

13 MONOPOLY

OVERVIEW

1. Barriers to entry prevent firms from entering a market when there are incentives for them to enter. Barriers to entry include natural monopoly, high fixed cost, advertising, and exclusively owned resources.
2. In the short run, a monopolist may make economic profit, economic loss, or a normal profit.
3. In the long run, the monopoly makes either an economic profit or a normal profit. No firm can survive in the long run with an economic loss. Long run economic profit is possible in monopoly because barriers to entry prevent firms from entering the market and reducing price.
4. When compared to a perfectly competitive firm, a monopoly charges a higher price and produces a smaller quantity of output.
5. The monopoly misallocates resources in both the short run and the long run because it does not produce at the lowest average total cost. It charges a price higher than the opportunity cost of the resources needed to produce a unit of the good. This is true even if the monopoly is making a normal profit.

MATCHING

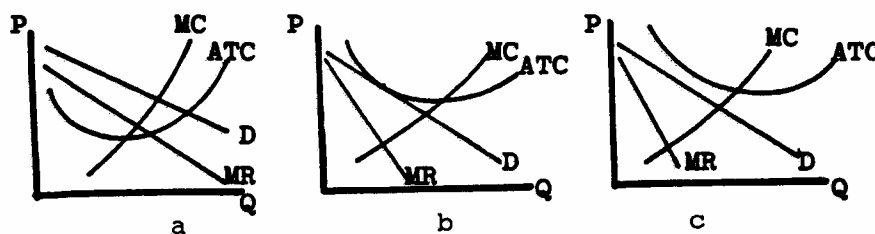
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|-------|----|----------------------------|----|--|
| _____ | 1. | barriers to entry | a. | factors that keep firms from entering the market when there are incentives for them to enter |
| _____ | 2. | natural monopoly | b. | in the long run, the average cost falls as productive capacity rises |
| _____ | 3. | economies of scale | c. | when the firm does not produce at the lowest point on the average total cost |
| _____ | 4. | misallocation of resources | d. | the market is only large enough to support one firm |

TRUE-FALSE

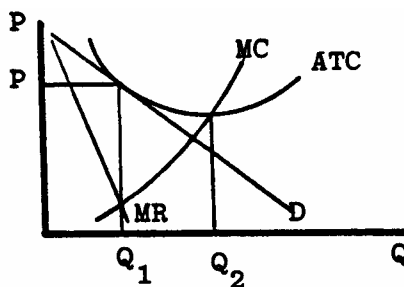
- _____ 1. There are no forces causing a monopoly to produce efficiently.
- _____ 2. If a monopoly produces so that profit is zero, then it will be efficient.
- _____ 3. Barriers to entry ultimately cause the monopoly to be inefficient.
- _____ 4. A monopoly charges a higher price than would occur under competition.
- _____ 5. A monopoly's supply is marginal cost above average variable cost.

PROBLEMS

1. Which of the following graphs is not consistent with profit maximization in long run monopoly? _____

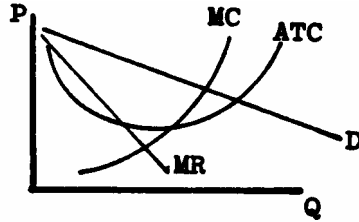


2. a. Use the following graph to find the efficient level of output. _____



- b. What output does the monopoly produce in the short run? _____ In the long run? _____
- c. Compare your answers to 2a and b. What conclusion can you make about monopoly? _____

- d. If the firm were perfectly competitive, how would your conclusion about the long run output be different? _____
3. In the following graph identify:
- a. price and quantity for a profit maximizing monopoly firm. _____
- b. price and quantity for a profit maximizing perfectly competitive market.
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IN THE NEWS

- The profit margin in the grocery business is measured in pennies on an item. In many small towns, there is only one grocery store. More than one grocery store may not be able to stay in business.
 - Why does the size of the market affect the number of firms in the market?

 - As the small town grows, what will happen to the number of grocery stores?

- There is still one firm in the u.s. making swords. The market for swords has become smaller now that there is no longer a cavalry. Only ceremonial swords are manufactured.
 - Are there barriers to entry in this market? Explain. _____
 - How will the firm determine the quantity of swords to produce? _____
 - How will the firm set price? _____
 - What gives this firm its market power? _____
- Monopoly industries include Conrail freight transportation by rail, local energy distribution, and local telephone service. In these cases, the government has either taken over the business or regulates it.

If the government sold all of its monopoly business and stopped regulating the electric, gas, and local telephone companies, would new firms enter these industries? Explain why or why not. _____

- Bowling Green, Ohio currently buys its electric power from an electric energy wholesaler. Recently, the city was offered an opportunity to be the first owner of a revolutionary coal

burning electrical generation system. Bowling Green has a choice between the new plant and a long term contract with the wholesaler.

a. Would you expect that electric prices would go up or down in Bowling Green? Why?

b. What is the impact of the new coal plant on the market power of the wholesaler?

