
MICROECONOMICS IN CONTEXT, 1e
STUDENT STUDY GUIDE

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CHAPTER 1

ECONOMIC ACTIVITY IN CONTEXT

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Overview

This chapter introduces you to the basic concepts that underlie the study of economics. The four essential economic human activities are resource maintenance, the production of goods and services, the distribution of goods and services, and the consumption of goods and services. As you work through this book, you will learn in detail about how economists analyze each of these areas of activity.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Define the difference between normative and positive questions.
2. Differentiate between intermediate and final goals.
3. Discuss the relationship between economics and well being.
4. Define the four essential economic activities.
5. Illustrate tradeoffs using a production possibilities frontier.
6. Explain the concept of opportunity costs.
7. Summarize the differences between the three spheres of economic activity.
8. Understand what is meant by “economics in context.”

Key Terms

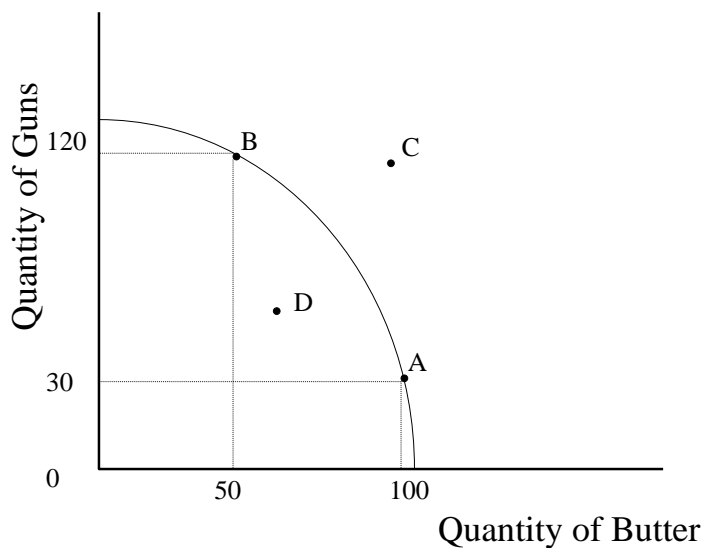
economics	resource maintenance
production	distribution
consumption	positive questions
normative questions	intermediate goal
final goal	wealth
efficiency	well-being
economic actor (agent)	negative externalities
positive externalities	transaction costs
exchange	transfer
abundance	scarcity
production possibilities frontier (PPF)	opportunity cost
technological progress	core sphere
public purpose sphere	public goods
free riders	business sphere
informal sphere	microeconomics
macroeconomics	model
traditional microeconomic model	economistic thinking

Active Review Questions

Fill in the blank

1. You decide to buy a used car. You discover that it is hard to get information on the quality of the used cars that are available. You have trouble communicating with the car dealer. It takes a considerable amount of time to get the information you need to successfully get the car you had in mind. In other words, buying a used car turns out to be an activity with high _____ costs.
2. A new factory begins discharging pollutants into a previously pristine river. Fish in the river begin to die, and people who make their living through fishing have trouble maintaining their catch. This factory is generating negative _____.
3. Protecting wildlife in a national park is an example of the economic activity of _____.
4. Your grandmother sends you a check for \$100. This form of resource distribution is referred to as a _____.
5. A diagram that shows the tradeoffs between production of two goods is called a(n) _____.
6. A professional musician practices piano every afternoon. Her neighbor listens to the music and enjoys it. Through her activity, the musician is creating a positive _____.

Questions 7 to 10 refer to the production possibilities frontier shown below.



True or false

7. In the graph shown above, at point B, society is producing the maximum possible amount of butter.
8. To move from point A to point B, society would have to cut down on its gun production and increase butter production.
9. Starting from point B, society would have to invest substantial resources to increase gun production.
10. Cooking a family dinner at home is an activity of the core sphere of economics.
11. Microeconomics is the study of national and international economic trends.
12. Watching a movie is an example of “consumption.”

Short answer

13. Name the two actors in the basic neoclassical, or traditional, model of economics.

14. “Children should learn to clean up after themselves by the age of six.” Is this a positive or a normative statement? _____
15. “The business sphere contributed 59% of production in the US in 2000.” Is this a positive or a normative statement? _____
16. List the three basic economic questions.

17. What are the two main forms of economic distribution? What is the difference between them?

18. A family enjoys a three-week vacation. In order to afford this vacation, the family saved money over the course of a year. Was earning this money a final goal or an intermediate goal? _____
19. Technological innovations can vastly increase a society’s productive capacity. How might a technological innovation affect a society’s production possibilities frontier?

20. What is the distinguishing characteristic of institutions in the public purpose sphere?

Self Test

1. Which of the following best exemplifies an intermediate goal?
 - a. Spending a relaxing vacation with your family.
 - b. Spending a day at the art gallery.
 - c. Going fishing for fun.
 - d. Getting a summer job so you can afford a trip abroad.
 - e. Reading a novel.

2. Which of the following statements is positive (as opposed to normative)?
 - a. One should always be polite at the dinner table.
 - b. There are ten people in this class.
 - c. A young person's top priority should be job security.
 - d. The best professor is one who meets with students individually each week.
 - e. Resources should be distributed equally across society.

3. Which of the following is an example of a positive externality?
 - a. A musician performs in a concert. People pay to listen to the concert.
 - b. An architect designs a house for herself to live in. She enjoys spending time in the house.
 - c. A student volunteers in a shelter for the homeless.
 - d. A homeowner plants a tree for shade around her house. The tree also provides shade for her next-door neighbor.
 - e. A teacher drives his car to work and gets stuck in a traffic jam.

4. Which of the following is an example of a negative externality?
 - a. A student receives a failing grade on a French exam.
 - b. Your roommate throws a loud party that keeps you awake all night.
 - c. You decide to take public transportation to work every day.
 - d. A group of farmers pool their resources to purchase seeds for next year.
 - e. You receive a letter saying your bank account is overdrawn.

5. Enjoying art at a museum is an example of
- Production
 - Consumption
 - Exchange
 - Transfer
 - Resource maintenance
6. Which of the following statements is *false*?
- Final goals could include fairness, freedom, or a sense of meaning in one's life.
 - You are offered a very interesting job, but you need a car to get there. Getting a car is an example of a final goal.
 - Resource maintenance refers to activities associated with tending to, preserving, or improving natural, social, and other resources.
 - Production is the conversion of resources into goods or services.
 - Distribution is the sharing of products and resources among people.
7. Which of the following is an example of the economic activity of resource maintenance?
- cooking dinner
 - operating a factory
 - providing worker education
 - drilling for oil
 - buying a bicycle
8. Which of the following factors could expand a society's production possibilities frontier?
- Increased butter production.
 - Shifting from one product to another.
 - Producing air pollution.
 - Depleting resources now instead of later.
 - Technological innovations.
9. Which of the following is an example of the economic activity of distribution?
- A baker makes 10 loaves of bread.
 - A plumber fixes a leak.
 - The legal speed limit is raised from 65 to 75 mph.
 - A couple enjoys a walk in the forest.
 - A retired worker receives Social Security benefits.

10. Which of the following is an example of the economic activity of consumption?

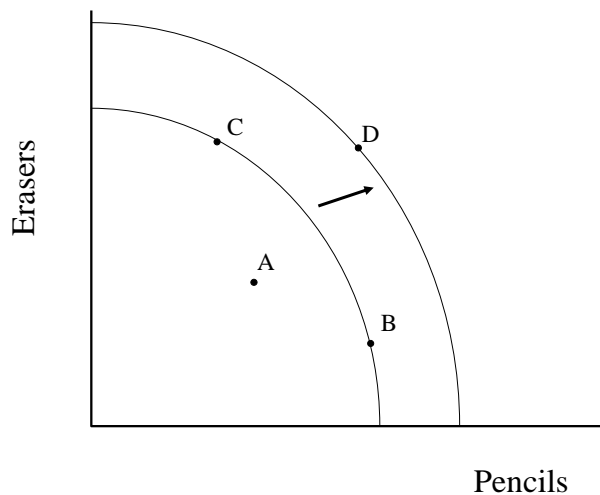
- a. A baker makes 10 loaves of bread.
- b. A plumber fixes a leak.
- c. The legal speed limit is raised from 65 to 75 mph.
- d. A couple enjoys a walk in the forest.
- e. A retired worker receives Social Security benefits.

11. What does the Production Possibilities Frontier represent?

- a. A catalog of all possible production options, represented as percentages.
- b. The tradeoffs between production and consumption options.
- c. The tradeoffs between possible production levels for two goods.
- d. The amount that a society could produce if it devoted all its resources to producing one good.
- e. The possible gains from international trade in two or more goods.

Questions 12 and 13 refer to the following scenario.

An economy produces two goods: pencils and erasers. The graph shown below depicts two possible production possibilities frontiers (PPFs) for this economy.



12. Which of the following events could cause the economy to move from point B to point D?

- a. Workers become less productive due to poor working conditions.
- b. A hurricane destroys vital resources for pencil production.
- c. A new machine is invented that makes it easier to produce both pencils and erasers.
- d. All production costs rise proportionally.
- e. The cost of eraser inputs goes up.

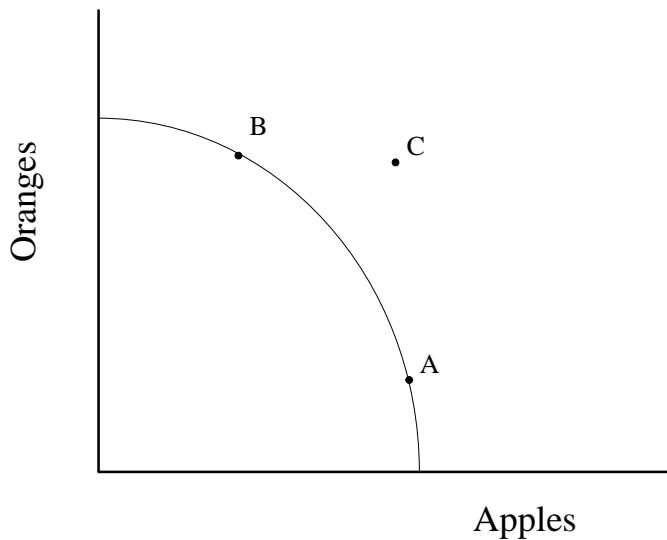
13. Which of the following statements is true?

- a. Moving from point C to point B requires shifting resources away from eraser production and into pencil production.
- b. Point B represents a less efficient resource mix than point C.
- c. Depletion of nonrenewable resources could lead the economy to shift from point C to point D.
- d. Utility is maximized at point A.
- e. At point A, society is producing all the pencils it can.

14. The nation of Anyplace produces two goods, chairs and tables. Anyplace can produce the chairs and tables using either sustainable methods or resource-depleting methods. If Anyplace chooses resource-depleting methods, which of the following statements is true?

- a. Eventually the PPF of Anyplace will shift outward (away from the origin).
- b. Eventually the PPF of Anyplace will shift inward (toward the origin).
- c. Eventually the PPF of Anyplace will pivot, causing a change in the slope of the curve.
- d. Eventually Anyplace will have to choose between producing only chairs or producing only tables.
- e. None of the above.

Question #15 refers to the graph shown below.



15. Which of the following statements is true?

- a. Point A is inefficient.
- b. Point B is inefficient.
- c. Point A is preferred to point B.

- d. Point B is preferred to point A.
 - e. Point C cannot be attained with current technology.
16. Suppose there is a production possibilities frontier (PPF) for wine and cheese. Which of the following situations would shift the PPF inward (toward the origin)?
- a. A severe weather event that destroys much of the economy's productive capacity.
 - b. Discovery of a new, cheaper source of milk for making cheese.
 - c. Increased popularity of wine, as compared with cheese.
 - d. A technological breakthrough.
 - e. Improved education of the work force.
17. In general, as production of a good increases, the opportunity cost of production increases. How is this notion reflected in the graph of production possibilities frontier (PPF)?
- a. The PPF bows inwards (that is, looks like a slide or a valley)
 - b. The PPF bows outwards (that is, looks like a hillside).
 - c. The PPF shifts in response to technological change.
 - d. The PPF shows production of one good at a time.
 - e. The PPF becomes flatter as resource availability increases.
18. A city government maintains local roads. This service is an example of
- a. a free rider
 - b. a public good
 - c. a positive externality
 - d. an external cost
 - e. a core sphere activity
19. Which of the following is an example of a core sphere activity?
- a. James plays a game of catch with his nephew.
 - b. Martha works at a bank.
 - c. A nonprofit organization provides social services to low-income families.
 - d. A national government purchases weapons.
 - e. Both a and c are true.
20. The activities of a charitable institution would be characterized as part of
- a. The core sphere
 - b. The free rider sphere
 - c. The public purpose sphere
 - d. The business sphere
 - e. The informal sphere

Answers to Active Review Questions

1. transaction
2. externalities
3. resource maintenance
4. transfer
5. production possibilities frontier
6. externalities
7. False. Society could produce more butter by producing fewer guns.
8. False. To move from A to B, society would have to decrease butter production and increase gun production.
9. True. At point B, society is already employing many of its resources to produce guns. Increasing gun production further will present high opportunity costs.
10. True.
11. False. Microeconomics focuses on activities that take place within and among the major economic organizations of a society. Macroeconomics is the study of broader patterns in the national and international economy.
12. True. An experience can be “consumed” without using up material resources.
13. firms and households
14. normative
15. positive
16. What should be produced and maintained? How? For whom?
17. Exchange and transfer. Exchange occurs when one actor provides a good or service, or money, in return for something else. Transfer is a one-way transaction, when one actor gives something to another.
18. intermediate
19. A technological innovation can expand the production possibilities frontier (move it “out,” away from the origin).
20. The distinguishing characteristic of institutions in the public purpose sphere is that they exist for a purpose related to the public good (e.g. national defense, poverty alleviation, healthcare, education, environmental protection, etc.).

