Managerial Economics:
A Problem-Solving Approach
2nd Edition

End-of-Chapter Questions and Answers

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Chapters 1 and 2 - Introduction and The One Lesson of Business

Multiple Choice Questions

1. Who is most likely to value a new pickup truck?
    a) A recent college graduate with a new child
    b) A financially comfortable construction manager
    c) A college student getting ready to move
    d) A wealthy Fortune 500 executive

2. Which of the following is not an example of the government's role in helping create wealth?
    a) Assessing property taxes
    b) Recording property transactions
    c) Providing federal courts to adjudicate contract disputes
    d) Assigning street addresses

3. When are parties likely to engage in transactions?
    a) If they both gain from the transaction
    b) If the sale price is above the seller's value and below the buyer's value
    c) When the total gains from trade are greater than zero
    d) All of the above

4. The existence of underemployed assets:
    a) is inefficient because not all assets are being put to their highest use
    b) implies the potential for money-making opportunities
    c) provides the opportunity for wealth-creating transactions
    d) All of the above

5. In a transaction for a good valued at $100,000 by a buyer and $95,000 by a seller, what amount of tax would result in an unconsummated transaction?
    a) Any tax amount would result in an unconsummated transaction
    b) A tax of $1,500
    c) A tax of $5,500
    d) It depends on how much the parties are willing to pay (and accept) for the good

Multiple Choice Key

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

Short Answer Questions

Property Rights

Why are property rights so important in creating wealth?

Goal Alignment at a Small Manufacturing Company

The owners of a small manufacturing company have hired a manager to run the company with the expectation that he will buy the company after five years. Compensation of the new vice president is a flat salary plus 75% of first $150,000 of profit, and then 10% of profit over $150,000. Purchase price for the company is set as 4.5 times earnings (profit), computed as average annual profitability over the next five years. Does this contract align the incentives of the new vice president with the goals of the owners?

Rent Control

Figure out how to profitably consummate the unconsummated wealth-creating transaction created by rent control.

Price Ceilings

Defenders of communist economic systems may point out that consumers pay lower prices for certain goods because the government imposes a limit on what producers may charge. Cite at least two other ways that consumers may be "paying" for these goods.

Taxes

Consider a seller who values a car at $9,500 and a buyer who values the same car at $10,000. What total surplus will result from a transaction between the two when the seller is faced with the following sales tax rates: 0%, 2%, 4%, 6%, and 8%?

Short Answer Key

Property Rights

With individual ownership of property, owners keep the value they create by moving assets to higher-valued uses thereby creating an incentive to engage in such transactions.

Goal Alignment at a Small Manufacturing Company

No. Both the purchase price and the profit sharing create perverse incentives. The VP keeps $0.75 of each dollar earned up to $150,000, but only $0.10 of each dollar earned after $150K. Since earning more requires more effort (increasing marginal effort), our student has little incentive to earn more than $150,000. And every dollar the VP earns raises the price that he will eventually pay for the company by $4.50, effectively penalizing him for increasing company profitability.

Rent Control

To circumvent the price ceiling, rent a furnished apartment, i.e. landlords can justify above-ceiling rates by claiming the additional rent is for the furniture, not the apartment. Another strategy is to buy rent-controlled apartments and convert them into private apartments or condominiums. The value of an apartment to a prospective purchaser is above its value as a rental unit, so moving the asset to a purchaser will create wealth.

Price Ceilings

Consumers may be forced to pay with their time by having to wait in line for scarce goods. Also, they may have to accept lower quality goods.

Taxes

Tax Rate	Seller Value	Seller Min Price	Buyer Value	Surplus
0.0%	$9,500	$9,500	$10,000	$500
2.0%	$9,500	$9,690	$10,000	$310
4.0%	$9,500	$9,880	$10,000	$120
6.0%	$9,500	$10,070	$10,000	$0
8.0%	$9,500	$10,260	$10,000	$0

Chapter 3 - Benefits, Costs, and Decisions

Multiple Choice Questions

1. A manufacturing company is considering purchasing a new machine that doubles capacity from 500 to 1,000 units per week. The machine will occupy approximately 500 square feet of vacant (unused) space on the factory floor. Which of the following costs are irrelevant in the decision to purchase this machine?
    a) The additional cost of utilities necessary to run the machine.
    b) Monthly rental expense associated with the 10,000 square foot factory.
    c) Additional machinists who will need to be hired to run the machine.
    d) Maintenance costs for regular repair and cleaning of the machine.

2. A company manufactures both pens and pencils in the same facility. The firm's production capacity is shared between these two products. Due to a federal ruling requiring all elementary school students to use only pencils, the overall demand for pencils has shifted outward. Surprisingly, this has had no effect on pen demand. The firm will find in the short term that:
    a) the cost of producing pencils rises.
    b) the cost of producing pens falls.
    c) pencils are more profitable than pens.
    d) the cost of producing pens rises.

