M)$$

Short answer questions (1-3 sentences)

Question 1.

Explain the effect on long run growth and embodied or disembodied technical change of each of the following (if any):

- a. Endangered Species Act.
- b. Research subsidies to economists.
- c. AIDS epidemic in Africa.

Question 2.

Does strong patent protection increase long run growth? Explain.

Question 3.

A former student of this class (true story, except different numbers) was making a presentation to a local government about the benefits of locating a factory in their town. He estimates the factory would generate \$10 million in income for local residents in terms of new jobs. If the MPC is 0.9, what is the overall increase in income for the town? Explain why the answer is greater than \$10 million.

Question 4.

For the two consumers below, calculate a , the before-tax MPC, and the after-tax MPC.

Consumer	Wage Income	Taxes Paid	Social Security Income	Consumption
Eco 212 Student	100	40	0	40
Retiree	0	0	40	30

Longer Questions

Question 5.

On Tuesday, the FED raised interest rates.

- a. Graphically show the effect on the spending balance graph.
- b. What happens to consumption and income?