Answers to Self Test Questions

- | | |
|-------|-------|
| 1. d | 11. c |
| 2. b | 12. c |
| 3. d | 13. a |
| 4. b | 14. b |
| 5. b | 15. e |
| 6. b | 16. a |
| 7. c | 17. b |
| 8. e | 18. b |
| 9. e | 19. a |
| 10. d | 20. c |

CHAPTER 2

ECONOMIC ACTORS AND ORGANIZATIONS

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Overview

This chapter delves into the motivations that drive people to do what they do, and the patterns of behavior that people display. The chapter examines such issues as how people make choices, whether and when people behave rationally, the role of self-interest and altruism, and how people's choices vary with the amount of time between an action and its consequence. Traditional economic concepts are covered along with innovative concepts from psychology that have begun to enrich economic discourse in recent years.

This chapter also teaches the basic principles of a traditional economic model in which individual actors carry out a limited set of activities, subject to certain assumptions about how they will behave.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Define the difference between economic actors and organizations.
2. Differentiate between intrinsic and extrinsic motivations.
3. Discuss the ways that economic actors make decisions.
4. Understand the importance of time discount rates for making economic decisions.
5. Define and discuss the different modes of economic organization.
6. List the assumptions behind the traditional neoclassical model.

Key Terms

purposeful (instrumental) behavior
incentive
self-interested motivation
motivation according to the common good
constrained behavior
rational choices
satisfice
bounded rationality
low time discount rate
economic organization
organization by consent
markets
circular flow diagram
perfect rationality

extrinsic motivation
intrinsic motivation
altruistic motivation
habitual behavior
choice behavior
optimize
melioration
high time discount rate
individual economic actor
custom
organization by administration
market failure
perfect information

Active Review

Fill in the Blank

1. Economists generally make the assumption of purposeful, or _____, behavior, meaning that people choose their behaviors consciously to achieve certain goals.
2. When you undertake an unpleasant task in the hopes of being paid for it, you could be described as _____ motivated.
3. A firefighter who gives up his own life to rescue a child is motivated by _____.
4. A person who works to improve the public education system in his city is working to advance the _____.
5. Circumstances that affect the options available to you, such as the offerings at a school cafeteria or the set of books available in your local library, act as _____ on your behavior.
6. Identifying and pursuing a satisfactory, rather than an optimal, outcome is referred to as _____.
7. A continuous effort to achieve a better situation than the present one is known as _____.
8. The idea that people consider some, but not all, relevant information when making a decision is included in a broad concept of _____ rationality.
9. A situation in which the market form of organization produces inefficient or harmful results is known as _____.

True or false

10. If a man eats rice every day, that must mean he likes rice.
11. All human behavior can be as described as “choice behavior.”
12. Economists have traditionally tended to focus on the role of habit and constraints in determining behavior.
13. Psychological studies show that people always make rational choices.

14. A person who exhibits behaviors of satisficing or meliorating displays characteristics of bounded rationality.
15. A person who spends money as soon as she gets it and does not think much about the future displays a high time discount rate.
16. An organization may be composed of many individual economic actors.
17. A company could act both as an individual economic actor and as an organization.

Short answer

18. Mary belongs to a frisbee team. The team is involved in an effort to make more park space available for practice sessions and games. A reporter writes an article stating that “the local frisbee team is lobbying for more park space.” In this situation, is the team being treated as an individual economic actor or an organization? _____

19. Name the four major modes of economic organization.

20. You help a friend with his homework and he cooks dinner for you in return. Which mode of economic organization does this exemplify?

21. Name some examples of cases in which voluntary exchange is generally considered to be unethical.

22. Name the three economic activities that are included in the traditional model of the economy.

23. The traditional economic model assumes that production is accomplished only by firms. Explain what realities are overlooked when we make this assumption.

24. What do firms buy in the traditional economic model? What do they sell?

25. The traditional economic model assumes that consumption is done by households. What other role may households play?

Self Test

1. Which of the following cases exemplifies intrinsic motivation?

- a. A piano teacher offers many hours of lessons per day, in order to maximize her income.
- b. A young biologist works hard on preparing a lecture because he wants to impress his colleagues.
- c. A car salesman reads philosophy in his free time because he enjoys it.
- d. A computer scientist double-checks the accuracy of his code before showing it to his boss.
- e. A father of two small children makes sure to bring snacks when he picks them up from school, so they won't complain on the way home.

2. A company offers employees a bonus if they achieve a certain level of sales per week. This is an example of:

- a. habit
- b. constraint
- c. extrinsic motivation
- d. a high time discount rate
- e. satisficing

3. Which of the following statements about Adam Smith is false?

- a. Smith is the author of *The Theory of Moral Sentiments*.
- b. Smith is the author of *The Wealth of Nations*.
- c. Smith believed that there is no need for altruistic behavior.
- d. Smith's work has been used to justify views that are not necessarily supported by his writing.
- e. Smith wrote about both economic and ethical issues.

4. Some people have argued that if everyone simply follows his or her own self-interest, societal well-being will automatically result. This view overlooks

- a. The fact that people may not have all the information they need to make good decisions.
 - b. The fact that people almost always work to advance the common good.
 - c. The fact that people optimize.
 - d. The fact that people have high discount rates.
 - e. The role of markets.
5. A racist apartment building owner insists on only renting to people of one race, even though this means some apartments will stand empty and total revenues will decline. We can describe this person's motivations as being
- a. meliorative
 - b. intrinsic
 - c. extrinsic
 - d. positive
 - e. normative
6. You have a range of options for how to spend your summer, including getting a summer job, traveling abroad, or taking a summer school course. As you make plans for the summer, you are exhibiting
- a. altruism
 - b. constrained behavior
 - c. time discounting
 - d. choice behavior
 - e. perfect information
7. Which of the following is most clearly an example of constrained behavior?
- a. You decide to get Chinese food tonight because you're tired of Mexican food.
 - b. A single mother takes a night job because she can't find a day job.
 - c. A high school student works at the local supermarket to help pay for prom tickets.
 - d. An economist starts work at 8:00 AM because that is what she is used to doing every day.
 - e. A young man brings flowers to a dinner party because he wants to make a good impression on the host.
8. The term "rational behavior" is used in traditional economic models to describe behavior that *best* moves a person toward his or her goals. This behavior is known as
- a. bounded rationality
 - b. satisficing
 - c. meliorating
 - d. organizational savvy

e. optimizing

9. During her first year of college, Jean lived in a small dorm room with an annoying roommate. In her second year, she was happy because she got a room of her own, although it was still small. In her third year, she moved into a spacious apartment with a good friend. Jean's process of finding a better place to live each year could be described as:

- a. discounting
- b. custom
- c. exchange
- d. meliorating
- e. production

10. The four major modes of economic organization are:

- a. production, consumption, consent, exchange
- b. custom, consent, administration, exchange
- c. production, consumption, transfer, exchange
- d. custom, consent, transfer, administration
- e. supply, demand, household, firm

11. Which of the following is an example of economic organization by custom?

- a. Two lawyers, a man and a woman, decide to get married. Without discussing it, they assume that after they have their first child, the woman will quit her job while the man goes back to work.
- b. A group of neighbors form a food co-op to buy and sell organic produce.
- c. A group of steel workers form a union.
- d. An entrepreneur forms a new company to produce orange juice.
- e. Two friends decide to open a restaurant together.

12. A market failure is

- a. A situation in which regulation is inappropriate.
- b. A situation in which markets yield inefficient or harmful outcomes.
- c. A situation in which no market exists.
- d. A situation in which some people refuse to participate in the free market.
- e. A situation in which all decisions are made according to custom.

13. Which of the following is an assumption of the traditional model of the economy?

- a. Production is accomplished by firms.
- b. Production is accomplished by households.
- c. Consumption is accomplished by firms and households.
- d. Exchanges occur only among firms.

- e. People engage in meliorating behavior.
14. Which of the following elements of the economy are included in the traditional model of the economy?
- a. resource maintenance
 - b. production by households
 - c. transfers
 - d. exchange
 - e. all of the above
15. The traditional economic model assumes perfect rationality and perfect information. Which of the following situations is most consistent with the traditional economic model?
- a. You need to buy a pair of shoes. You find out what store sells the best shoes for the lowest prices, and you go shopping there.
 - b. You need to buy a pair of shoes, so you buy them at the nearest store.
 - c. You get drunk at a fraternity party because you want to impress your friends.
 - d. You don't study the night before your economics exam because your roommate is sick and needs your help.
 - e. You buy a used car without doing research beforehand, and end up paying more than the car is worth.
16. Which statement about the traditional economic model is false?
- a. It assumes the economy is composed entirely of individual economic actors.
 - b. It treats households as organizations with potentially complex internal dynamics.
 - c. It assumes that exchange is performed in markets.
 - d. It assumes all economic actors possess perfect information.
 - e. It omits consideration of resource maintenance activities.
17. Which of the following is *not* an example of economic organization by exchange?
- a. Juan pays to get a haircut.
 - b. John mows Jean's lawn in return for dinner.
 - c. Paola gives her daughter a check to cover school expenses for the semester.
 - d. Amy works at the local food coop in return for a discount on all her purchases there.
 - e. Jamil pays for health insurance every month.
18. Which of the following statements is true?
- a. A sports team can be viewed as an individual economic actor or as an organization.

- b. The notion of bounded rationality is central to the traditional neoclassical model.
 - c. Economic organization by exchange always produces the greatest possible good for society.
 - d. The traditional neoclassical model relies heavily on the notion of intrinsic motivation.
 - e. A person who does not care much about the future is said to have a low time discount rate.
19. Which of the following exemplifies a high time discount rate?
- a. Making sure to save money for your child's college education, even though your child is still young.
 - b. Deciding to take an expensive vacation now, even if it means not taking a vacation next year.
 - c. Taking steps to avoid water pollution, because the pollution could decrease fish yields next year.
 - d. Planting an acorn with the intention that your grandchildren will enjoy the full-grown oak tree.
 - e. Putting money away for a rainy day.
20. Which of the following situations best illustrates the concept of satisficing?
- a. Claudillo looks for a job that will pay better than his last job.
 - b. Johanna researches every possible option before she chooses what model of car she will buy.
 - c. Albert eats a peanut butter sandwich for lunch every day because that's all he can afford.
 - d. Tuan wants an affordable three-bedroom apartment. He rents the first one he finds.
 - e. Carla saves her money carefully so she can take a year off from work and write a novel.

Answers to Active Review Questions

1. instrumental
2. extrinsically
3. altruism
4. common good
5. constraints
6. satisficing
7. meliorating
8. bounded
9. market failure

10. False. The man's behavior may also reflect the constraints he faces. For example, rice may be the only food available to him, or one of a small set of food options.
11. False. Habits and constraints can also play an important role in determining behavior.
12. False. Economists have traditionally focused almost entirely on choice behavior.
13. False. Economic models often assume rationality, but this assumption is not necessarily borne out by psychological studies.
14. True.
15. True.
16. True.
17. True.
18. individual economic actor
19. custom, consent, administration, exchange
20. exchange
21. Examples in the book include buying and selling babies, buying and selling human organs, buying and selling votes or grades. Students may come up with other examples – for example, you may believe that buying and selling sex, in the form of prostitution, is an unacceptable form of voluntary exchange.
22. production, exchange, consumption
23. This assumption overlooks the production that occurs in households, as well as the services provided by actors in the public purpose sphere. It also overlooks the role of natural resources, such as forests and rivers, in providing for human needs.
24. In the traditional economic model, firms buy land, labor, and capital services, and sell produced goods and services.
25. Households play an important role in production of goods and services (such as meals, child care, and education), as well as serve important roles in distribution and resource maintenance.

Answers to Self Test Questions

- | | |
|-------|-------|
| 1. c | 11. a |
| 2. c | 12. b |
| 3. c | 13. a |
| 4. a | 14. d |
| 5. b | 15. a |
| 6. d | 16. b |
| 7. b | 17. c |
| 8. e | 18. a |
| 9. d | 19. b |
| 10. b | 20. d |

CHAPTER 3

MARKET INSTITUTIONS

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Overview

Exploring the wide variety of market structures that exist in the real world, and the basic characteristics that all markets share, this chapter introduces you to the real-world aspects of markets.

