Summary

1. Economics is the social science that examines how individuals, institutions, and society make optimal choices under conditions of scarcity. Central to economics is the idea of opportunity cost: the value of the next-best good or service forgone to obtain something.

2. The economic perspective includes three elements: scarcity and choice, purposeful behavior, and marginal analysis. It sees individuals and institutions making rational decisions based on comparisons of marginal costs and marginal benefits.

3. Economists employ the scientific method, in which they form and test hypotheses of cause-and-effect relationships to generate theories, laws, and principles. Economists often combine theories into representations called models.

4. Microeconomics examines the decision making of specific economic units or institutions. Macroeconomics looks at the economy as a whole or its major aggregates.

5. Positive economic analysis deals with facts; normative economics reflects value judgments.

6. Individuals face an economizing problem. Because their wants exceed their incomes, they must decide what to purchase and what to forgo. Society also faces an economizing problem. Societal wants exceed the available resources necessary to fulfill them. Society therefore must decide what to produce and what to forgo.

7. Graphically, a budget line (or budget constraint) illustrates the economizing problem for individuals. The line shows the various combinations of two products that a consumer can purchase with a specific money income, given the prices of the two products.

8. Economic resources are inputs into the production process and can be classified as land, labor, capital, or entrepreneurial ability. Economic resources are also known as factors of production or inputs.

9. Economists illustrate society's economizing problem through production possibilities analysis. Production possibilities tables and curves show the different combinations of goods and services that can be produced in a fully employed economy, assuming that resource quantity, resource quality, and technology are fixed.

10. An economy that is fully employed and thus operating on its production possibilities curve must sacrifice the output of some types of goods and services to increase the production of others. The gain of one type of good or service is always accompanied by an opportunity cost in the form of the loss of some of the other type.

11. Because resources are not equally productive in all possible uses, shifting resources from one use to another creates increasing opportunity costs. The production of additional units of one product requires the sacrifice of increasing amounts of the other product.

12. The optimal (best) point on the production possibilities curve represents the most desirable mix of goods and is determined by expanding the production of each good until its marginal benefit (MB) equals its marginal cost (MC).

13. Over time, technological advances and increases in the quantity and quality of resources enable the economy to produce more of all goods and services, that is, to experience economic growth. Society's choice as to the mix of consumer goods and capital goods in current output is a major determinant of the future location of the production possibilities curve and thus of the extent of economic growth.

14. International trade enables a nation to obtain more goods from its limited resources than its production possibilities curve indicates.

Terms and Concepts

economics
economic perspective
opportunity cost
utility
marginal analysis
scientific method
economic principle
other-things-equal assumption
microeconomics

macroeconomics
aggregate
positive economics
normative economics
economizing problem
budget line
economic resources
land
labor

capital
investment
entrepreneurial ability
factors of production
consumer goods
capital goods
production possibilities curve
law of increasing opportunity costs
economic growth
Questions

1. What is an opportunity cost? How does the idea relate to the definition of economics? Which of the following decisions would entail the greater opportunity cost: Allocating a square block in the heart of New York City for a surface parking lot or allocating a square block at the edge of a typical suburb for such a lot? Explain. LO1

2. Cite three examples of recent decisions that you made in which you, at least implicitly, weighed marginal cost and marginal benefit. LO1

3. What is meant by the term “utility” and how does the idea relate to purposeful behavior? LO1

4. What are the key elements of the scientific method and how does this method relate to economic principles and laws? LO2

5. Indicate whether each of the following statements applies to microeconomics or macroeconomics: LO3
   a. The unemployment rate in the United States was 9.7 percent in March 2010.
   b. A U.S. software firm discharged 15 workers last month and transferred the work to India.
   c. An unexpected freeze in central Florida reduced the citrus crop and caused the price of oranges to rise.
   d. U.S. output, adjusted for inflation, decreased by 2.4 percent in 2009.
   e. Last week Wells Fargo Bank lowered its interest rate on business loans by one-half of 1 percentage point.
   f. The consumer price index rose by 2.7 percent from December 2008 to December 2009.

6. State (a) a positive economic statement of your choice, and then (b) a normative economic statement relating to your first statement. LO3

7. What are economic resources? What categories do economists use to classify them? Why are resources also called factors of production? Why are they called inputs? LO4

8. Why is money not considered to be a capital resource in economics? Why is entrepreneurial ability considered a category of economic resource, distinct from labor? What are the major functions of the entrepreneur? LO4

9. Specify and explain the typical shapes of marginal-benefit and marginal-cost curves. How are these curves used to determine the optimal allocation of resources to a particular product? If current output is such that marginal cost exceeds marginal benefit, should more or fewer resources be allocated to this product? Explain. LO5

10. Explain how (if at all) each of the following events affects the location of a country's production possibilities curve: LO5
    a. The quality of education increases.
    b. The number of unemployed workers increases.
    c. A new technique improves the efficiency of extracting copper from ore.
    d. A devastating earthquake destroys numerous production facilities.

