1. Consider a company that manages a network of hospitals across several counties in one state. Household incomes and the cost of living are higher in urban than rural areas. The company, however, has set the same prices for pharmaceuticals and services in all of its hospitals. It has also paid the same salaries for doctors, nurses, and other professional staff throughout the state.

(A) Management has noticed that there are long waiting lists for treatment at its urban hospitals. Can you explain this problem? Graph is required.

(B) The company has had great difficulty in recruiting professional staff for its urban hospitals. Can you explain this problem? Graph is required.

Answer:
(A) In urban areas, household incomes are higher. Pharmaceuticals and medical services are normal products. Accordingly, the demand for pharmaceuticals and medical services will be higher in urban areas. The company charges the same prices in urban and rural areas. These prices will be too low in urban areas, resulting in excess demand (waiting lists).

(B) In urban areas, the cost of living is higher. The cost of living is a major factor in the supply of medical labor. The supply will be lower in urban areas. Since the company pays the same salaries in urban and rural areas, it will get a smaller quantity of medical labor in urban areas.

2. Congress and the president decide that the United States should reduce air pollution by reducing its use of gasoline. They impose a $0.50 tax for each gallon of gasoline sold.

(A) Should they impose this tax on producers or consumers? Explain carefully using a supply-and-demand diagram.

(B) If the demand for gasoline were more elastic, would this tax be more effective or less effective in reducing the quantity of gasoline consumed? Explain with both words and a diagram.

(C) Are consumers of gasoline helped or hurt by this tax? Why?

Answer:
(A) Both ways lead to the same results.
(B) More effective in reducing the quantity of gasoline consumed
(C) Hurt, because consumer surplus certainly falls due to this tax.
(D) Hurt, because the reduction in the sale quantity of gasoline results in a decrease in the demand for workers in the oil industry. Therefore, the wage that workers receive falls and the employment falls as well.

3. In Switzerland, the federal government levies a social security tax, partly on employers and partly on employees. Employers and employees pay equal percentages of the employee's salary in tax.

(A) Using relevant demand-supply analysis, explain the effect of the social security tax on wages, employment, and the buyer and seller surpluses.

(B) Suppose that the government changed its policy and decided to collect the entire tax from employees. How would this new policy benefit employers?

\[ W_b^{**} = W_s^{**} = W^* \]

Equilibrium wage: unchanged; Employment: lower
wage paid by employer: \( W_b^{**} \) (higher)
wage received by employer: \( W_s^{**} \) (lower)
Qantas operates a fleet of over 100 Boeing jet aircraft. Commercial passenger jets must be operated by a pilot and co-pilot. Many jets carry cargo in their "bellies", under the passenger seating areas. Consider each of the following costs. Identify which are joint costs of passenger and belly cargo services, which are fixed costs of passenger service, and which are both.

(A) Cockpit personnel: All jets, large and small, require a pilot and co-pilot. Belly cargo service requires no additional officers in the cockpit.

(B) Airport landing fees: Some airports charge landing fees by weight of the aircraft, while others levy a fixed fee, regardless of weight.

(C) Fuel: Larger aircraft and those carrying heavier loads will consume relatively more fuel.

Answer:

(A) Joint cost, and also a fixed cost.

(B) If the landing fee varies with weight, then it is not joint or fixed. If a jet carries an additional 100 pounds of cargo, the airline must pay additional fees. Similarly, if the jet carries an additional passenger. If the landing fee is fixed, then it is a joint cost and a fixed cost.

(C) Neither a joint cost, nor a fixed cost. If a jet carries an additional 100 pounds of cargo, the airline must spend more on fuel. Similarly, if the jet carries an additional passenger.

Managerial economics teaches us that relevant costs should be considered and irrelevant costs should be ignored while making decisions. Relevant costs may be hidden and irrelevant costs may be shown in accounts. Please specify a decision you would like to make and give examples of relevant costs that are hidden and

It doesn't benefit employers.
irrelevant costs that are shown in accounts for this particular decision.

Answer: It is up to your own answer.

