

# Problem Set 8

UCLA - Econ 102 - Fall 2018

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## Optimal Taxation: The “Supply Side” (Neoclassical) View

Consider the labor market model of lecture 6. Denoting the (hourly) wage by  $w$ , the price of consumption by  $p$ , and the number of hours by  $l$ , assume that moreover  $\alpha = 0$  so that:

$$U(c, l) = c - B \frac{l^{1+\epsilon}}{1+\epsilon}, \quad f(l) = Al^{1-\alpha} = Al.$$

1. Derive the Labor Demand curve.
2. For labor supply, assume that the tax and transfer system is such that  $\tau$  is the marginal tax rate, and  $c_0$  is a subsistence level of income given by the government (that is,  $c = c_0$  even if one does not work):

$$c = (1 - \tau)wl + c_0$$

Derive the Labor Supply curve.

3. Calculate the numbers of hours worked, as well pre-tax income, as a function of the parameters of the model.
4. Compute the number of hours worked, as well as pre-tax income, if labor productivity is  $\$A = \$$  real dollars / hour, the tax rate is  $\$$
5. Compute the number of hours worked, as well if pre-tax income, if labor productivity is  $\$$ , if the disutility of working
6. Assume that the population has  $N$  people, with a fraction  $\lambda$  of the type described in question 4, and a fraction  $1 - \lambda$  of the type described in question 5. What is total output in the economy?
7. Assume that the tax system has two marginal tax rates, such that people with an income
8. Assume a tax reform that increases  $c_0$ . What is the impact on output?
9. Assume a budget-neutral tax reform that lowers the marginal tax rates on the richest by 10 points ?
10. Why has this model different predictions, compared to the one in lecture 9 ? What is missing ?
11. Go through questions 4 to 9, assuming that  $\epsilon = 4$ . What do you conclude?

## Paul Krugman VS Robert Barro on the Bush tax cuts

Watch this debate between Paul Krugman and Robert Barro, moderated by Charlie Rose.

# [1] "Sorry I don't know how to embed videos in PDF"

# [1] "Use the html version, or the link: <https://www.youtube.com/embed/077G0SaJv5M>"

1. Explain Robert Barro's view on taxes, using the previous exercise.
2. What is Paul Krugman's take on taxes?
3. What is the discussion on public debt, and the deficit ? Explain.
4. From 11:26 Robert Barro suggests to move from pay-as-you-go to “personal accounts”. Explain their discussion in terms of problem set 7.