11. Suppose that, on the basis of a nation's production possibilities curve, an economy must sacrifice 10,000 pizzas domestically to get the 1 additional industrial robot it desires but that it can get the robot from another country in exchange for 9000 pizzas. Relate this information to the following statement: "Through international specialization and trade, a nation can reduce its opportunity cost of obtaining goods and thus 'move outside its production possibilities curve.'" LO6

12. LAST WORD Studies indicate that married men on average earn more income than unmarried men of the same age and education level. Why must we be cautious in concluding that marriage is the cause and higher income is the effect?

Problems

1. Potatoes cost Janice $1 per pound, and she has $5.00 that she could possibly spend on potatoes or other items. If she feels that the first pound of potatoes is worth $1.50, the second pound is worth $1.14, the third pound is worth $1.05, and all subsequent pounds are worth $0.30, how many pounds of potatoes will she purchase? What if she only had $2 to spend? LO1

2. Pham can work as many as or as few hours as she wants at the college bookstore for $9 per hour. But due to her hectic schedule, she has just 15 hours per week that she can spend working at either the bookstore or at other potential jobs. One potential job, at a café, will pay her $12 per hour for up to 6 hours per week. She has another job offer at a garage that will pay her $10 an hour for up to 5 hours per week. And she has a potential job at a daycare center that will pay her $8.50 per hour for as many hours as she can work. If her goal is to maximize the amount of money she can make each week, how many hours will she work at the bookstore? LO1

3. Suppose you won $15 on a lotto ticket at the local 7-Eleven and decided to spend all the winnings on candy bars and bags of peanuts. The price of candy bars is $0.75 and the price of peanuts is $1.50. LO4
   a. Construct a table showing the alternative combinations of the two products that are available.
   b. Plot the data in your table as a budget line in a graph. What is the slope of the budget line? What is the opportunity cost of one more candy bar? Of one more bag of peanuts? Do these opportunity costs rise, fall, or remain constant as each additional unit of the product is purchased?
c. Does the budget line tell you which of the available combinations of candy bars and bags of peanuts to buy?
d. Suppose that you had won $30 on your ticket, not $15. Show the $30 budget line in your diagram. Has the number of available combinations increased or decreased?

4. Suppose that you are on a desert island and possess exactly 20 coconuts. Your neighbor, Friday, is a fisherman, and he is willing to trade 2 fish for every 1 coconut that you are willing to give him. Another neighbor, Kwame, is also a fisherman, and he is willing to trade 3 fish for every 1 coconut. LO4

a. On a single figure, draw budget lines for trading with Friday and for trading with Kwame. (Put coconuts on the vertical axis.)
b. What is the slope of the budget line from trading with Friday?
c. What is the slope of the budget line from trading with Kwame?
d. Which budget line features a larger set of attainable combinations of coconuts and fish?
e. If you are going to trade coconuts for fish, would you rather trade with Friday or Kwame?

5. To the right is a production possibilities table for consumer goods (automobiles) and capital goods (forklifts): LO5

<table>
<thead>
<tr>
<th>Type of Production</th>
<th>Production Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Automobiles</td>
<td>0</td>
</tr>
<tr>
<td>Forklifts</td>
<td>30</td>
</tr>
</tbody>
</table>

6. Look at Figure 1.3. Suppose that the cost of cheese falls, so that the marginal cost of producing pizza decreases. Will the MC curve shift up or down? Will the optimal amount of pizza increase or decrease? LO5

7. Referring to the table in problem 5, suppose improvement occurs in the technology of producing forklifts but not in the technology of producing automobiles. Draw the new production possibilities curve. Now assume that a technological advance occurs in producing automobiles but not in producing forklifts. Draw the new production possibilities curve. Now draw a production possibilities curve that reflects technological improvement in the production of both goods. LO6

8. On average, households in China save 40 percent of their annual income each year, whereas households in the United States save less than 5 percent. Production possibilities are growing at roughly 9 percent annually in China and 3.5 percent in the United States. Use graphical analysis of “present goods” versus “future goods” to explain the differences in growth rates. LO6

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