

# Final Review E339

## Health Insurance

An individual with a demand function for podiatric care of the form  $P = 30 - Q$  faces a supply curve of  $P = \$10$ . Podiatrists are medical specialists of the foot, ankle and lower leg.

- a) What are the quantity demanded and the price paid by the individual?  
If the individual were to buy a health insurance policy with 15% coinsurance
- b) What would be the quantity demanded?
- c) What would be the price received by the podiatrist?
- d) What would be the price paid by the individual?
- e) Calculate the deadweight loss.

## Labor market

Consider the market demand for labor  $L_d$  and the supply of labor  $L_s$ , where  $W$  is the market wage.

$$\text{Demand : } L_d = 1,000 - 20W$$

$$\text{Supply : } L_s = -200 + 40W$$

- a. What is the equilibrium market wage? What is the equilibrium employment level?
- b. The government thinks about establishing a minimum wage of \$19. Discuss what would happen in the labor market without employer provided insurance. Does employment go up or down?

## Uncertainty and Health Insurance

Bob earns \$70,800. In the next year he faces a 25% chance of having an accident with his speed boat that will cost him 50,000\$. There are two insurance companies in the market. The first insurance company offers a full-insurance package for only: \$16,500, the second insurance company offers a partial-insurance package with a 30% coinsurance rate for \$11,000. Bob values his wealth with the following utility function:

$$U(\text{Wealth}) = \text{Wealth}^{1/2}.$$

- a. Explain the differences of the effects of Moral Hazard due to the 2 types of insurance contracts in the market. How do the two insurances affect Bob differently? What is the effect on the insurance markets if Bob buys insurance? (Use a graph to illustrate your arguments about Moral Hazard. You need no calculations to answer this question)
- b. Calculate the actuarially fair premium for the full insurance contract. What is the risk premium and what is Bob's total willingness to pay for full insurance? Draw a detailed graph, and explain all terms in detail.
- d. What insurance if any should Bob buy?
- c. What is adverse selection and how can it affect insurance markets?

## Demand supply

1. Refer to Figure 1, which shows a market for taxi medallions. If the number of taxi licenses is reduced from  $Q_2$  to  $Q_1$ , the producer surplus:
  - A) increases by area BCFG. B) increases by (area BCFG - area GHI).
  - C) decreases by (area CDGH + area GHI). D) decreases by area GHI.

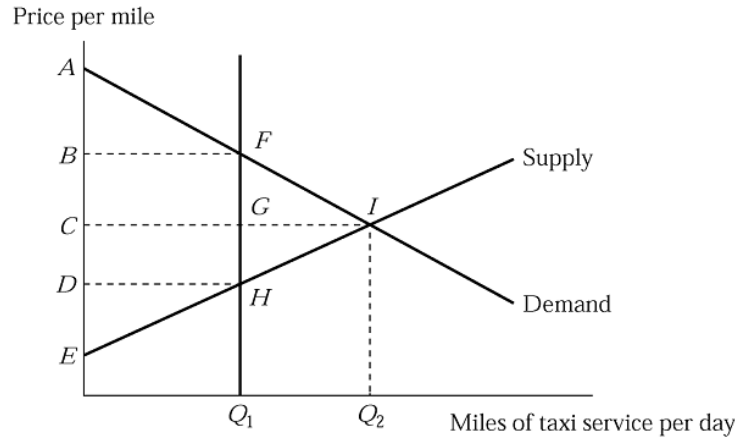


Figure 1:

2. Assume demand  $p = 10 - 2.3q$  and supply is  $p = 1 + 3q$ . Calculate the equilibrium point. Then calculate consumer and producer surplus.
3. Introduce a quota  $Q_1 = 1$ . What is the new market price? What is the new market quantity? Calculate the new consumer surplus.
4. Introduce a different quota  $Q_1 = \frac{10}{50}$ . What is the new market price? What is the new market quantity? Calculate the new consumer surplus. Calculate the new producer surplus.

## Indifference curves

Explain why indifference curves can never cross.

## Reading Assignment

Please read reading assignment 1 and 2 posted on the class website. Here are the links for your convenience. Then answer the questions that follow.

- [http://pages.towson.edu/jjung/jdocs/Health/2008NYT\\_BruceHardy.pdf](http://pages.towson.edu/jjung/jdocs/Health/2008NYT_BruceHardy.pdf)
  - <http://pages.towson.edu/jjung/jdocs/Health/Myths-about-the-Uninsured-Fact-Sheet.pdf>
- a) You are Dr. Rawlins, Chairman of NICE. Write 2 paragraphs trying to convince the U.S. congress to adopt a cost control system like NICE in the U.S.
  - b) You are Mr. Hardy. Write 2 paragraphs and try to convince the U.S. congress to not adopt a system like NICE in the U.S.
  - c) Please comment on the following statements:
    - – Most of the uninsured do not have health insurance because they are not working and so don't have access to health benefits through an employer.
    - The uninsured often receive health services for free or at reduced charge.

- The uninsured can get the care they need when they really need it and are able to avoid serious health problems.
- The health care the uninsured receive, but do not pay for, results in higher insurance premiums.