Handout Week 13- Solutions

Econ 102, Spring 2014

a. $Sg = (T - TR) - G = 700 - 150 - 500 = 50$

The government has a budget surplus of 50!
The market supply of loanable funds is the “sum” of the private saving and government surplus (saving).

$Q_{LF}^{S} = Sp + Sg$

Rewrite Sp: Sp=50r

$Q_{LF}^{S} = Sp + Sg = 50\mathrm{r} + 50$

b. Rewrite the demand for loanable funds:

$Q_{LF}^{D} = 100 - 100\mathrm{r}$

Equilibrium:

$Q_{LF}^{S} = Q_{LF}^{D}$

$\Rightarrow r = \frac{1}{3}$

$\Rightarrow Q = \frac{200}{3}$

To find private saving, just plug r=1/3 in the equation for private saving:

$Sp = 50\mathrm{r} = \frac{50}{3}$

c. Sg=(T-TR)-G=700-170-550=-20
The government has a deficit of 20!
The market supply for loanable funds becomes:

$Q_{LF}^{S} = Sp + Sg = 50\mathrm{r} - 20$

Equilibrium: $Q_{LF}^{S} = Q_{LF}^{D}$

$\Rightarrow r = \frac{4}{5}$

$\Rightarrow Q = 20$

$\Rightarrow Sp = 40$

People are saving more now! They see higher interest rate.

d. Recall that consumers divide their income (with net transfers from the government) between consumption and saving. $Sp + C = Income + (TR - T)$

Before the change we had:

$$\frac{50}{3} + C_0 = Income + (150 - 700) \Rightarrow C_0 = Income - 563.33$$

After:

$$40 + C_1 = Income + (170 - 700) \Rightarrow C_1 = Income - 570$$

Assuming that there was no change in the income! We can see that people spend less on consumption even though the transfer has increased by 20! Why do you think that happened?

Problems from the midterm:
3. a
15. a
16. d
24. a
25. c