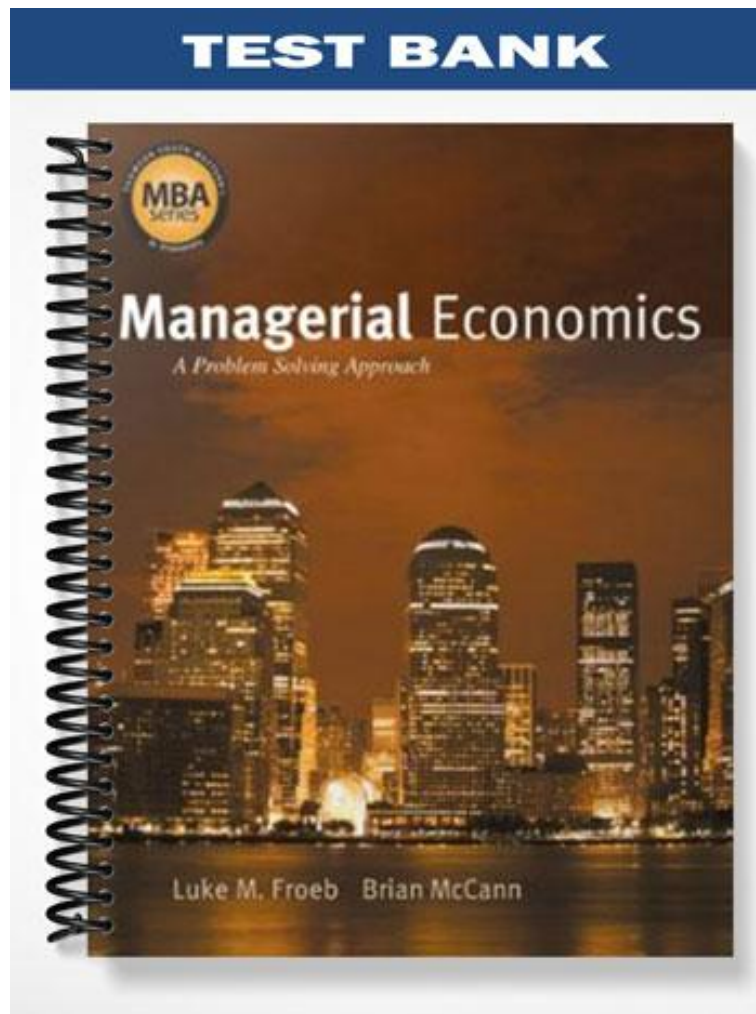


**TEST BANK**



**Managerial Economics**

*A Problem Solving Approach*

Luke M. Froeb Brian McCann

## Short Answer Questions

### Price of Breast Reconstruction vs. Breast Augmentation

**Relevant chapter: 1 & 2**

Two similar surgeries, breast reconstruction and breast augmentation, have different prices. Breast augmentation is cosmetic surgery not covered by health insurance. Patients who want the surgery must pay for it themselves. Breast reconstruction following breast removal due to cancer is covered by insurance. The price for one of the surgeries has increased by about 10% each year since 1995 while the other has increased by only 2% per year. Which of the surgeries has the lower inflation rate?

**Answer:**

Market pressure comes from two sources: consumers who can choose not to purchase, and competitors who can offer lower prices. Breast augmentation is subject to both of these forces, and thus has a lower price, while breast reconstruction is covered by insurance where the consumer pressure is weaker.

### Day Care Incentives

**Relevant chapter: 1 & 2**

A manager of a day-care center in Haifa, Israel has a clearly stated policy that parents are supposed to pick up their children by 4pm (16:00). But often parents are late. Each week, there is an average of eight late pickups. To combat tardiness, the manager of the center instituted a fine of \$3 per child per incident. Surprisingly, the number of late pickups more than doubled, to twenty per week. Why?

**Answer:**

Incentives can take many forms: economic, moral or social. The fine replaced a large moral incentive (the guilt parents feel when they are late) with a smaller economic one (the \$3 fee). Parents simply responded to cost with more late pickups.

