Handout Week 13

Econ 102, Spring 2014

Market of Loanable Funds

Consider the following closed economy:

The government in this economy has a government expenditures (G) of 500, transfer payments

(TR) of $150, and collected taxes (T) of 700.

The demand for loanable funds curve includes only investment demand for loanable funds: $r=1-0.01Q$ where r is the interest rate and Q is the quantity of loanable funds.

The supply of private savings (Sp) is given by r=0.02Q. (Where Q is private saving Sp)

a. Calculate the value of government savings (Sg)? Is the government running a budget deficit or a budget surplus? Find the economy's supply of loanable funds curve?
b. Calculate the equilibrium interest rate and the equilibrium quantity of loanable funds in this market? What is the level of private saving in this economy?
c. How would your answer to (a) and (b) change if the government increase its expenditure by 50 and the transfer payment by 20?
d. Can you compare the levels of private consumption before and after the change?!
e.

Questions from exam

3. (51%) Sprockets and gears are both inputs for bicycles and are produced by different companies. Bicycles are purchased only by individuals and produced by a third company. Assume that sprockets and gears both use capital and labor while bicycles use only labor to assemble the parts. There are no other factors. Payments to factors as well as revenues from sales of these items are as follows:

	Wages	Cost of Capital	Revenue from Sales
Gears	$500	$400	$1000
Sprockets	$250	$100	$500
Bicycles	$750	$0	$2500

What is the contribution to GDP from the companies that produce gears, sprockets, and bicycles?

a. $2500

b. $4000

15. (67%) Use the following table to answer this question. The market basket in a simple economy consists of 4 units of good X and 2 units of good Y.

Year	1984	1994	2004
Price of good X	10	22	44
Price of good Y	5	?	12

You are also told that the inflation rate between the years 1984-2004 is 3 times the inflation rate between the years 1984-1994. Given this information and holding everything else constant, what is the price of Y in the year 1994?

a. 6

b. 6.5

c. 7

d. 8

16. (56%) The labor market demand and labor market supply in Country A are given by the following equations where W is the real wage in dollars:

$$L^D = 1500 - W$$

$$L^S = 2W - 300$$

The aggregate production function in country A is given by the following equation where (Y) is real GDP or output, (L) is labor, and (K) is capital:

$$Y = \sqrt{K \times L}$$

You are also told that the capital stock is constant and equal to 81 units of capital.

Suppose now that the government sets a minimum wage of $1100. Given this information and holding everything else constant, which of the following statements is true?

a. As a result, the marginal productivity of capital will increase

b. As a result, the labor productivity will decrease

c. As a result, the marginal productivity of labor will decrease

d. As a result, the marginal productivity of capital will decrease

24. (55%) Assume the U.S. Congress writes a budget bill that requires the government to run a deficit of $1 billion. How would you characterize the government's elasticity of demand with respect to this deficit?

a. Perfectly inelastic

b. Unit elasticity

c. Perfectly elastic

d. Without knowing the interest rate, we can't know the elasticity

25. (60%)The residents in the country of Nimh typically consume 2 pieces of cheese, 3 slices of bread, and 1 house. Use the table regarding prices to answer the following two questions. (Hint: There is more than one way to solve this problem—the easy path is the better choice.)

	1985	1990	1995
Price of a Unit of Cheese	$3.10	$3.5	$4
Price of a Slice of Bread	$1.95	$2	$6
Price of a House	$10.50	$15	$16

What is the inflation rate from 1990 to 1995 using 1985 as the base year?

a. 33%

b. 133%

c. 50%

d. 150%