Macroeconomics 1 - Seminar 8

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Part 1: True/False

1) If the GDP of the CR is higher than the GNP of the CR then foreigners contribute to production in the CR more than the Czechs contribute to production abroad.

   True

Part 1: True/False

2) If the government changes the tax code in a way that encourages households to save more, the supply of loans will shift to the right, leading to a higher interest rate. (Use a supply-and-demand diagram for loanable funds to explain your answer)

False

Part 1: True/False

3) Nominal GDP in 2012 was higher than in 2008; thus, the real output of the economy had to grow.

False

Part 1: True/False

4) Suppose the price of fish increases, so households now buy less fish and more chicken. This will cause the CPI to measure more inflation than there really is.

True

Part 1: True/False

5) Numerous students graduate from college but cannot find work. This increases the labor force participation, but it has no effect on unemployment rate. (Consider the correctness of the effects to both mentioned statistics)

False

Part 1: True/False

6) When the Central Bank adds more money to the economy, the Money Supply curve shifts, causing the equilibrium price level to increase. (Use a supply-and-demand diagram to explain your answer)

True

Part 1: True/False

7) In an economy with two labor markets – one for manufacturing workers and one for service workers - manufacturing workers decide to form a union. This decision leads to decline in equilibrium wage in service labor market.

True

Part 1: True/False

8) When the Central Bank reduces the discount rate, the Money Supply will grow.

True

Part 1: True/False

9) When inflation turns out to be higher than expected, borrowers will be worse off.

False

Part 1: True/False

10) Price of the non-renewable resources has to rise in the long-term, because its quantity/supply is running out by consumption.

False

Part 2: Open questions

1) Consider an economy that produces and consumes bread and automobiles. The following table contains 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

a) Using 2000 as the base year, compute the following statistics for each year: nominal GDP, real GDP, the price deflator for GDP, and consumer price index (consumer basket is composed by 100 automobiles and 500,000 breads).

in 2000: nom. GDP=$10 mil. =real GDP, GDP defl.=100, CPI=100

in 2010: nom. GDP=$15,2 mil., real GDP=10 mil., GDP defl.=152, CPI=160

b) Compute the inflation rate between 2000 and 2010 using CPI and GDP deflator and explain the difference. Using CPI it is 60% and using GDP def. It is 52%.

c) What is the average annual growth rate in nominal and real GDP between 2000 and 2010? The average annual growth rate in nominal GDP is 4.3% and in real GDP is 0.

d) Suppose that the average annual population growth was 3%. How much did the real GDP per person change from 2000 to 2010? The real GDP per person in 2010 is 0.74 times the real GDP per person in 2000.

Part 2: Open questions

2) Suppose the government borrows $20 billion more next year.

a) Use a supply-and-demand diagram of loanable funds to analyze this policy. Does the interest rate rise or fall? Decline in national saving leads to the shift of supply curve to the left and causes the real interest rate to increase.

b) What happens to investment? To private saving? To public saving? To national saving? Investment decrease, Private saving increase less than $20 billion, Public saving decrease by $20 billion, National saving decrease

c) Suppose households believe that greater government borrowing today implies higher taxes to pay off the government debt in the future. What does this belief do to private saving and the supply of loanable funds today? Does it increase or decrease the effects you discussed in parts (a) and (b)? HHs will save more to be able to pay taxes tomorrow, hence supply of loanable funds will increase, the real interest rate will decrease, Investment and national savings goes up. It will reduce the effects from a) and b).

Part 2: Open questions

3) The Federal Reserve conducts a $ 10 million open-market purchase of government bonds. If the required reserve ratio is 10 percent, what is the largest possible increase in the money supply that could result? Explain. What is the smallest possible increase? Explain.

The largest possible increase in the money supply is $100 mil. And the lowest possible is $10 mil. (banks put all money to reserves)

BONUS

4) Assume that the banking system has total reserves of $100 billion. Assume also that required reserves are 10 percent of checking deposits and that banks hold no excess reserves and households hold no currency.

a) What is the money multiplier? What is the money supply?
   Money multiplier=10 and Money supply=$1000 billion
b) If the Central Bank now raises required reserves to 20 percent of deposits, what are the changes in reserves and in the money supply?
   MS=$500 billion and total reserves=$100 billion