The chapter includes a historical discussion of how markets developed and expanded over a span of several centuries. This history puts current market structures in context, highlighting the fact that a market economy is just one of many ways that people can structure their lives together. As you read this chapter, make sure you understand the structure of the market that is featured in the traditional microeconomic model, as well as the other market structures that appear globally.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Understand the different definitions of markets.
2. Discuss the history of markets.
3. Describe what is necessary for markets to function effectively.
4. Discuss the relationship between markets and well-being.
5. Identify different types of markets.
6. Describe various ways in which market prices may be determined.

Key Terms

market
laissez-faire economy
“just price” doctrine
private property
explicit contract
money
wholesale markets
intermediate goods markets
labor markets
financial markets
posted prices
market value
open auction
sealed-bid auction
bargaining
futures market

institutions
guilds
laissez-faire proprietary capitalism
implicit contract
physical infrastructure
retail markets
product markets
resale markets
factor markets
underground markets
mark-up (or cost-plus) pricing
auction market
Dutch auction
double-auction
spot market
long-term contracts

Active Review Questions

Fill in the blank

1. An economy with very little government regulation is known as a(n) _____ economy.
2. Roads, warehouses, and transport equipment are all examples of physical _____.
3. A market in which consumer buy goods for personal use is known as a _____ market.
4. Markets for labor, natural resources, and manufactured capital goods are referred to as _____ markets.
5. A drug dealer imports illegal drugs and sells them in a dark alley. The dealer is part of a(n) _____ market.
6. At an old-fashioned, open-air market you might bargain over the price of a T-shirt. At your local mall, you are more likely to simply pay the _____ for an item.
7. A market where an item is sold to the highest bidder is known as a(n) _____ market.
8. At the New York Stock Exchange, both buyers and sellers state prices at which they are willing to make transactions. This is an example of a _____.
9. In a fish market, buyers and sellers negotiate for immediate delivery of fresh fish. This is an example of a(n) _____ market.
10. A situation in which a single buyer and a single seller negotiate the price of an item is known as _____.

True or False

11. The ratio of labor to materials and energy in industrial production has declined since the Industrial Revolution.
12. As worker productivity increases, workers always spend fewer hours on the job.
13. In 19th century Russia, industrialization was complete and feudalism was obsolete.
14. When external barriers are removed, people will naturally revert to market behaviors.

15. An implicit contract, based on common norms or traditions, can facilitate successful transaction of an exchange between buyer and seller.

Short Answer

16. A group of shipwrecked sailors decide to set up a functioning economy with whatever is available on the tropical island where they have been washed ashore. One sailor suggests they use tropical fruits as their unit of exchange, since they don't have any money on the island. What's one problem with this suggestion? What might be a better item to use in place of money?

17. In what sense is money itself a social institution of trust?

18. Describe the concept of "time dollars," and explain one way in which they can be useful.

19. Name two possible disadvantages of markets.

20. The tropical country of Exemplia is going through a modernization process. The government decides to encourage farmers to stop growing corn for use within Exemplia, and to start growing coffee for export. Within five years, Exemplian farmers are exporting substantial amounts of coffee, and 90% of the corn consumed in Exemplia is imported from abroad. Explain one risk associated with Exemplia's decision to participate in international markets for agricultural products.

21. State the two definitions of a market.

22. Name the four basic institutions required for a market institution to function.

Self Test

1. Which of the following is a valid definition of the word "market"?
 - a. A place where people meet to buy and sell goods.
 - b. An institution that brings together buyers and sellers.
 - c. Any social system in which people interact.
 - d. Any social system that provides health care and education to a large number of people.
 - e. Both a and b.

2. Which of the following statements is false?
 - a. Markets facilitate the exchange of information among buyers and sellers.
 - b. Markets are institutions.
 - c. The term "market" can refer to a physical location.
 - d. Markets only exist in laissez-faire economies.
 - e. The existence of private property is a necessary condition for the existence of a market.

3. Which of the following would *not* be described as an institution?
 - a. a hospital
 - b. a stock exchange
 - c. laws governing inheritance
 - d. a newly built house
 - e. the market for health foods in the USA

4. Which of the following statements is false?

- a. Medieval peasant life was strongly shaped by market forces.
 - b. Medieval artisans organized their work through guilds.
 - c. In the 11th century, most production of food and clothing occurred at home.
 - d. Markets were largely irrelevant to the daily lives of most medieval people.
 - e. The "just price" doctrine held that prices charged should always be fair.
5. Which of the following statements is *false*?
- a. In the 16th century, laws were passed to reaffirm the rights of the poor to receive needed support.
 - b. In the 18th century, land and agricultural products were increasingly bought and sold in markets.
 - c. In the 17th century, England was embroiled in a two-decade-long civil war.
 - d. The first wave of rapid industrialization occurred in Russia.
 - e. The British conquest of India in the 18th century expanded export markets for British textiles.
6. Which of the following ideas was *not* characteristic of the Industrial Revolution?
- a. individualism
 - b. instrumental rationality
 - c. valuing private property
 - d. valuing luxury purchases
 - e. increasing attention to spiritual issues
7. Which of the following is *not* a requirement for the functioning of markets?
- a. Individualist institutions of property and decision making.
 - b. Social institutions of trust.
 - c. Infrastructure for industrial production.
 - d. Infrastructure for the flow of goods and information.
 - e. Money as a medium of exchange.
8. Within an individual company, the main form of coordination is generally
- a. exchange
 - b. market value
 - c. administration
 - d. money
 - e. custom
9. Which of the following institutions is governed primarily by exchange?
- a. a centrally planned economy

- b. a corporation
- c. an elementary school
- d. a market
- e. both b and d

10. Which of the following is an example of a social institution of trust?

- a. Barbara's Bakery has a reputation for delivering birthday cakes on time.
- b. Carlos has been purchasing goods from Christina for years, and knows she always charges a fair price.
- c. The local grocery extends credit to a long-time customer who plans to pay when his next paycheck arrives.
- d. A consultant seals an agreement with a client with a handshake.
- e. All of the above.

11. Which of the following is *not* an advantage to markets as a form of social coordination?

- a. Markets allow the flow of important information, in the form of prices.
- b. Markets can give people substantial freedom to choose among various goods or activities.
- c. Markets can encourage beneficial innovation.
- d. Markets ensure that excessive concentration of economic power will not occur.
- e. Markets allow producers to gauge consumers' desires, via information about sales volumes.

12. Unified Chemical Corporation makes a chemical used in many plastics. It sells this chemical to Northern Plastics Company. What type of market does this exemplify?

- a. resale market
- b. retail market
- c. financial market
- d. intermediate goods market
- e. wholesale market

13. Which of the following is an example of a factor market?

- a. the market for silver
- b. the labor market
- c. the retail market
- d. a car dealership
- e. a drug cartel

14. Which of the following statements is false?

- a. On their own, markets cannot necessarily address the needs of elderly or disabled people.
 - b. Markets contain a built-in solution to excessive concentration of economic power.
 - c. Markets do not necessarily do well on their own at protecting environmental resources.
 - d. Markets have no built-in mechanism for efficient provision of public goods.
 - e. Markets can make people vulnerable to the actions of their trading partners.
15. Which set of terms accurately describes the type of market featured in the traditional microeconomic model?
- a. double-auction, spot, product market
 - b. single-auction, spot, futures market
 - c. producer/consumer futures market
 - d. open-auction market-value system
 - e. single buyer, single seller, bargaining market
16. At its end-of-the-year fundraiser, Anytown High School auctions off a high-quality bicycle. The school principal starts by stating a high price for the bicycle. She then lowers the price gradually until someone offers to buy it. This is an example of:
- a. a posted price
 - b. a double auction
 - c. a bargaining situation
 - d. a Dutch auction
 - e. an open auction
17. Which of the following statements accurately describes an open auction?
- a. The opening price is set high, and then drops gradually.
 - b. The opening price is set low, and rises as potential buyers offer competing bids.
 - c. A single buyer and a single seller negotiate the price of an item.
 - d. Both buyers and sellers state prices at which they are willing to make transactions.
 - e. Individual bids are given privately to the auctioneer.
18. Which of the following statements accurately describes a spot market?
- a. Buyers and sellers contract for immediate delivery of a specified amount of a good.

- b. Buyers and sellers contract for future delivery of a good.
- c. Buyers and sellers enter into a long-term agreement for delivery of a good over time.
- d. Workers contract to provide labor over an extended period of time.
- e. Companies agree to exchange intermediate goods over an extended period of time.

19. In which of the following situations are long-term contracts frequently used?

- a. apartment rentals
- b. mortgages
- c. energy purchases
- d. raw material purchases
- e. all of the above

20. Which of the following assumptions is made in the traditional microeconomic model?

- a. Firms (producers) sell directly to households (consumers).
- b. Firms enter into long-term contracts.
- c. Firms operate in futures markets.
- d. Firms use an open auction model.
- e. All of the above.

Answers to Active Review Questions

1. laissez faire
2. infrastructure
3. retail
4. factor
5. underground
6. posted price
7. auction
8. double auction
9. spot
10. bargaining
11. True.
12. False. Increased productivity can, but does not necessarily, lead to decreased working hours.
13. False.
14. False.
15. True.
16. Tropical fruits will rot within a few days. Thus, they do not provide a durable store of value. Alternatives could include carved stones, a specific kind of shell, or some other item that can be stored over time.

17. Money is ultimately based on common agreement: the understanding that other people will accept it in exchange. The value of money derives from this understanding.
18. Time dollars are credits exchanged for services within a local network. Time dollar systems can allow exchanges among people who might not otherwise have the opportunity for productive interchange. In this way, they can increase productive activity as well as strengthening bonds within a community.
19. Markets can make parties who trade more vulnerable to each other's actions (e.g. cutting off supplies). Markets also have no inherent ability to correct for the excessive concentration of economic power. These are two of several possible points you could make in response to this question, based on the information in the textbook.
20. One risk is that Exempla's population is now vulnerable to fluctuations in international markets. If prices change dramatically, or if a major trading partner stops exporting corn, Exempla's population could find itself facing a severe corn shortage. Since corn is a central source of nutrition in many countries, such an outcome could lead to serious problems of hunger and malnutrition.
21. A market can be defined as a physical location where buyers and sellers gather to exchange products or services. A market can also be defined as an institution that brings buyers and sellers into communication with each other, structuring and coordinating their actions.
22. Individualist institutions related to property and decision-making; social institutions of trust; infrastructure for the smooth flow of goods and information; and money as a medium of exchange.

Answers to Self Test Questions

- | | |
|-------|-------|
| 1. e | 11. d |
| 2. d | 12. d |
| 3. d | 13. b |
| 4. a | 14. b |
| 5. d | 15. a |
| 6. e | 16. d |
| 7. c | 17. b |
| 8. c | 18. a |
| 9. d | 19. e |
| 10. e | 20. a |

CHAPTER 4

SUPPLY AND DEMAND

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Overview

In this chapter, you'll find the basics of supply and demand analysis. As you work through this chapter, you will start learning how to manipulate supply and demand curves as a way to analyze the relationships among prices, volume of production, and other factors. You will learn about the various factors that can shift a supply or demand curve up or down, the concepts of equilibrium and market adjustment, and the signaling and rationing functions of prices.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Understand the uses of empirical, theoretical, and historical analysis.
2. Interpret supply and demand curves.
3. Understand the difference between a change in supply (demand) and a change in the quantity supplied (demanded).
4. List the non-price determinants of supply by businesses and demand by households.
5. Explain how price adjusts due to changes in supply and demand.
6. Understand topics of market analysis including signaling, rationing, scarcity, shortage, and inadequacy.
7. Appreciate the difference between the theory of supply and demand and the real world.
8. Describe the impacts of price floors and ceilings.