3. In comparing a firm's accounting costs with its economic costs, the accounting costs:
    a) are the same, if the firm is earning a normal rate of return.
    b) are larger.
    c) take account of the implicit cost of owned resources.
    d) are smaller.

4. The average capital invested in Firm X during the year is $20,000. During that same year, Firm X produces after-tax income of $3,200. If the firm's cost of capital is 12%, what is the economic profit?
    a) $0
    b) $800
    c) $1,200
    d) $3,200

5. Which of the following costs always must be considered relevant in decision-making?
    a) Variable costs
    b) Avoidable costs
    c) Fixed costs
    d) Sunk costs

Multiple Choice Key

1. b
2. d
3. d
4. b
5. b

Short Answer Questions

Production Opportunity Cost

A can manufacturing company produces and sells three different types of cans: versions X, Y, and Z. A high-level, simplified profit/loss statement for the company is provided here. Corporate overhead (rent, general and administrative expense, etc.) is allocated equally among the three product versions. After reviewing the statement, company managers are concerned about the loss on Version Z and are considering ceasing production of that version. Should they do so? Why or why not?

	Version X	Version Y	Version Z	Total
Net Can Sales	$180,000	$240,000	$105,000	$525,000
Variable Costs	105,000	135,000	82,500	322,500
Corporate Overhead	60,000	60,000	60,000	180,000
Contribution to Profit	15,000	45,000	-37,500	22,500

Opportunity Cost of Renting

You currently pay $10,000 per year in rent to a landlord for a $100,000 house, which you are considering purchasing. You can qualify for a loan of $80,000 at 9% if you put $20,000 down on the house. To raise money for the down payment you would have to liquidate stock earning a 15% return. Neglect other concerns, like closing costs, capital gains, and tax consequences of owning, and determine whether it is better to rent or own.

Opportunity Cost of Steel

Your firm usually uses about 200 to 300 tons of steel per year. Last year, you purchased 100 tons more steel than needed (at a price of $200 per ton). In the meantime, the price of steel jumped to $250 per ton delivered (which means that any firm selling the steel must pay any shipping costs), and the price has since stabilized at that price. The cost of shipping steel to the nearest buyer would be $20 per ton. In the meantime, a business next door just went bankrupt and the bank is offering a special deal where you can buy another 100 tons of steel for $180 per ton. Assume that the interest rate is 0%. Which of the following are correct?

a. Sell your 100 tons at the going market price of $250 and make a profit of $30 per ton ($50 less $20 cost of shipping).
b. Buy the 100 tons next door at $180 and resell at a price of $250 less $20 shipping, for a net profit of $50 per ton.
c. Hold onto your 100 tons and wait until it is needed for production.
d. Buy the 100 tons next door at $180 and hold onto it until it is needed in production.

Foreign Currency

You’ve completed your vacation in a foreign country. At the airport you discover you have the equivalent of $20 local currency left over. The exchange control officer tells you that you can't convert the local money back to dollars. Nor can you take it out of the country. Because the gift shop was closed, you decided to spend the remaining money on refreshments—for complete strangers! What is the cost of the refreshments?

Evaluating Performance in a Small Business

A few years ago, a construction manager earning $70,000 per year working for a regional home builder decided to open his own home building company. He took $100,000 out of one of his investment accounts that had been earning around 6% a year and used that money to start up the business. He worked hard the first year, hiring one employee (his only salary cost for the business was the $40,000 paid to this employee) and generated total sales of $1,000,000. Total material and subcontracted labor costs for the year were $900,000. Calculate accounting profit. What are the opportunity costs for the manager of being in this business relative to returning to his old job? What is the economic profit of the business?

Short Answer Key

Production Opportunity Cost

This is an example of the fixed-cost fallacy: The overhead will be incurred regardless of whether you get rid of the product line so it is irrelevant to your decision. The relevant benefit of shutting down Version Z is $82,500, the relevant cost of shutting down Version Z is $105,000. Keep the product line.

Opportunity Cost of Renting

This is an example of the hidden-cost fallacy. The interest payments on the loan are $7,200 per year, so owning may appear to be a good deal, but you must also compute the opportunity cost of the down payment. You forego $3,000 in expected return each year if you sell the stock. So the cost of owning is $10,200 per year. Rent instead.

Opportunity Cost of Steel

The answer requires you to identify the hidden costs of transporting the steel. Both C and D are correct. Answer A is incorrect because you would have to buy steel in the future for your own production needs, so if you sold now and repurchased in the future would never recover the $20 shipping cost. Answer B is incorrect for the same reason.

Foreign Currency

The cost of the refreshments is zero. The money can not be converted to another currency neither taken out of the country; therefore the opportunity cost of spending this money on refreshments is zero.

Evaluating Performance in a Small Business

Revenue of $1 million less costs of $940,000 indicates an accounting profit of $60,000.
Had the construction manager stayed at this job, he would have earned $70,000 along with the $6,000 his $100,000 would have earned had he left it in his investment account. Opportunity costs are $76,000.