

Econ 102
Intermediate Macroeconomics
Instructor: Chao Wei

Midterm

Instructions:

The exam is made up of two parts:

Part I (30 points): Multiple Choice Questions. One point for each question.

Part II (30 points) Problems and Applications

Part II. Problems and Applications

1. Suppose that the U.S. Congress grants President's Bush's request of \$87 billion for American efforts in Iraq and Afghanistan, and as a result government spending increases by \$87 billion. If the marginal propensity to consume is 0.9, what happens to the following? Do they rise or fall? By what amounts?
 - (a) Public Saving.
 - (b) Private Saving.
 - (c) National Saving.
 - (d) Investment.
2. Use the neoclassical theory of distribution to predict the impact on the real wage and the real rental price of capital of each of the following events:
 - (a) A wave of immigration increases the labor force.
 - (b) The Isabel hurricane destroys some of the capital stock.
 - (c) A technological advance improves the production function.
3. Consider an economy described by the following equations:

$$Y = C + I + G \quad (1)$$

$$Y = 5000 \quad (2)$$

$$G = 1000 \quad (3)$$

$$T = 1000 \quad (4)$$

$$C = 200 + 0.75(Y - T) \quad (5)$$

$$I = 1300 - 50r \quad (6)$$

- (a) In this economy, compute private saving, public saving, investment, and the equilibrium interest rate.

- (b) Now suppose firms become very pessimistic about the future, and as a result, equation (6) changes into

$$I = 1000 - 50r, \quad (7)$$

Find the new equilibrium interest rate and investment. Does the amount of investment differ from what you get in (a)? Why or why not?

- (c) Now consider a more sophisticated consumption function than equation (5) :

$$C = 200 + 0.75(Y - T) - 50r, \quad (8)$$

What is the rationale here behind the assumption that consumption depends negatively on the real interest rate? Now we have a new economy described by equations (1), (2), (3), (4), (6) and (8), compute the consumption and investment in this new economy.

- (d) Now consider another economy described by equations (1), (2), (3), (4), (7) and (8), compute the equilibrium interest rate and investment in this case. Does the amount of investment differ from what you get in (c), why or why not?