6. In 2004, U.S. consumer products manufacturers distributed 27.548 billion coupons, with a face value of over $280 billion, of which a mere 1.2% were redeemed by consumers. Why do manufacturers spend millions of dollars to distribute coupons when the redemption rate is so low? Why don’t they manufacturers directly cut the wholesale prices of the products, which would be much cheaper to administer?

(A) Some say that retailers would absorb a direct wholesale price cut instead of passing it on to consumers. They argue that, by contrast, retailers cannot absorb the value of coupons. Suppose that the retail sector is perfectly competitive. Compare the demand-supply equilibrium in the retail market with (i) a wholesale price cut of 50 cents and (ii) widespread distribution of 50-cent coupons. For this part, you may assume that all consumers use coupons.

(B) Would there be any difference between the wholesale price cut and using coupons if the retailer were a monopoly?

Answer:

(A) Competitive retail market

(i) The 50-cent wholesale price cut will shift down the retail supply curve by 50 cents (increase the supply), resulting in a lower retail price and larger quantity. Referring to the Figure, the original equilibrium is at a. The new equilibrium is at c, with price P’ and quantity Q. How much the retail price falls will depend on the price elasticities of demand and supply. (ii) The issuance of coupons will affect the demand side. Assuming that all consumers use 50-cent coupons, this will shift the retail demand up by 50 cents (increase the demand), resulting in a higher retail price and larger quantity. Referring to the Figure, the original equilibrium is at a. The new equilibrium is at b, with price P” and quantity Q. The net price to the consumer is P” - 50 = P’. Comparing (i) and (ii), the final equilibrium in the retail market will be the same -- the new quantity of sales and the net price to the consumer will be the same.
(B) In reality, not all consumers use coupons. Assuming that consumers with more elastic demand are more likely to use coupons, the retailer can use coupons to target a discount (and hence a lower price) at the consumer segment with the more elastic demand. This is a case of indirect segment discrimination.

7. For many years, the NBA had a monopoly over basketball and, consequently, monopsonized the market for players. This monopsony over players began to erode in 1967 with the formation of the ABA. Finally, in 1983, basketball team owners agreed to allow free agency, which removed the restrictions against players moving between teams. An analysis of earnings showed that a player who scored 10% more points would have earned 2.05% more salary between 1968 and 1975, but 3.21% more salary between 1984 and 1988.

(A) Explain the connection between having a monopoly over basketball and a monopsony over basketball players.

(B) Compare the wage rate when the demand side of the market is a monopsony with the perfectly competitive wage.

(C) Explain the differences in player earnings between 1968-75 as compared with 1984-88.

(D) When the ABA and NBA proposed to merge, the basketball players opposed the proposal. Explain why.

Note: Use the monopoly diagram and monopsony diagram to analyze these questions.
(A) The only seller of basketball games is the only buyer for basketball players.

(B) 1968-75: Monopsony; 1984-88: More competitive. Therefore, the player earnings were higher between 1984-88.

(D) When both merge, the basketball player's earnings may decrease.

8. Hong Kong Director-General of Telecommunications Anthony Wong expressed concern about the effect of license auctions on the price of telecommunications: “There’s good and bad in auctioning off spectrum … it may raise costs for telecoms providers” (“Telecoms chief sees further fall in long-distance tariffs”, South China Morning Post, December 31, 1999, Business 1.)

(A) Typically, licenses are transferable, but the one-time license fee, once paid, is not refundable. From an operational standpoint, how does the cost of a license depend on the price, if any, that the owner paid for it?

(B) How does the one-time license fee affect the marginal cost of providing
telecommunications service? How does it affect the profit-maximizing scale of operations?

(C) Suppose that the one-time license fee is changed to an annual charge based on the telecommunications provider’s revenue. How would the new policy affect the service provider’s profit-maximizing scale of operations?

Answer

(A) The cost of a license depends on the prevailing market price of licenses, which may have little or no relation to the price that the owner paid for it at an earlier time.

(B) The one-time license fee is a fixed cost with respect to the scale of operations and does not affect the marginal cost. Hence it does not affect the profit-maximizing scale of operations.

(C) The annual charge based on the telecommunications provider’s revenue would raise the provider’s marginal cost, and hence reduce the profit-maximizing scale.