Key Terms

empirical investigation
theories

historical investigation

market supply

change in quantity supplied

nonprice determinants of supply

effective demand

individual demand

change in demand

nonprice determinants of demand

complementary good

equilibrium

theory of market adjustment

static model

time series data

theoretical investigation

supply curve

individual supply

change in supply

demand curve

market demand

change in quantity demanded

derived demand

substitute good

surplus

shortage

disequilibrium

dynamic model

signaling function of markets and prices
market incentives
precise
price floor
cartel

rationing
inadequacy
accurate
price ceiling

Active Review

Fill in the Blank

1. The observation and recording of specific happenings in the world is known as _____ investigation.
2. When we observe the changes in an economic variable over time, we are dealing with _____ data.
3. A curve indicating the quantities that buyers are willing to purchase at various prices is known as a(n) _____ curve.
4. Mark would like to buy a new car for \$20,000. However, he doesn't have any savings and he doesn't qualify for a loan. Thus, his desire for a car does not translate into _____ demand.
5. Tabitha needs furniture for her room. She is deciding between a medium-sized couch and a large armchair. Either the couch or the armchair could fulfill her need for sitting space in the room. The couch and the armchair can be referred to as _____ goods.
6. When people eat french fries, they like to put ketchup on them. Due to an increase in the price of french fries, total sales of french fries decrease. At the same time, ketchup sales also decrease. This phenomenon can be explained by noting that french fries and ketchup are _____ goods.
7. Surplus and shortage are both instances of _____.
8. A model that ignores time, implicitly assuming that all adjustments occur instantaneously, is known as a(n) _____ model.
9. In general, in a basic model showing supply and demand, if the supply curve shifts to the right, equilibrium price will _____ and equilibrium quantity supplied will _____.
10. Markets and market prices perform two important functions, signaling and _____.
11. Label the following examples as "shortage," "scarcity," or "inadequacy."

a. Scooters cost \$100 each. Ten people are willing to pay \$100 for a scooter, but due to a backup at the factory, only eight scooters are available for sale.

b. Ten people need a place to sleep. Hotel rooms cost \$50 per night. Five people have \$50 each, so they get rooms. The other five don't have \$50, so they spend the night on park benches. _____

c. Young-Ah would like to buy a movie ticket and a concert ticket, but only has enough money to buy one of them.

True or False

- 12. Supply curves are always generated empirically.
- 13. The price of limes could be a nonprice determinant of the supply of lemons.
- 14. The demand curve for a good shows the same information as the demand schedule.
- 15. Tastes and preferences act as nonprice determinants of demand.
- 16. In general, an increase in demand tends to increase equilibrium price and decrease equilibrium quantity.

Short Answer

17. There are ten restaurants in your town. On a given night, each restaurant has the ability to produce up to twenty full course dinners at a price of \$20 each. What is the total market supply of full course dinners tonight, at a price of \$20?

18. Name five major nonprice determinants of supply, for a producing business.

19. Why do demand curves generally slope downward?

20. Suggest a possible exception to the "law of demand," in which people buy less of a good as its price increases.

21. Explain the difference between a *change in quantity demanded* and a *change in demand*.

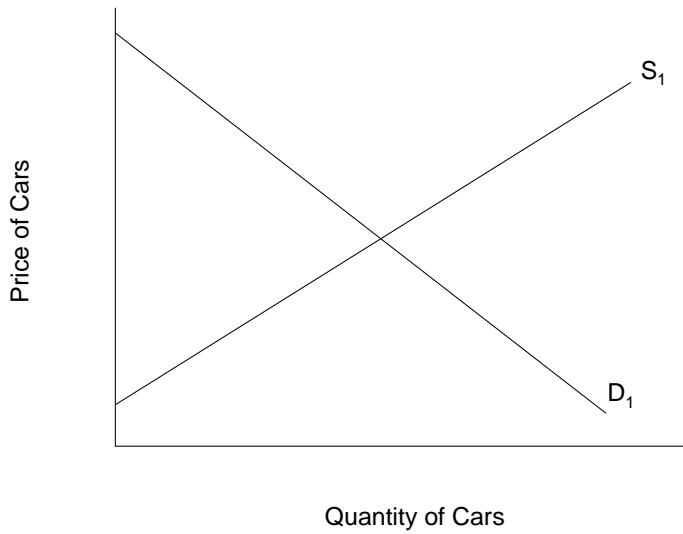
22. State the difference between a static and dynamic model.

23. Describe a possible case in which adjustment to equilibrium may take many years, or not happen at all.

24. Describe the signaling and rationing functions of market prices.

25. A new movie is released after having been heavily promoted to teenagers. On the first night, the tickets sell out and there are still teenagers waiting outside theaters, desperate to see the movie and unable to get a ticket. Is this market in equilibrium? Explain.

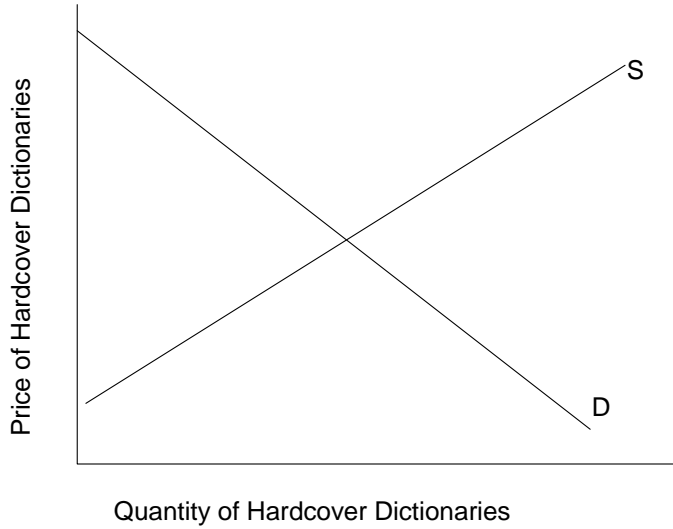
Problems



1. For the following questions, refer to the graph shown above.

- a. Label the equilibrium point as E_1 , the equilibrium quantity as Q_1 , and the equilibrium price as P_1 .
- b. Show how the supply curve will change if car manufacturers achieve a technological breakthrough that allows them to produce cars more cheaply.
- c. If the price stayed at P_1 , would a surplus or a shortage result from the technological breakthrough described in part (b)? Answer in words, and show on the graph.

- d. Assuming market forces work quickly, show the new equilibrium price to which the market will adjust. Label this point as E_2 . Label the new equilibrium quantity as Q_2 , and the new equilibrium price as P_2 .
- e. In words, summarize the information that you have shown in your adjustments to the graph in parts (a) through (d).



2. The graph above shows supply and demand for hardcover unabridged English dictionaries. Suppose that a new dictionary resource is created on the Internet, decreasing people's interest in buying large dictionaries in book form. For the questions below, state the answer in words and, where relevant, diagram your answer.

- a. What happens to the demand curve for hardcover dictionaries, as a result of this Internet innovation? (Answer in words and diagram.)

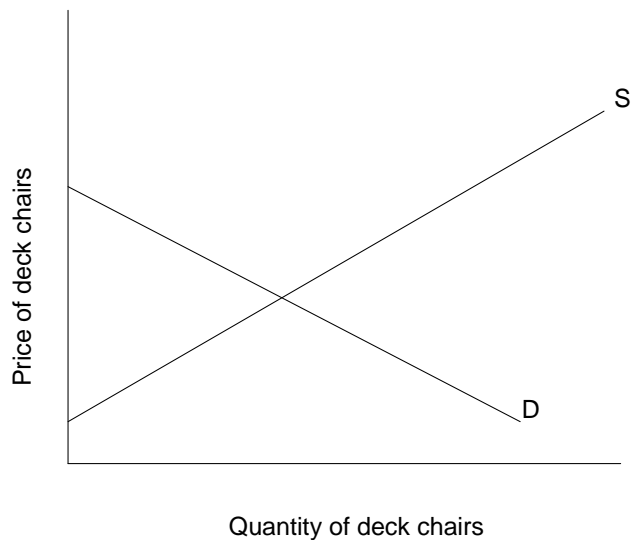
- b. What happens to the supply curve as a result of the Internet innovation? (Answer in words and diagram.)

- c. What happens to the price of hardcover dictionaries as a result of the innovation? Show the new price level on the graph you drew for part (b).

- d. Suggest one or more factors that could prevent this market from adjusting to equilibrium.

3. Refer again to the graph above, showing the market for hardcover dictionaries. What are the two types of change in this market that would lead the equilibrium price to *rise*?

4. In a popular new movie, a central character spends much of his time sitting on a white deck chair. Suddenly, white deck chairs come into fashion and everybody wants one. The graph below shows the market for deck chairs *before* the movie came out.



- On the diagram above, show what happens to the market for deck chairs as a result of the movie.
- Show the size of the shortage that exists in the short term, before the market adjusts to equilibrium.
- Label the new equilibrium point as E_2 .

5. Using the same example of the market in white deck chairs, describe and, on separate graphs, show the changes in equilibrium price and quantity that would occur in response to the following events (each considered individually):

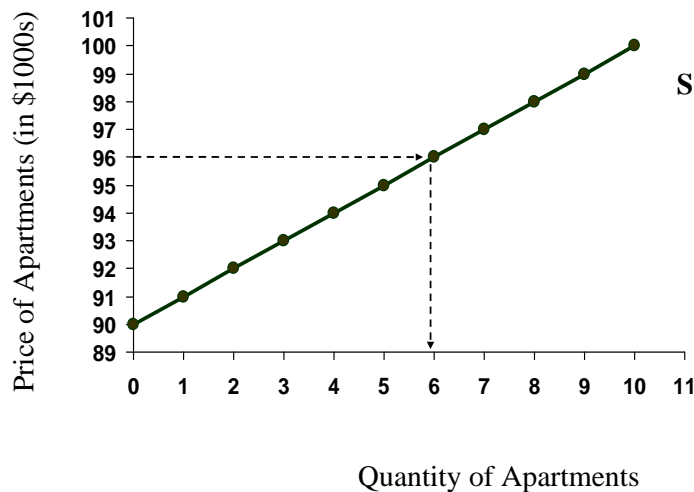
- A key input for making deck chairs becomes more expensive.
- In a highly publicized event, someone falls off a poorly constructed deck chair and sustains a serious head injury.

Self Test

1. Which of the following is an example of *empirical* work?
 - a. Susanna develops a simple model to represent the life cycle of a certain species of grasshopper.
 - b. Juliana collects data on frog populations in a local pond.
 - c. Marshal experiments with a supply and demand model, shifting the supply curve to the left and right.
 - d. Anaya predicts likely changes in the housing market, using a housing model.
 - e. Jorge builds a model city using a sophisticated computer program.
2. The three main modes of investigation for understanding variations in price and quantities are:
 - a. Time series, theoretical, and empirical
 - b. Time series, empirical, and supply curve analysis
 - c. Empirical, theoretical, and historical
 - d. Empirical, theoretical, and thought experiments
 - e. Time series, thought experiments, and supply curve analysis

Questions 3 to 5 refer to the following graph:

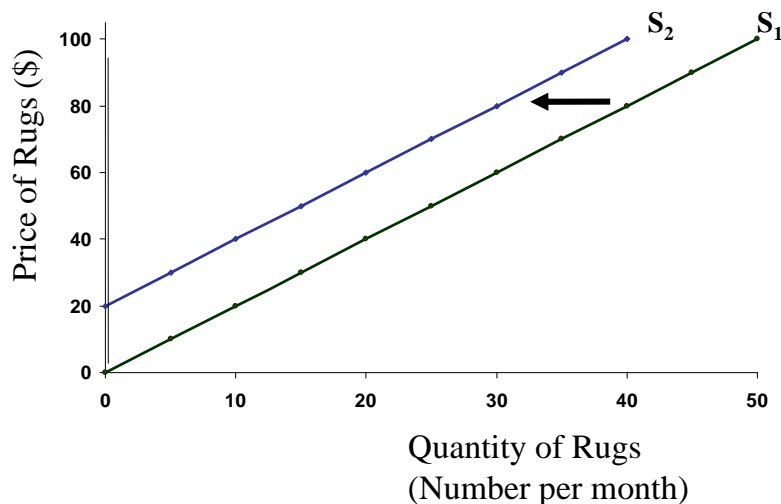
The Supply Curve for Apartments



3. Based on Figure 4.1, how many apartment owners would be willing to sell their apartments for \$91,000?
 - a. None
 - b. One
 - c. Two
 - d. Six
 - e. All ten apartment owners

4. In the scenario depicted in Figure 4.1, up to ten apartments may be available for sale. Suppose that ten more apartment owners enter the market, for a total of twenty available apartments. These new entrants into the market would be willing to sell their apartments for any price above \$90,000. Which of the following statements accurately describes the resulting change in the supply curve?
- The supply curve shifts upward.
 - The supply curve shifts to the right.
 - The supply curve shifts to the left.
 - The supply curve becomes longer.
 - The supply curve can no longer be represented by a straight line.
5. In the situation described in question #4, how many apartment owners would be willing to sell their apartments for \$91,000?
- None
 - One
 - Two
 - Ten
 - Eleven
6. Which of the following statements is true, regarding the supply of a particular good, and that good's own price?
- A price increase shifts the supply curve to the right.
 - A price decrease shifts the supply curve to the right.
 - A price increase shifts the supply curve downward.
 - A price change alone does not shift the supply curve.
 - A price change is the only way to shift the supply curve.

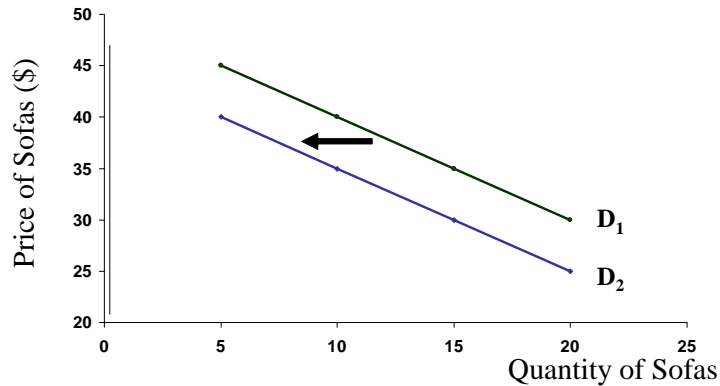
Question #7 refers to the following graph.



