
Chapter 14: Answers to Questions and Problems

1.
 - a. 2,000.
 - b. 2,800.
 - c. Yes. Both the pre-merger HHI and change in HHI exceed those specified in the guidelines.

2.
 - a.
 - i. About \$125.
 - ii. Approximately \$281.25 (computed as $.5[7.5][\$200 - \$125] = \$281.25$).
 - b.
 - i. \$80.
 - ii. 12 units.
 - iii. 0 units, since the firm would earn a loss by operating at the regulated price.

3.
 - a. Set $P = MC_{\text{External}} + MC_{\text{Internal}}$ to get $100 - 5Q = 30Q$. Solving yields $Q = 100/35$ units.
 - b. Set $P = MC_{\text{Internal}}$ to get $100 - 5Q = 20Q$. Solving yields $Q = 100/25$ units.
 - c. Set $MR = MC_{\text{Internal}}$ to get $100 - 10Q = 20Q$. Solving yields $Q = 100/30$ units.
 - d. Pollution taxes or permits.

4.
 - a. 8 units.
 - b. \$12 per unit.
 - c.
 - i. No. The socially efficient level would be 12 units.
 - ii. Workers 1 and 2 get surplus of \$32, while worker 3 gets surplus of \$128.

5.
 - a. Set $MR = MC$ to get $25 - 2Q = 5$. Solve to obtain $Q = 10$ and $P = \$15$.
 - b. Set $P = MC$ to get $25 - Q = 5$. Solve to obtain $Q = 20$ and $P = \$5$.
 - c. Monopoly profits, which are $(\$15 - \$5)10 = \$100$.

6.
 - a. Note that $Q^S = Q^{SF} + Q^{SD} = 300 + 0.5P$. Setting this equal to domestic demand yields $300 + 0.5P = 500 - 1.5P$. Solving yields $P = 100$ and $Q = 350$ units.
 - b. Setting total supply under the quota to total demand yields $150 + 0.5P = 500 - 1.5P$. Solving yields $P = \$175$ and $Q = 237.5$ units.
 - c. Worse off.
 - d. Better off.

7.
 - a. Nothing.
 - b. Only if the lump sum tariff makes it unprofitable for them to sell in the domestic market.

8.
 - a. \$16.
 - b. 4 units.
 - c. 2 units.
 - d. $Q^d = 10$ units while only 2 units are available. This leads to a shortage of 8 units.
 - e. \$16, computed as $.5(\$18 - \$10)(6 - 2) = \$16$.
 - f. $P = \$14$. There is neither a shortage nor a surplus at this price.

9. Section 2 of the Sherman act makes it illegal to monopolize or attempt to monopolize.

10. Price discrimination is illegal under the Robinson Patman Act.

11. Under the Hart-Scott-Rodino Merger Act, such notification is required for transactions exceeding \$50 million.

12. There is a free rider problem caused by the public-goods nature of obtaining information. If the manager of one division expends effort gathering information and shares it, then other division managers receive the benefits without having to bear any of the costs. Unfortunately, when all division managers think this way, the result is that very little effort is spent within the firm on information gathering efforts.

13. Her best shot would probably be to point out that absent externalities, the fact that her firm has market power means that price is too high and output too low. Absent market power, the fact that her firm creates an externality means that production is too high and price is too low. But since her firm operates in an environment of both market power and externalities, the two forces might exactly balance. In other words, her firm might actually be producing the socially efficient output and charging the socially efficient price.

14. No. These changes in the law allow the company that is affected by insider trading to reap the benefits from stopping the action or reporting it. Therefore, the market itself helps enforce the law.

15. The socially efficient price is \$2, which yields total consumer surplus of \$498,002. At the monopoly price of \$501, consumer surplus is \$124,500.50. Consumers are willing to spend up to the difference in consumer surplus at the socially efficient price and the monopoly price: $\$498,002 - \$124,500.50 = \$373,501.50$. Thus, each consumer is willing to spend about $\$373,501.50/2,000,000 = \0.19 . In light of the low benefit per consumer (less than the cost of a postage stamp) and the fact that the monopoly would be willing to spend up to the monopoly profits to fight regulation, consumers are unlikely to succeed.

16. The price of rubber in China will fall and more rubber will be exchanged. Consumers of rubber in China will gain while producers of rubber in China will be harmed. Overall, however, social welfare in China will rise.
17. This will reduce the supply of foreign steel, thereby reducing the equilibrium quantity of steel sold in the U.S. and raising the price.
18. The equilibrium quantity of lumber in the U.S. will decrease but the equilibrium price will increase. U.S. consumer surplus will decrease (consumers are made worse off), domestic producer surplus increases (domestic producers are made better off), and the U.S. is better off since tariff revenue increases.
19. Prior to the Truth in Lending Simplification Act (TILSA), \$6 billion in consumer loans were made and loans sold at a price (interest rate) of 5 percent. Post TILSA, consumer loan origination is \$12 billion and sold at a price (interest rate) of 10 percent. The increase in consumer loan origination is not a general result. Whether consumer loan origination increases or decreases depends on the relative magnitudes of the shift in supply and demand. The price (interest rate), however, will certainly increase.