

Homework – Week 6

Name: _____

Externalities

1) Consider the market for immunization. Draw the private demand and supply and plot equilibrium price and quantity. Now draw the public demand (take into account that one person takes immunization is less likely to get sick and therefore less likely to spread the disease) for immunization and compare the optimum quantity with the market solution. What can the government do to achieve the optimal quantity?

2) Consider the market for plastic bags. Draw the private demand and supply and plot equilibrium price and quantity. Now draw the public supply (take into account that producing plastic bags generates pollution) of plastic bags and compare the optimum quantity with the market solution. What can the government do to achieve the optimal quantity?

3) Consider two neighbors living in the same building, one neighbor in the first floor and the other neighbor in the second floor. Living in the 1st floor there's a couple with a small baby, and they value silence at night at \$100 per night. In the 2nd floor there's two roommates who love to throw loud parties on Fridays, and their combined value for a party is \$50.

A) If the 2nd floor neighbors have the right to throw parties, what would be the outcome of the negotiation over the loud noise? In particular say if the party happens or not, who pays and who receives, and the price range they can agree upon.

B) Now suppose the 1st floor neighbors have the right to a silent night. Redo question A)

C) Now suppose the 1st floor neighbors value the silent night at \$50 and the 2nd floor neighbors value the party at \$100. If the 1st floor neighbors have the right to a silent night, what would be the outcome of the negotiation over the loud noise? In particular say if the party happens or not, who pays and who receives, and the price range they can agree upon.

Public Goods and Common Resources

1) Consider 4 roommates deciding to hire someone to clean the house. The following table describes each roommate's willingness to pay for the cleaning services.

Roommate	Willingness to pay
Adam	\$10
Kris	\$20
Willie	\$25
Aaron	\$5

A) What type of good is this? Explain why.

B) The cost of the cleaning services is \$50. Doing a cost-benefit analysis should the 4 roommates hire the cleaning services? Why?

C) Will a single roommate hire the cleaning services by himself? Why?

D) If they decide to split the cost evenly, will they agree to hire the cleaning service? Why?