

Handout Week 11
Econ 102, Spring 2014

Economic Growth. In year t , technology is given by $A = 1 + t$, and output by, $Y = AL$. Labor demand and supply are given by:

Labor Demand: $L = 10 - W + t$

Labor Supply: $L = W$

- a) How much does output change by between years $(t-1)$ and t ?
- b) If a minimum wage of 10 is imposed, what is the change in output between $(t-1)$ and t for t less than or equal to ten?
- c) Is the change in output larger in the minimum wage case or in the unregulated case?
- d) Does this minimum wage encourage long-run economic growth?

Investment.

In a certain economy there is only one consumption good and the opportunity to save.

Expense on consumption is: $12 - P$, where P is the price of consumption.

- a) If total income in the economy is 60, what is savings as a function of P , the price for the consumption good?
- b) Are consumption and savings complements or substitutes?
- c) With this in mind, what sorts of policies will increase savings? What must a policy do in order to increase savings?
- d) Say we tax consumption by $T = 4$, making the price of consumption $(P+T)$, what is the level of savings? If we do not tax consumption, what is the level of savings? What is the difference in savings between these two scenarios? Should we tax consumption for the purpose of increasing economic growth?
- e) If there were increased depreciation, would people save more or less?

Loanable Funds

This question will examine the loanable funds model discussed in class more closely. Say the private supply and demand of loanable funds are given by:

Demand: $Q = 10 - P$

Supply: $Q = P$

- a) What is the equilibrium interest rate if the government is borrowing no money?

- b) Say the government needs to borrow 2 dollars. To represent this change, shift the demand for loanable funds as discussed in class. What is the new interest rate and the quantity of private investment?
- c) In the standard loanable funds model we discussed, when the government wants to borrow money, what is the elasticity of its demand for loanable funds?
- d) What if instead of the government needing to purchase a fixed amount of loanable funds, the government would decide to borrow different amounts when faced with different interest rates? Say Congress will vote to run a deficit of $(2-P)$ where P is the interest rate. What is the new equilibrium quantity of funds exchanged and the new interest rate?