7. The graph shown above depicts two possible supply curves for production of handmade rugs. S_1 is the initial supply curve, and S_2 is the new supply curve after a change has occurred in the market. Which of the following events could have caused this shift?
- Several rug makers have left the market, making handmade rugs more scarce.
 - Several new rug makers have entered the market, making handmade rugs more plentiful.
 - The price of thread used in rugs has dropped, making it cheaper to produce rugs.
 - Rugs have come into fashion, so buyers want more of them.
 - Rugs have gone out of fashion, so buyers want fewer of them.
8. Which of the following is *not* an example of a “nonprice determinant of supply” of handmade rugs?
- Available technology for making rugs.
 - The price of looms for weaving rugs.
 - Number of rug producers.
 - Price of related goods and services.
 - Price of handmade rugs.
9. Which of the following is an example of movement *along* a supply curve?
- The quantity of apples offered for sale increases as the price of apples rises.
 - An apple orchard burns down in an accidental fire, decreasing the number of suppliers on the market.
 - Thanks to good weather conditions, apple growers enjoy a bumper crop this year.
 - The price of pears doubles, increasing demand for apples.
 - The price of fertilizer increases, making it more expensive to produce apples.
10. Which of the following statements is true?
- Markets respond to both effective and latent demand.
 - Markets respond to demand, even if that demand is not backed up by cash.
 - Markets respond only to wants or needs that are backed up by the ability to pay.
 - Demand curves represent "effective demand" only.
 - Both c and d are true.
11. Samantha runs a small business selling birthday cakes. She gets an order for 10 cakes due next week. She decides to hire an assistant to help her bake the 10 cakes. Samantha's need for an assistant is an example of
- derived supply
 - derived demand
 - the law of demand
 - a nonprice determinant of demand

- e. a nonprice determinant of supply

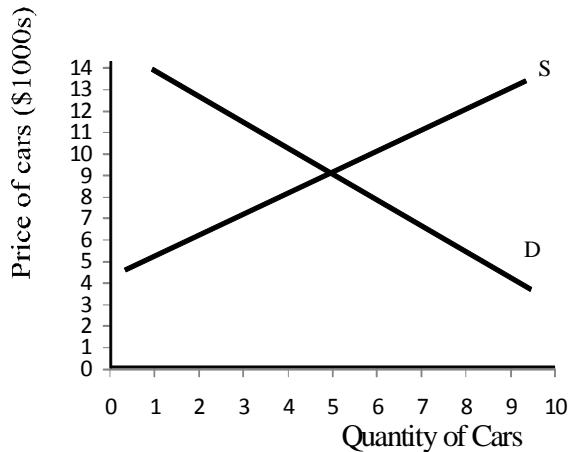
Question #12 refers to the following graph:



12. Assume that sofas and arm chairs are substitute goods. The graph shown above illustrates the demand curve for sofas. Which of the following events could have triggered the shift in demand from D_1 to D_2 , as shown above?

- The price of sofas increased.
 - The price of armchairs increased.
 - The price of labor for making sofas increased.
 - The price of sofas decreased.
 - The price of armchairs decreased.
13. A bike shop in a small town has received a shipment of 10 new bicycles. The shop offers the bikes for sale at a price of \$300 each. At this price, however, there are only two people in town who are willing to buy a bicycle. This situation can be described as
- disequilibrium
 - shortage
 - surplus
 - equilibrium
 - both a and c are correct

Questions 14 to 16 refer to the following graph.



14. When the price of cars is \$5000, which of the following terms is *not* an accurate description of the situation?
- Quantity demanded exceeds quantity supplied.
 - A shortage exists.
 - The market is in disequilibrium.
 - Fewer than five cars are available for sale.
 - The market is in equilibrium.
15. Beginning from the price of \$5000, which of the following events would be predicted by the theory of market adjustment?
- Some buyers who are willing to pay more will bid the price of cars up.
 - The market will remain in disequilibrium.
 - Prices will fall.
 - All buyers will remain in the market.
 - The supply and demand curves will shift to achieve equilibrium.
16. Now suppose that the local government invests in a new, very efficient fleet of buses. Now, it is easy and affordable to get from one place to another without having your own car. What change in the graph shown above is most likely to result from the new bus service?
- The supply curve shifts to the right.
 - The supply curve shifts to the left.
 - The demand curve shifts to the right.
 - The demand curve shifts to the left.
 - None of the above.
17. At the end of a hot day, ten people want to buy a glass of lemonade. However, the local lemonade stand only has five glasses of lemonade left. The lemonade stand operator sells the remaining five glasses to the five people who are willing and able to pay the most. This is an example of

- a. surplus
- b. rationing by price
- c. the signaling function of markets
- d. a shift in the demand curve
- e. a lottery

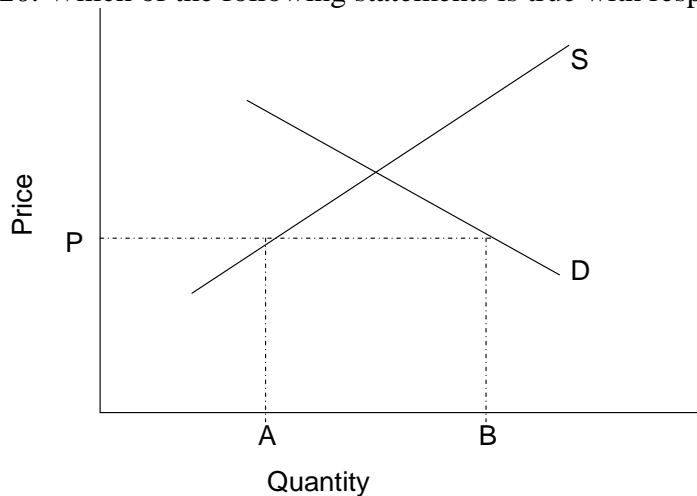
18. Which of the following is an example of a price ceiling?

- a. A group of producers form a cartel.
- b. A young woman realizes she cannot get a promotion at her job unless she gets another degree.
- c. A group of sellers agree among themselves that they will not sell their product below a certain price.
- d. Nobody is allowed to charge more than \$5 per bag of corn.
- e. None of the above.

19. A cartel is

- a. An organization that sells oil.
- b. A consortium of consumers.
- c. An institution that creates price ceilings.
- d. A group of producers who mutually agree to limit their production, in order to sustain a price floor.
- e. A group of producers who mutually agree to trade with one another.

20. Which of the following statements is true with respect to the graph shown below?



- a. Price P is a price floor that affects the quantity traded on the market.
- b. At price P, quantity demanded exceeds quantity supplied.
- c. At price P, quantity A is demanded.
- d. At price P, this market is in equilibrium.

e. Both a and b are true.

Answers to Active Review Questions

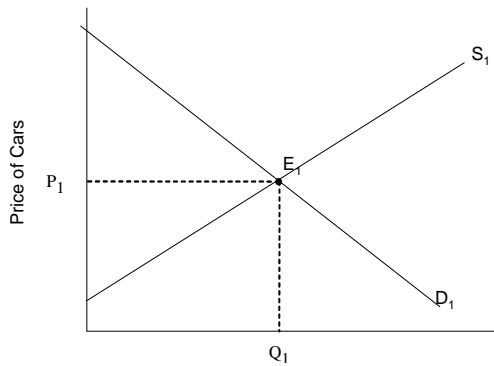
1. empirical
2. time series
3. demand
4. effective
5. substitute
6. complementary
7. disequilibrium
8. static
9. decrease, increase
10. rationing
11. a. shortage b. inadequacy c. scarcity
12. False. To derive a supply curve empirically we would have to hold everything else in the market constant while varying just the price, and measure the quantity of the good in question supplied at each price. Approximations of this exercise have been done, but in general, a supply curve represents a thought experiment rather than a depiction of empirical data.
13. True. For example, if limes command a high price, lemon producers might switch to lime production, thus decreasing the total supply of lemons available.
14. True.
15. True.
16. False. In general, an increase in demand tends to increase both equilibrium price and equilibrium quantity.
17. Market supply: 200.
18. Available technology of production; resource prices; number of producers; producer expectations about future prices and technology; prices of related goods and services.
19. The demand curve slopes downward because in general, the higher the price of the good, the fewer people will want to buy it.
20. Occasionally, people will want more of a good if it is sold as a "prestige" good at a high price. This phenomenon might sometimes be observed with specialty foods, clothes, or cars.
21. "Change in quantity demanded" refers to movement *along* the demand curve. For example, if the price of apples rises, all other things being equal, people will buy fewer apples; thus, the quantity demanded will decrease. A "change in demand" refers to a situation in which the entire demand curve shifts. For example, if a large number of new people move into your neighborhood, there will be a larger pool of people interested in buying apples at the local grocery store.
22. A static model assumes that all adjustments occur instantaneously. A dynamic model explicitly takes the passage of time into account.
23. The textbook describes the example of the shortage of nursing staff in health care settings, a shortage that has existed for decades. You may come up with other real-life or hypothetical examples. For example, adjustment to equilibrium might take a long time in a housing market; sellers might keep prices high for a period of time,

hoping to find takers, even though few people are willing to purchase homes at those prices.

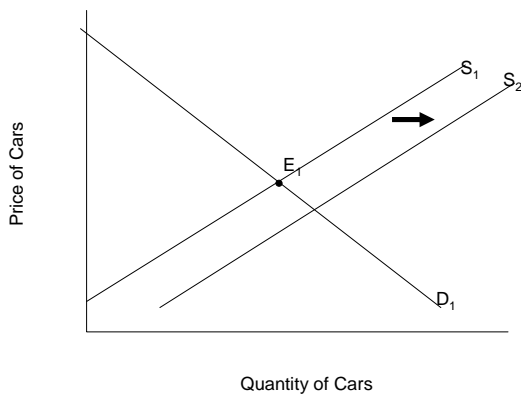
- 24. The signaling function of the market refers to the market's ability to carry information throughout the economy, for example about what goods people want and how readily those goods can be produced. The rationing function of the market refers to its function in determining who gets what quantity of any given resource.
- 25. No, this market is not in equilibrium; there is a shortage of movie tickets.

Answers to Problems

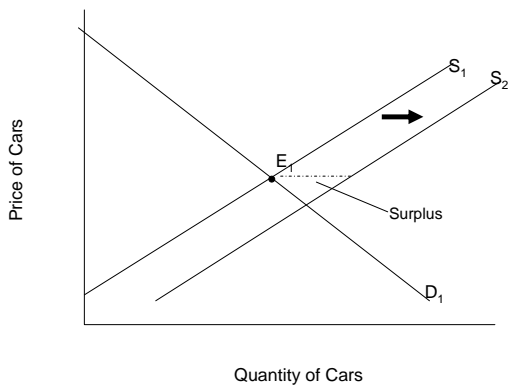
1. a.



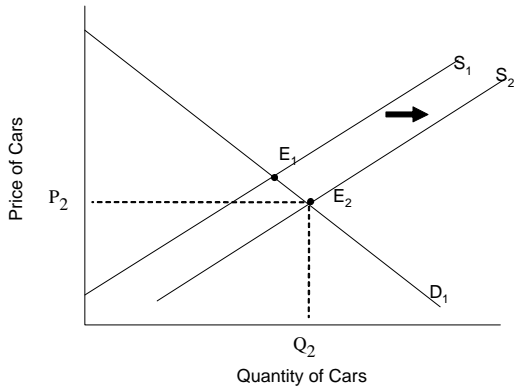
1. b.



1. c. The shift in the supply curve creates a temporary surplus.

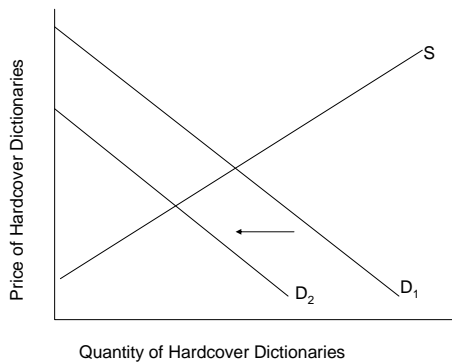


1. d.



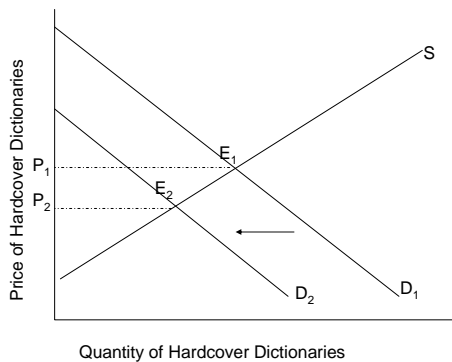
1. e. The supply curve has shifted to the right. The equilibrium price has fallen, and equilibrium quantity has risen.