### Concert Opportunity Cost

**Relevant chapter: 3**

You won a free ticket to see a Bruce Springsteen concert (assume the ticket has no resale value). U2 has a concert the same night, and this represents your next-best alternative activity. Tickets to the U2 concert cost \$80, and on any particular day, you would be willing to pay up to \$100 to see this band. Assume that there are no additional costs of seeing either show. Based on the information presented here, what is the opportunity cost of seeing Bruce Springsteen?

**Answer:**

\$20. Opportunity cost is the value of your next best alternative. In this case, your next best alternative is attending the U2 concert. Your value for this alternative is \$100 with a corresponding cost of \$80 leaving a net value of \$20.

This question is adapted from Paul J. Ferraro and Laura O. Taylor (2005) "Do Economists Recognize an Opportunity Cost When They See One? A Dismal Performance from the Dismal Science", *Contributions to Economic Analysis & Policy*: Vol. 4: No. 1, Article 7.

## Opportunity Cost

### Relevant chapter: 3

The expression “3/10, net 45” means that the customers receive a 3 percent discount if they pay within 10 days; otherwise, they must pay in full within 45 days. What would the seller's cost of capital have to be in order for the discount to be cost justified? (HINT: Opportunity Cost)

### Answer:

The "opportunity cost" of receiving a late payment is the foregone benefit of receiving the money early. This is determined by a firm's cost of capital. A 3% interest rate for 35 days corresponds to an annual rate of about  $3\% \times (365/35) = 31\%$ .

## Implementing Incentive Pay Systems

### Relevant chapter: 4

Would incentive pay work better for employees selling tickets at a movie box office or employees selling clothing at a retail store?

### Answer:

An incentive-pay system will work better at a retail store. In the case of movie box office ticket sales, customers do not go to box offices until they have already decided to purchase a movie ticket. Since the box office employee does not do much to impact the customer's decision, an incentive-compensation system will not likely increase sales. In contrast, the increased effort by sales people at a clothing store is likely to result in higher effort.

## Extent vs. Discrete Problems

### Relevant chapter: 4

Identify which of the following are extent decisions.

- A. Decide whether to expand an existing product into a new region.
- B. What discount should be given on products during the upcoming holiday sale?
- C. Should the advertising budget be changed for the upcoming year?
- D. Should you develop a new product for an existing product line?

### Answer:

- A. Discrete decision.
- B. Extent decision. You must evaluate the marginal increase in sales for each level of discount. Are the profit generated from the price discount greater than the loss from the discount?
- C. Extent decision. If the increase in sales (revenue) is greater than the increase in budget ( $MR > MC$ ), then the budget should be increased. You should also examine how sales would be affected if the budget is decreased.
- D. Discrete decision. You must decide whether the product should be developed (yes or no).

## NPV

### Relevant chapter: 5

Suppose an initial investment of \$100 will return \$50/year for three years (assume the \$50 is received each year at the end of the year). Is this a profitable investment if the discount rate is 20%?

**Answer:**

Yes, the project has a positive NPV, so it is profitable

$$\begin{aligned} \text{NPV} &= -\$100 + 50/1.2 + 50/1.2^2 + 50/1.2^3 \\ &= -\$100 + 41.67 + 34.72 + 28.94 \\ &= \$5.33 \end{aligned}$$

**Toy Trucks**

**Relevant chapter: 5**

Last year, a toy manufacturer introduced a new toy truck that was a huge success. The company invested \$2.5 million for a plastic injection molding machine (which can be sold for \$2.0 million) and \$100,000 in plastic injection molds specifically for the toy (not valuable to anyone else). Labor and the cost of materials necessary to make each truck is about \$3. This year, a competitor has developed a similar toy that has significantly reduced demand for the toy truck. Now, the original manufacturer is deciding whether they should continue production of the toy truck. If the estimated demand is 100,000 trucks, what is the break-even price for the toy truck? Should you shut down?

**Answer:**