Macroeconomics 1 - Seminar 4

10.03.2015

Miroslava Federičová

HW1 – Problem 1

Consider an economy that produces and consumes bread and automobiles. In the following table are data for two different years.

	2000		2010	
Good	Quantity	Price	Quantity	Price
Automobiles	100	$ 50,000	120	$ 60,000
Bread	500,000	$10	400,000	$ 20

- Using 2000 as the base year, compute the following statistics for each year: nominal GDP, real GDP, the price deflator for GDP, and a fixed-weight price index (CPI).

  nominal GDP_{2000}=10 millions; nominal GDP_{2010}=15,2 millions

  real GDP_{2000}=10 millions; real GDP_{2010}=10 millions

  GDP def_{2000}=100 ; GDP def_{2010}=152; CPI_{2000}=100; CPI_{2010}=160

- How much did prices rise between 2000 and 2010? Compare the answers given by the GDP deflator and the CPI. Explain the difference.

  Using GDP deflator, prices raised by 52% and using CPI by 60%.

- Suppose you are a senator writing a bill to index Social Security and federal pensions. That is, your bill will adjust these benefits to offset changes in the cost of living. Will you use the GDP deflator or the CPI? Why? CPI

HW1 – Problem 2

Suppose that the GDP of the Czech Republic is 60% of the GDP of Eurozone. By how many percent should the Czech economy growth rate exceed the growth rate in Eurozone to reach the GDP of Eurozone in 10 ten years?

The Czech Republic should grow by 5.2% more than Eurozone to reach the GDP in Eurozone in 10 years.

HW1 – Problem 3

Economies in country A and B started at the same level of real GDP. After 50 years, the real GDP in the country A rose with average annual rate of growth 2% and in the country B 4%.

- How much did the real GDP rise in country A and country B?

  GDP raise in country A 2.69 times and in country B 7.11 times.

- How many times is the real GDP higher in country A than in country B?

  GDP in country B is 2.64 times higher than the GDP in country A.

- Suppose that at the beginning the size of the population in country A was the same as in country B. Population growth during the 50 years was in country A 3% and in country B 1%. How much did the real GDP per person rise in country A and country B?

  GDP per person raise in country A 0.61 times (i.e. decreased) and in country B 4.34 times.

- How many times is the real GDP per person higher in country A than in country B?

  GDP per person in country B is 7.11 times higher than in country A.

HW1 – Problem 4

Suppose that a country experiences a reduction in productivity – that is, an adverse shock to the production function.

- What happens to the labor demand curve? Use a diagram of the labor market.

  Labor demand curve shifts to the left.

- How would this change in productivity affect the labor market – that is, employment, unemployment, and real wages – if the labor market is always in equilibrium?

  Employment would decrease, unemployment increased and real wages would go down.

- How would this change in productivity affect the labor market if unions prevent real wages from falling?

  Quantity of the labor would decrease even more.

- Define the two categories of financial institutions.

- What is stock? What is bond? How are they different? How are they similar?

- Define public saving, private saving, national saving and investment. How are they related?

Financial institutions through which savers can directly provide funds to borrowers are called:

a. banks.

b. financial markets.

c. mutual funds.

d. saving and loan associations.

Which of the following are characteristics of bonds?

i. Bonds are certificates of indebtedness.
ii. Bonds are purchased through auctions.
iii. Bonds can be resold in secondary bond markets.
iv. Bonds represent ownership of a corporation.

a. only ii, iii, and iv

b. only i, ii, and iii

c. only i, iii, and iv

d. all four

Which of the following are true, regarding bonds?

a. From the holder's point of view, bonds are riskier than stocks.

b. Bonds do not have a specified date of maturity.

c. For tax purposes, government bonds are treated differently than corporate bonds.

d. Bond buyers are protected from corporate bankruptcy through the FDIC.

Which of the following statements is true, regarding stocks?

a. Stocks specify the benefits the holder will have in the future.
b. The act of buying stock of a corporation amounts to buying a part of that corporation.
c. Stocks have maturity dates.
d. Stocks pay interest to the stockholder.

Which of the following are true?

a. Prices of stocks are determined by the corporations that issue them.

b. Stocks are riskier than bonds for the holder.

c. The profits of a corporation do not belong to the stockholders.

d. The value of the stock will be repaid to the stockholder by the corporation on the maturity date.

Which of the following is true about banks?

a. The interest rate banks charge when they lend is the same they pay for the deposits they receive.

b. Typically, banks receive few but big deposits, which they then use to make many small loans.

c. Through the checking accounts they facilitate, banks provide a medium of exchange.

d. Banks are financial institutions through which savers can directly provide funds to borrowers.

Which of the following is NOT true about mutual funds?

a. Mutual funds typically hold a wide assortment of stocks and/or bonds.
b. Mutual funds pool together the money of many different savers.
c. Mutual funds typically accept deposits and allow depositors to write checks on their deposits.
d. Mutual funds allow people with limited funds to diversify.

Assuming a closed economy, which of the following is true?

a. National saving must equal domestic investment.
b. National saving must be greater than domestic investment.
c. National saving is what remains out of income after households consume.
d. National saving must be less than domestic investment.

Assuming a closed economy, which of the following is FALSE in the market for loanable funds?

a. National saving provides the supply of loanable funds.
b. Domestic investment provides the demand for loanable funds.
c. The loanable funds market determines the interest rate in the economy.
d. The amount of funds loaned depends on national saving alone.

If the government changes the tax code in a way that encourages households to save more:

a. the supply of loans will shift to the right, leading to a lower interest rate.
b. the demand for loans will shift to the right leading to a higher interest rate.
c. the supply of loans will shift to the left, leading to a higher interest rate.
d. the demand for loans will shift to the left leading to a lower interest rate.

Explain the difference between saving and investment as defined by macroeconomist.

Which of the following situations represent investment? Saving? Explain.

a) Your family takes out mortgage and buys a new house. Investment
b) You use your $200 paycheck to buy stock in AT&T. Saving
c) Your roommate earns $100 and deposits it in her account at a bank. Saving
d) You borrow $1,000 from a bank to buy a car to use in your pizza delivery business. Investment

Economists in Funlandia, a closed economy, have collected the following information about the economy for a particular year:

$Y=10{,}000$

$C=6{,}000$

$T=1{,}500$

$G=1{,}700$

The economists also estimate that the investment function is:

$$I=3{,}300 - 100\,r$$

where r is the country's real interest rate, expressed as a percentage.

Calculate private saving, public saving, national saving, investment, and the equilibrium real interest rate.

Private saving= 10,000-1,500-6,000=2,500

Public saving=1,500-1,700=-200

National saving=2,300

Investment=2,300

Real interest rate=10%