2. a. The demand curve shifts to the left.



2. b. The supply curve does not shift.

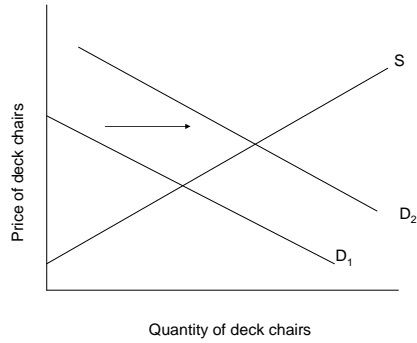
2. c. The price of hardcover dictionaries at the new equilibrium, E_2 , is lower.



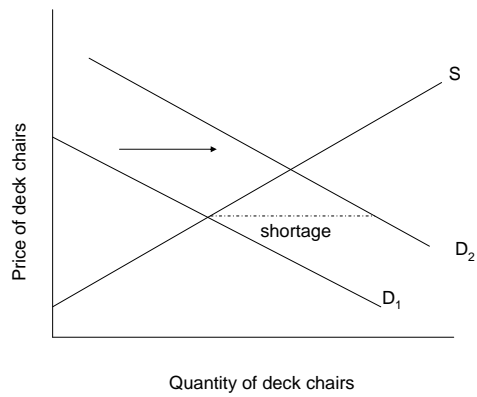
d. Many answers are possible here. For example, dictionary producers might continue charging high prices out of habit, failing to recognize – or not wanting to admit -- that demand has changed significantly.

3. The equilibrium price could rise as a result of the supply curve shifting to the left (i.e. a decrease in supply), or as a result of the demand curve shifting to the right (i.e. an increase in demand).

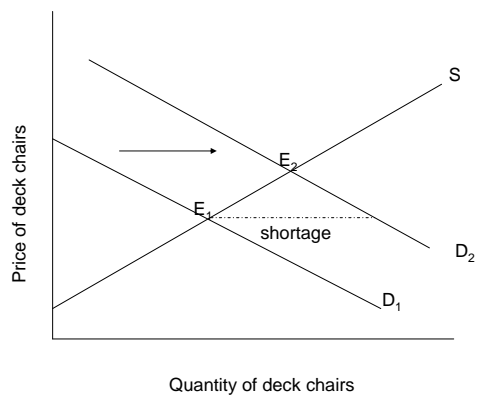
4. a.. The demand curve shifts to the right, as shown below.



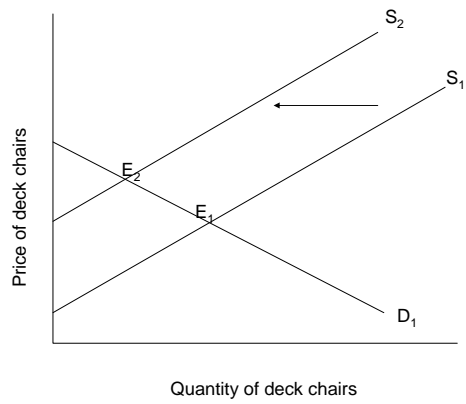
4. b.



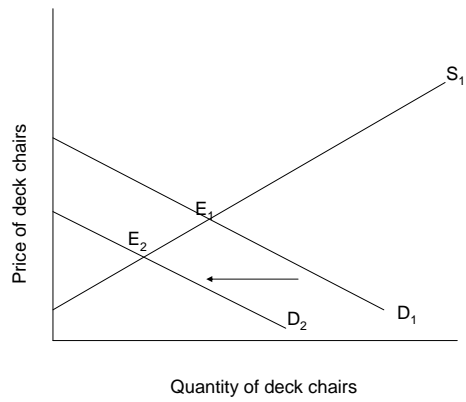
4. c.



5. a. The supply curve shifts to the left, leading to a higher equilibrium price and lower equilibrium quantity.



5. b. The demand curve shifts to the left, leading to a lower equilibrium price and lower equilibrium quantity.



Answers to Self Test Questions

- | | |
|-------|-------|
| 1. b | 11. b |
| 2. c | 12. e |
| 3. b | 13. e |
| 4. b | 14. e |
| 5. e | 15. a |
| 6. d | 16. d |
| 7. a | 17. b |
| 8. e | 18. d |
| 9. a | 19. d |
| 10. e | 20. b |

CHAPTER 5

WORKING WITH SUPPLY AND DEMAND

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Overview

This chapter continues dealing with the demand and supply curves we learned about in Chapter 4. You will learn about the notion of *elasticity* of demand and supply, the way in which demand is affected by income, and how a price change has both income and substitution effects on the quantity demanded.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Understand why businesses may or may not be able to increase revenues by raising prices.
2. Define elasticity of demand and differentiate between elastic and inelastic demand.
3. Define elasticity of supply and differentiate between elastic and inelastic supply.
4. Understand the income and substitution effects of a price change.
5. Discuss the differences between short-run and long-run elasticities.

Key Terms

price inelastic demand

price elastic demand

perfectly elastic demand curve

price elasticity of supply

inferior goods

income effect of a price change

short-run elasticity

elasticity

perfectly inelastic demand curve

price-taker

normal goods

income elasticity of demand

substitution effect of a price change

long-run elasticity

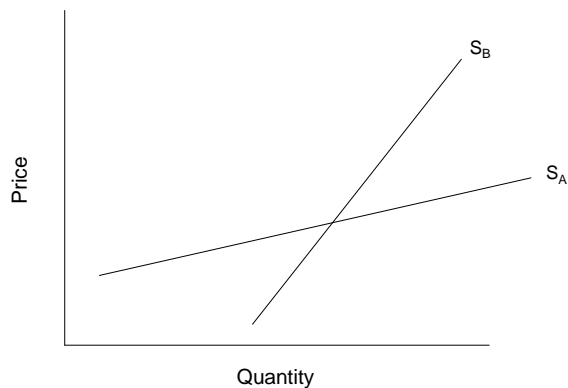
Active Review Questions

Fill in the blank

1. When you drop by the only coffee shop in your neighborhood, you notice that the price of a cup of coffee has increased considerably since last week. You decide it's not a big deal, since coffee isn't a big part of your over-all budget, and you buy a cup of coffee anyway. Most of the other coffee drinkers who frequent the coffee shop make a similar calculation. Thus, the demand for coffee in your neighborhood is relatively _____.

2. You sell muffins for one dollar each. If you raise your price by even one penny, you will lose all your customers. You can be referred to as a(n) _____.
3. The responsiveness of demand to income is known as the _____ of demand.
4. The income elasticity of demand is _____ for inferior goods and _____ for normal goods.
5. When demand is _____, revenue to the seller is unaffected by a price change.

For Question #6, refer to the following graph:



6. For a given price range, which of the supply curves in the graph shown above is characterized by a relatively greater elasticity of supply? _____
7. The elasticity of demand is calculated as the percent change in _____ divided by the percent change in _____.
8. When quantity demanded does not respond at all to price, demand is perfectly _____.
9. If the price elasticity of demand is greater than one, then demand is _____.
10. Suppose tangerines are an inferior good. This means that if your income decreases, you will buy (more/fewer) _____ tangerines.

True or False

11. Perfectly elastic demand refers to a situation in which any price change for the good in question, no matter how small, will produce an "infinite" change in quantity demanded.

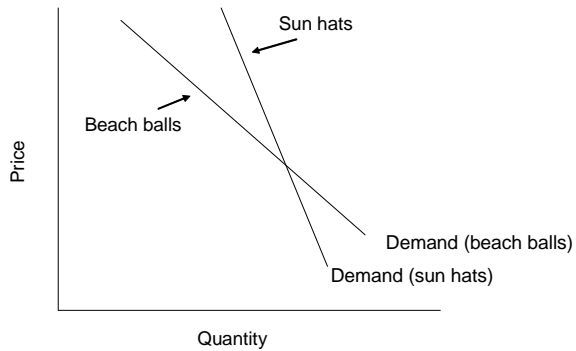
12. When the seller increases the price charged for a good with an elastic demand, the seller's revenues will go up.
13. Elasticity is the same as the slope of the demand curve.
14. Income elasticity of demand is always expressed as a positive number (absolute value).
15. When the income elasticity of demand is positive but less than 1, demand is called "income elastic."
16. If a good is inferior and its price rises, the income effect will encourage greater expenditures, at the same time as the substitution effect pushes toward lower expenditures.

Short Answer

17. Name the three main reasons why demand for a good or service might be inelastic.

18. You run the only lemonade stand in Central Park. If people don't buy lemonade from you, their only other option is to buy orange juice from a nearby vendor. One day, you decide to raise the price of your lemonade from \$1 per glass to \$1.25 per glass. As a result, half of your usual customers decide to get orange juice instead of lemonade that day. What does this experience tell you about the demand for lemonade in Central Park?

19. A 20% increase in the price of milk leads to a 10% reduction in the quantity of milk demand. What is the price elasticity of demand for milk?



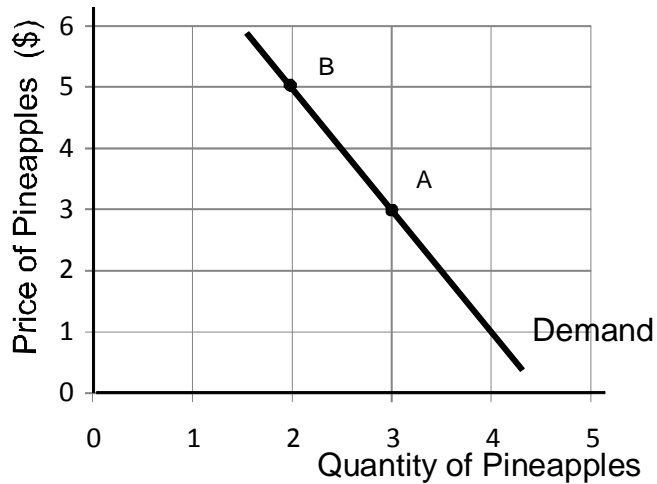
20. The graph shown above illustrates the demand curves for two goods: Sun hats and beach balls. Which demand curve is relatively more elastic?

Problems

1. Draw a diagram of a perfectly inelastic demand curve. Suggest an example of a good for which demand might be perfectly elastic.

2. A limited number of Civil War uniforms have been preserved. No matter how much buyers are willing to pay for these uniforms as collectors items, there's no way to increase the quantity of uniforms in existence. Show the supply curve for authentic Civil War uniforms.

For Problems #3 and #4, refer to the following graph:



3. The graph above shows the demand curve for pineapples.

a. Calculate the amount of revenue the seller would receive if the price is set at \$3.

b. Calculate the amount of revenue the seller would receive if the price is set at \$5.

c. Reasoning from the results you just calculated, is the demand for bananas elastic or inelastic, in this range of prices? How do you know?

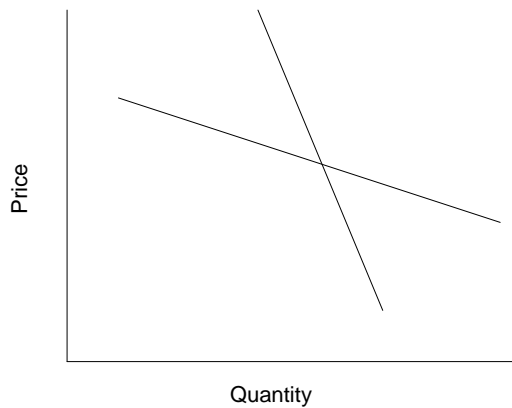
4. Continuing with the above example of pineapples,

a. Calculate the percent change in price that occurs in moving from point A (the “base” case) to point B, using the midpoint formula. (If directed by your instructor, also calculate this using the log-difference formula.)

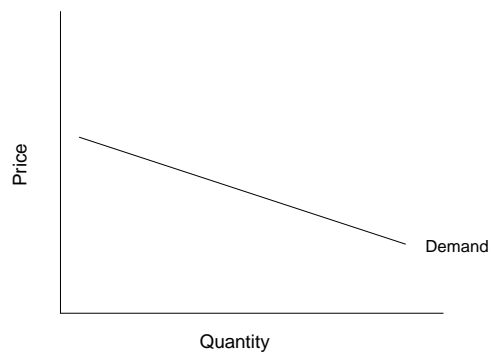
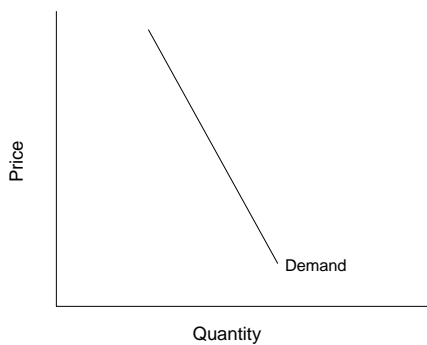
b. Calculate the percent change in quantity that occurs in moving from point A to point B, using the midpoint formula. (If directed by your instructor, also calculate this using the log-difference formula.)

c. Calculate the price elasticity of demand for pineapples.