5. In many foreign countries, the railroads have long been owned and operated by the government. The trains perennially lose money, because they are priced to encourage ridership. Because of the train systems, these foreign countries have not developed the road systems common in the United States.

a. What reason can you give for the government to own and operate the trains?

b. Can you explain why there is little passenger service left on railroads in the U.S.?

PRACTICE TEST

Circle the correct answer.

1. Which of the following is not a barrier to entry?
 - a. Standardized product
 - b. Natural monopoly
 - c. High fixed cost
 - d. Exclusively-owned resources

2. The downward-sloping demand curve of the monopolist:
 - a. means that to sell more, price must be lowered.
 - b. is the same as the market demand.
 - c. means that at a higher price less will be bought.
 - d. all of the above.

3. A long-run difference between monopoly and perfect competition is that only the monopoly may make:
 - a. economic profit.
 - b. economic loss.
 - c. normal profit.
 - d. marginal profit.

4. A comparison of the price and output level of a monopolist and a perfect competitor reveals that:
 - a. the monopoly price is higher and the output greater.
 - b. the monopoly price is lower and the output lower.
 - c. the monopoly price is higher and the output lower.
 - d. the monopoly price is lower and the output greater.

5. The monopolist:
 - a. is always a large powerful firm.
 - b. always charges the highest possible price.
 - c. always misallocates resources.
 - d. always makes a profit.

ANSWERS

Matching

1. a
2. d
3. b
4. c

True-False

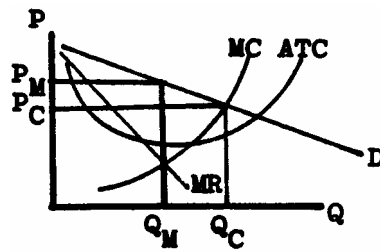
1. T
2. F
3. T
4. T
5. F

Problems

1. Graph c where there is an economic loss.

2.
 - a. The efficient level of output occurs where the ATC is minimum, Q_2 .
 - b. The monopoly will produce so that MR equals MC, the Q_1 output in both the short run and the long run.
 - c. The monopolist will produce an output smaller than the efficient quantity. The monopolist misallocates resources.
 - d. In the perfectly competitive case, the firm will produce the efficient level of output in the long run.

- 3.a,b The monopoly produces the smaller quantity and charges the higher price. The competitive firm produces the larger quantity and charges the lower price.



In the News

1. a. The market size is an important determinant of the number of firms in the market. The market size is the basis for natural monopoly. Too many firms will cause price to fall below AVC so all firms will shut down. In natural monopoly only one firm can make enough profit to stay in business.
- b. As the town grows, the market grows and new firms will enter the market. There may also be specialization. For example, in a small town, there might be a general store where a wide variety of items would be available. Eventually new stores would enter that would sell only food and not cloth, or only cloth and not food.
2. a. The market is a natural monopoly since it is probably too limited to support competing producers.
- b. The firm will choose to produce the number that maximizes profit. It is probable that the firm's largest business comes from orders. The firm then produces to order. The firm cannot easily control the number ordered, but the price the firm charges will have an important impact on the number ordered.
- c. The firm sets price to induce the profit maximizing number of swords to be ordered. The price must also be high enough to cover costs in the long run.
- d. The firm has market power because it is a natural monopoly. Other firms that once made swords found the business unprofitable and stopped making swords. Apparently there was not enough business to allow all firms to charge enough to cover their costs.
3. It is unlikely that new firms would enter these industries. The main reason is that, for the industries mentioned, the fixed cost of entering would be enormous and the chances that another firm could be successful are slim. There are other barriers to entry into these industries besides government regulation.
4. a. The price might go up but only if it were going to go up in any case. The fact that Bowling Green has another alternative source of electrical power means that it can buy power from the wholesaler or the new plant, whichever is cheaper.
- b. If the new coal plant works for Bowling Green, it can work for other communities. That means that the wholesaler who was providing power to many communities on a near monopoly basis would have a rival and the market power of the wholesaler would be reduced.
5. a. One view is that the government owns and operates the trains because it found that if the trains were left in the hands of the private sector, the owners managed to form monopolies and charge high rates. Thus to provide transportation that people could afford, the government took over the trains. Another view is that rising costs and

declining revenues resulted in economic loss that destroyed the private firms. Now it is left to society to weigh the benefits against the costs of public ownership.

- b. One reason for the lack of train service is that the distances in the u.s. are too long. Trains are efficient for trips across a state but do not compete favorably with airplanes across the country. Also, there are excellent roads in the u.s. which means that it is convenient to use cars as an alternative form of transportation.

Practice Test

1.a., 2.d., 3.a., 4.c., 5.c.