4. Suppose the demand for oranges is more price elastic in the demand for chocolate. On the graph below, indicate which line represents the demand for oranges, and which represents the demand for chocolate.



5. Which of the following demand curves is more elastic?

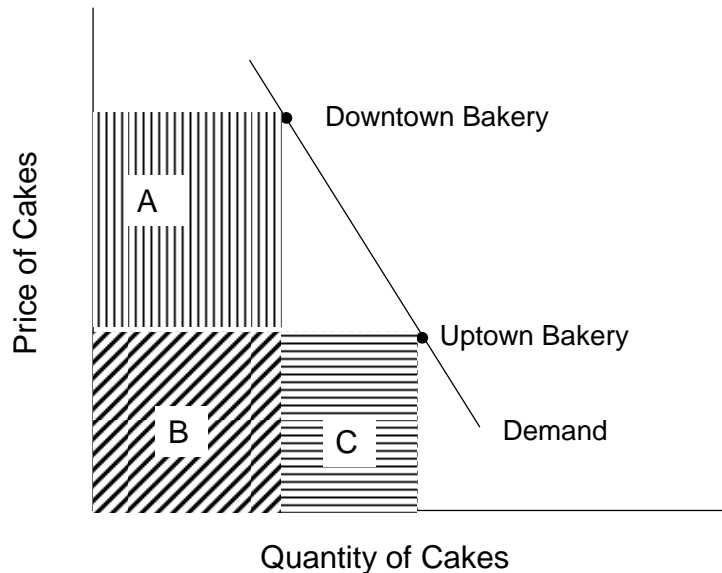


Self Test

1. The price of milk doubles, but the quantity demanded changes very little. Which of the following would *not* be a likely explanation for this phenomenon?

- a. There isn't a good substitute for milk.
- b. People feel they need milk, rather than just wanting it.
- c. Demand for milk is highly price elastic.
- d. Milk is not a very big part of most people's budget.
- e. All of the above are likely explanations for this phenomenon.

Questions 2 and 3 refer to the following scenario and graph. Bob's Bakery has two locations. The bakery decides to experiment with charging different prices at the two bakeries, to find out which price will bring in higher total revenues. The results of the experiment are shown in the graph below.



2. The revenue earned at Downtown Bakery is equal to

- a. area A
- b. area B
- c. area C
- d. area A + B
- e. area B + C

3. Area A is bigger than area C. This means that

- a. Demand for chocolate cake is highly price elastic.
- b. Demand for chocolate cake is price inelastic.
- c. The quantity demanded of chocolate cake exceeds the quantity supplied.

- d. The quantity supplied of chocolate cake exceeds the quantity demanded.
 - e. None of the above.
4. Suppose a study finds that as people's incomes rise, they tend to buy fewer subway tokens because they are more likely to have a car. This would mean that subway tokens are
- a. normal goods
 - b. inferior goods
 - c. price elastic goods
 - d. price taker goods
 - e. supply elastic goods
5. The more money people make, the more pairs of shoes they buy. We can conclude that
- a. Shoes are a normal good.
 - b. Shoes are an inferior good.
 - c. Demand for shoes is highly price elastic.
 - d. Demand for shoes has an elasticity between 0 and 1.
 - e. All of the above.

Questions #6 and #7 refer to the following scenario.

A 4% increase in the price of tomatoes leads to a 1% reduction in the quantity of tomatoes demanded.

6. The price elasticity of demand for tomatoes is:
- a. 0.5
 - b. 0.6
 - c. 0.25
 - d. 1.25
 - e. 4.0
7. Which of the following statements about the market in tomatoes is *false*?
- a. Demand for tomatoes is price inelastic.
 - b. A price increase will lead to a revenue increase.
 - c. Demand for tomatoes is unit elastic.
 - d. Price elasticity of demand equals percent change in quantity demanded, divided by percent change in price.
 - e. All of the above are true.
8. Which of the following statements is *true*?

- a. Elasticity is identical to the slope of the demand curve.
 - b. A single, straight-line demand curve can be elastic in one region and inelastic in another.
 - c. Perfectly inelastic demand can be represented by a horizontal line.
 - d. When demand is unit elastic, revenue is strongly affected by price changes.
 - e. You can always determine the relative elasticity of demand for two products by comparing the slope of their demand curves.
9. The government of the major oil-producing country is overthrown in a coup. In the confusion created by the coup, the country stops producing oil for two months. Which of the following effects would you expect to see as a result of this sequence of events?
- a. The oil supply decreases.
 - b. In a stylized model of the oil market, the supply curve shifts to the left.
 - c. In a stylized model of the oil market, the supply curve shifts to the right.
 - d. Both a and b would be expected.
 - e. Both a and c would be expected.
10. Suppose the government of Canada sets a ceiling on the price of oil. Which of the following situations could result?
- a. People pay less than the equilibrium price for oil.
 - b. The quantity of oil demanded exceeds the quantity of oil supplied.
 - c. A shortage exists in the oil market.
 - d. All of the above.
 - e. None of the above.
11. Which of the following situations *cannot* exist at market equilibrium?
- a. scarcity
 - b. shortage
 - c. inadequacy
 - d. rationing
 - e. signaling
12. Which of the following income elasticities could correspond to a *normal good* that is *income inelastic*?
- a. 0.5
 - b. 1.5
 - c. -1.5
 - d. 2.0
 - e. -0.5

13. Every week you buy rice, wheat, and oatmeal. Suddenly the price of rice rises. You decide to cut down on your rice purchases and get more wheat and oatmeal instead. This is an illustration of
- an income effect
 - a substitution effect
 - a normal good effect
 - a Giffen good
 - a price inelastic good
14. A population subsists largely on potatoes, plus small amounts of dairy products and vegetables. The price of potatoes rises, driving many poor families deeper into poverty. As a result, these families are forced to eliminate dairy products and vegetables from their daily diet and start eating even more potatoes than they did before. In this example potatoes are
- normal goods
 - inferior goods
 - giffen goods
 - both a and c are correct.
 - both b and c are correct.
15. You get a notice in the middle of the semester stating that your monthly dorm fee is being doubled, effective immediately. You don't want to pay the higher fee, but it's not practical for you to move out of the dorm mid-semester. You decide to pay the extra charge now, and look for new housing option after exams are over. Which of the following statements best describes your situation?
- The dorm room is a Giffen good.
 - The dorm room is an inferior good.
 - Your short run demand for dorm housing is relatively inelastic.
 - Your long run demand for dorm housing is less elastic than your short run demand.
 - None of the above.
16. Which of the following goods is most likely to have high price elasticity of demand?
- A staple food.
 - A good that forms a very small part of a person's total budget.
 - A good for which there are many close substitutes.
 - A vital medicine.
 - None of the above.
17. Jake sells hot dogs at an outdoor stand. There are several other hot dog stands in the vicinity. All the hot dog sellers are price takers. Which of the following statements is true about the demand for Jake's hot dogs?

- a. Demand for Jake's hot dogs is perfectly inelastic.
 - b. Demand for Jake's hot dogs is perfectly elastic.
 - c. Demand for Jake's hot dogs can be represented as a vertical line.
 - d. Demand for Jake's hot dogs can be represented as a downward sloping line.
 - e. None of the above.
18. Suppose that the price elasticity of supply for toothpaste is 0.2. If the price of toothpaste increases by 30%, what would we expect to happen to the quantity of toothpaste supplied?
- a. increase by 3%
 - b. decrease by 5%
 - c. increase by 60%
 - d. decrease by 15%
 - e. increase by 6%
19. Suppose a grocery store normally sells 100 cartons of milk per day and the price elasticity of demand for milk is 1.7. If the store lowers the price of milk by 10%, about how many cartons of milk will it then sell per week?
- a. 117
 - b. 83
 - c. 85
 - d. 100
 - e. 101.7
20. Which of the following is most likely to be an inferior good?
- a. eyeglasses
 - b. airplane tickets
 - c. caviar
 - d. opera tickets
 - e. discount bus tickets

Answers to Active Review Questions

1. price inelastic
2. price taker
3. income elasticity
4. negative, positive
5. unit elastic
6. S_A (the flatter curve)
7. quantity demanded; price
8. inelastic
9. elastic

10. more
11. True.
12. False.
13. False.
14. False.
15. False.
16. True.
17. There are very few good, close substitutes for the good or service; it is a good or service that people feel they need, rather than just want; or the good or service is a very small part of a buyer's budget.
18. The demand for lemonade in Central Park is price elastic.
19. 0.5
20. The demand curve for beach balls is relatively more elastic.

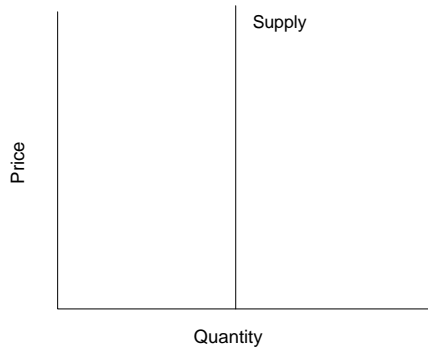
Answers to Problems

1.



The textbook suggests the example of a medication that you must take every day in order to survive. Provided that you have the money to pay for it, your demand is likely to be perfectly inelastic over a range of prices, since skipping a pill would mean losing your life.

2.



- 3.
- a. Revenue (at point A) = Price \times Quantity = \$3 \times 3 = \$9
 - b. Revenue (at point B) = \$5 \times 2 = \$10
 - c. In this case, an increase in price from \$3 to \$5 raises revenues from \$9 to \$10. When a price increase leads to higher revenues (that is, when revenues move in the same direction as the price), demand is **inelastic**.

4. a. Midpoint formula:

$$\% \text{ change in price} = [(5-3) / ((5+3)/2)] \times 100 = (2/4) \times 100 = + 50\%$$

Or log difference formula:

$$\% \text{ change in price} = [\ln(5) - \ln(3)] \times 100 = + 51.08\%$$

b. Midpoint formula:

$$\% \text{ change in quantity} = [(2-3) / ((2+3)/2)] \times 100 = (1/2.5) \times 100 = - 40\%$$

Or log difference formula:

$$\% \text{ change in quantity} = [\ln(2) - \ln(3)] \times 100 = - 40.55\%$$

c. Using numbers from midpoint formula:

$$\text{Price elasticity of demand} = | \% \text{ change in quantity demanded} / \% \text{ change in price} |$$

$$= | -40\% / 50\% | = \mathbf{.8}$$

Or using numbers from log difference formula:

$$= | -40.55\% / 51.08\% | = \mathbf{.794}$$

5. We cannot tell which demand curve is more elastic, because the scale is not shown. To compare the elasticities of the two curves based on their appearance, they would have to be on the same scale and passing through the same point.

Answers to Self Test Questions

- | | |
|-------|-------|
| 1. c | 13. b |
| 2. d | 14. e |
| 3. b | 15. c |
| 4. b | 16. c |
| 5. a | 17. b |
| 6. c | 18. e |
| 7. c | 19. a |
| 8. b | 20. e |
| 9. d | |
| 10. d | |
| 11. b | |
| 12. a | |

CHAPTER 6

CAPITAL STOCKS AND RESOURCE MAINTENANCE

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Overview

This chapter deals with the concepts associated with resource maintenance and capital stocks. The text examines the five types of capital that underlie economic activity: natural, human, social, manufactured, and financial capital. This chapter focuses primarily on definitions and concepts, rather than on graphic or numerical problems.

Chapter Objectives

After reading and reviewing this chapter, you should be able to:

1. Define the difference between stocks and flows.
2. Define the five types of capital.
3. Discuss the limitations of substitutability with respect to natural capital.
4. Describe why social capital is important for economic activities.
5. Distinguish between the two types of financial capital.
6. Understand the importance of maintaining capital stocks.

Key Terms

capital stock	investment
stock	flow
stock-flow diagram	natural capital
manufactured capital	financial capital
human capital	social capital
physical capital	intangible capital
renewable resource	nonrenewable resource
substitutability	precautionary principle
sustainable socioeconomic system	fixed manufactured capital
depreciation	inventories
labor	labor productivity
technology	embodied technology
disembodied technology	social organization
equity finance	debt finance
loan	principal
interest	

Active Review

Fill in the Blank

1. Assets that are tangible are known as _____ capital.

2. A gardener hears that a pesticide he has been using may have toxic effects on birds. Rather than wait to find out what further studies show about its effects, he finds another way of controlling insects in his garden. By taking action to protect birds, despite uncertainty about the dangers of the pesticide, the gardener is exercising the _____ principle.
3. An oil executive states he is not concerned about the eventual depletion of fossil fuel resources. "When we run out of oil," he says, "we'll just switch to nuclear." The oil executive is basing his argument on the notion of _____.
4. Manufactured goods that yield a flow of productive services over an extended period of time are known as _____ manufactured capital.
5. Everybody in Springfield knows that when an irrigation system malfunctions, the first thing you should do is turn off the power connection to the irrigation pump. This knowledge is an example of _____ technology.
6. Gary's Gasoline Station is for sale. Gary hopes to get a good price for the station in part because he has built up a good reputation with customers. The good will of Gary's customers is a form of _____ capital.
7. Financial capital exists in two forms: _____ finance and _____ finance.
8. Taking out a loan is equivalent to (choose one: renting/purchasing) _____ financial capital.
9. Amy takes out a loan. In taking out the loan, she agrees to repay both the _____ (the original amount) and interest. (principal)
10. The term "capital" is often used by non-economists to refer only to _____ capital.

True or False

11. In a sustainable socioeconomic system, flows of goods and services come largely from judicious use of renewable capital stocks.
12. Fixed manufactured capital stocks eventually become part of the product they are used to make.
13. A business that finances investments for its future production out of its own funds is said to be using debt finance.
14. Equity finance is essentially free, because it does not involve interest payments.

15. The number of fish sold per day at Big City Fish Shop is an example of a stock.
16. The *principal* is the original amount of a loan plus interest.
17. Embodied technology refers to technology that relates to human health.

Short Answer

18. Name the five forms of capital.

19. Alice is good at learning foreign languages, and has already studied Latin and Greek. She decides to sign up for an intensive summer course in intermediate German. Describe the scenario using the terms " human capital stock" and "investment."

20. Match the following items from column 1 with the appropriate examples from column 2:

Column 1:

- a) natural capital
- b) human capital
- c) social capital
- d) equity finance

Column 2:

- 1) clean water
- 2) a company's good reputation
- 3) a company uses its own funds to pay for new machinery
- 4) literate workers

Self Test

1. Which of the following is an example of a stock?
 - a. The number of haircuts you got last year
 - b. The amount of water that passes over a waterfall per second
 - c. The number of screwdrivers sold by a hardware store each week
 - d. The number of fish produced at a hatchery each day
 - e. The number of goldfish in the pet store's aquarium
2. Which of the following is an example of investment?

- a. A business sponsors an educational program for its employees.
 - b. A farmer sets aside seeds to plant next year.
 - c. A group of neighbors construct a new day care facility.
 - d. A worker puts half her paycheck into a savings account.
 - e. All of the above.
3. Which of the following statements is *false*?
- a. A nonrenewable resource is a stock that diminishes as it is used over time.
 - b. Renewable resources can be eliminated through over-use.
 - c. Financial capital refers to purchasing power, or money.
 - d. Natural capital refers to both renewable and nonrenewable resources.
 - e. Human capital refers to buildings, machines, and inventories of produced goods.
4. Which of the following would be referred to as social capital?
- a. money in the bank
 - b. heavy machinery
 - c. one person's training in engineering
 - d. a forest
 - e. trust and mutual understanding
5. Which of the following activities would be described as a resource maintenance effort?
- a. Limiting use of fossil fuels in an effort to limit global warming
 - b. Harvesting fish at a high rate
 - c. Extracting oil from known oil reserves
 - d. Using a well-designed machine to process leather for shoes
 - e. Selling seeds on the international market
6. Many public health and environmental policy experts believe that when an activity poses a threat to human health or the environment, action should be taken to address that threat even when there is some scientific uncertainty about the issue. This approach is known as
- a. substitutability
 - b. the renewable resource rule
 - c. the precautionary principle
 - d. the sustainability principle
 - e. the fixed capital principle
7. Which of the following is *not* an example of manufactured capital?
- a. roads
 - b. computers
 - c. a plow

- d. a primitive digging stick
 - e. a fresh-water spring
8. A city government builds a new road. After five years the road develops some potholes, making it less useful. This decline in the value of the road over time is an example of
- a. fixed inventory
 - b. flows of capital services
 - c. depreciation
 - d. substitutability
 - e. a renewable resource
9. Hal's Hardware has a backup supply of 100 cans of paint thinner in its warehouse. The cans of paint thinner, which Hal's Hardware is holding until they can be used, are
- a. an inventory
 - b. a flow
 - c. fixed manufactured capital
 - d. renewable resources
 - e. financial capital
10. Which of the following is an example of fixed manufactured capital?
- a. A delivery truck.
 - b. Oil reserves.
 - c. A chemical compound that will be incorporated into a product.
 - d. Nails that will be used to build a playground.
 - e. Both a and d are correct.
11. Which of the following would be considered a type of social capital?
- a. technology
 - b. good nutrition
 - c. roads
 - d. factories
 - e. financial assets
12. Which of the following statements is *false*?
- a. Crude oil stocks are natural capital.
 - b. Mutual understanding is a type of social capital.
 - c. Knowledge about how to operate a machine is intangible capital.
 - d. Physical capital is synonymous with natural capital.
 - e. Education is an investment in human capital.

13. A farmer takes a course to learn about crop rotation methods. In taking this course, she is investing in
- substitutable capital
 - human capital
 - natural capital
 - nonrenewable resources
 - fixed manufactured capital
14. Which of the following is an example of a stock of natural capital?
- The number of trucks owned by company.
 - The new growth in a forest over a year.
 - The knowledge you have gained from your past education.
 - The amount of oil in an underground reserve.
 - Efforts to remove the effects of pollution from a river.
15. A diagram that shows how flows change the level of a stock over time is known as a(n)
- flow chart
 - flow diagram
 - stock-flow diagram
 - input-output model
 - capital stock diagram
16. Which of the following forms of capital would be likely to increase if there is an influx of new funding for literacy training?
- human capital
 - social capital
 - stock capital
 - financial capital
 - physical capital
17. Which of the following activities is an example of maintaining a capital stock?
- Replenishing soil quality through crop rotation.
 - Harvesting a crop of corn.
 - Withdrawing money from a checking account.
 - Paying a phone bill.
 - None of the above.
18. Which of the following is an example of an inventory?
- A freezer full of ice cream to be served at a party next week.

- b. Taking out a loan from a bank.
 - c. A shopping cart.
 - d. A house that is for sale by the owner.
 - e. Both a and b are true.
19. The possibility of using one resource instead of another is known as
- a. the precautionary principle
 - b. substitutability
 - c. sustainability
 - d. manufacturing advantage
 - e. comparative advantage
20. Manufactured goods that yield a flow of productive services over an extended period of time are referred to as
- a. capital services
 - b. capital flows
 - c. fixed manufactured capital
 - d. manufactured flows
 - e. inventories

Answers to Active Review Questions

- 1. physical
- 2. precautionary
- 3. substitutability
- 4. fixed
- 5. disembodied
- 6. social
- 7. equity; debt
- 8. renting
- 9. principal
- 10. financial
- 11. True.
- 12. False.
- 13. False. A business that finances investments for its future production out of its own funds is said to be using *equity* finance.
- 14. False. Although there are no interest payments, equity finance does involve opportunity costs.
- 15. False. The number of fish sold per day is an example of a flow.
- 16. False. The principal refers to the original amount of the loan, and does not include interest.
- 17. False. Embodied technology refers to technology that is incorporated into forms of manufactured capital.
- 18. Natural, manufactured, human, social, financial.

19. Alice's innate abilities and prior training, which contribute to her ability to learn a new language, are part of her *human capital stock*. Taking the German course is an *investment* that will increase her stock of knowledge.
20. a) 1; b) 4; c) 2; d) 3

Answers to Self Test Questions

1. e
2. e
3. e
4. e
5. a
6. c
7. e
8. c
9. a
10. a
11. a
12. d
13. b
14. d
15. c
16. a
17. a
18. a
19. b
20. c

CHAPTER 7

PRODUCTION COSTS

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Overview

Chapter 7 begins a two-chapter sequence describing the activity of production. The chapter begins by exploring the nature of different kinds of production costs. A numerical and graphical example is presented concerning how production levels, and production costs, change as the use of a variable input is increased. The concept of “marginal cost” will be introduced. You will learn about total product curves, total cost curves, marginal cost curves and the long-run average cost curve. If your instructor chooses to use the Appendix to this chapter, you will also learn how to graph and interpret average variable and average total cost curves.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Understand the economist’s notion of production.
2. Define the difference between economic and accounting costs.
3. Distinguish between internal and external costs.
4. Understand an economic production function.
5. Describe the relationship between patterns of returns and patterns of (total and marginal) production costs.
7. Discuss economies of scale.

Key Terms

inputs
waste products
final goods
economic costs
external costs
social costs of production
production function
variable input
capacity constraint
long run
ceteris paribus
marginal return
total product curve
increasing (marginal) returns
variable cost
marginal cost
total cost curve

outputs
intermediate goods
accounting costs
internal costs
technical efficiency
false economies
fixed input
short run
limiting factor
positive (direct) relationship
negative (inverse) relationship
diminishing (marginal) returns
constant (marginal) returns
fixed cost
total cost
increasing (marginal) costs
constant (marginal) costs

decreasing (marginal) costs
long run average cost
constant returns to scale
minimum efficient scale
input substitution

average (total) cost
economies of scale
diseconomies of scale
maximum efficient scale

Active Review

Fill in the Blank

1. Project costs that are borne by persons or entities not directly involved in the project activity are known as _____ costs.
2. Annika opens a riding stable. She factors in the cost of buying horses, buying riding tackle, renting space, and the opportunity cost of her time. She does not consider the effect of the noises and smells from her stable on a nearby, upscale outdoor restaurant. Annika is considering only the _____ costs of her project.
3. Ten processes exist to produce widgets. Of these, Process RXQ can make 100 widgets with less electricity and the same amount of other inputs as the other nine processes. Process RXQ is said to be _____.
4. An equation or graph that shows the relationship between types or quantities of inputs and quantity of the output is known as a(n) _____.
5. To isolate the effect of one variable on another, we endeavor to study the relationship _____, or “with all else constant.”
6. When we consider a time scale long enough to allow fixed inputs to become variable, it becomes relevant to consider the long run _____ cost of production.
7. Applying fertilizer to a crop of beans is associated with diminishing marginal returns. From this fact, we can deduce that applying fertilizer to beans has _____ marginal costs.
8. When a company's long-run average cost increases with increasing output, that company is experiencing _____ of scale.
9. A lawn service decides to get rid of its leaf blowing machines and increase its number of workers, who will gather and move leaves using regular, nonautomated rakes. This decision is an example of input _____.

True or False

10. The harmful effects of the pesticide DDT on human health can be considered an external cost.
11. Cake baking process A uses one hour of the cook's time and half an hour of the assistant's time. Process B takes one hour of the assistant's time and half an hour of the cook's time. Thus, process A is technically efficient compared to process B.
12. The social costs of production include opportunity costs as well as external costs.
13. A process exhibits economies of scale when long-run average cost increases with increasing output capacity.
14. A paper mill pollutes a local river by discharging waste containing chlorine and other toxic chemicals. The cost of treating diseases that result from this pollution would be considered an internal cost of production.
15. A company signs a contract for five years, under which it will pay the same amount every month for property insurance. This cost, which is independent of the level of production in any given month, is referred to as a variable cost.
16. In the long run, all inputs are variable.

Short Answer

17. Suggest a situation in which the economic costs of a project would be lower than the accounting costs.

18. Which is a better guide in making decisions about what projects to undertake: accounting cost or economic cost?

19. The relationship between hours spent studying (input) and knowledge of economics (output) is positive. However, once you have done 20 hours of studying, an additional hour does not add as much to your knowledge as the first hour did. When you graph the relationship between studying and knowledge, is the resulting line straight or curved? Why?

20. Explain the difference between fixed and variable costs.

Problems

1. As Augusta's Hair Salon increases its staff from 1 to 15 hairdressers, it experiences increasing marginal returns, because the hairdressers work faster and better when they are in a larger group. Illustrate this situation on a total product curve graph.

2. A shoe factory has 500 employees and produces a thousand pairs of shoes per hour.

a. What is the shoe factory's productivity per worker per hour? _____

b. The factory hires one new worker. Now, the factory produces 1,002 shoes per hour. Then the factory hires one more worker. Production rises to 1,004 per hour. Does the factory have diminishing, constant, or increasing marginal returns at this level of production?

c. Graph the production function (total product curve) of the shoe factory at these levels of production, carefully labeling all lines and points.

3. Production at Julia's call center shows the following relationship between the number of workers and the number of phone calls handled (per day).

Quantity of Variable Input: Labor	Quantity of Output: Calls	Marginal Return to Additional Labor	Fixed Cost (\$)	Variable Cost (\$)	Total Cost (\$)
0	0	--			
1	100				
2	180				
3	240				

- a. Calculate the marginal return gained from the addition of each worker, filling in the column in the table.
 - b. Suppose Julie has entered a long term lease for an office space and telephones, and this is her only fixed cost. The lease costs her \$50 (per day). Fill in the Fixed Cost column in the table.
 - c. Julia pays each worker she hires \$80 per day, and this is her only variable cost. Fill in the Variable Cost column in the table.
 - d. Fill in the column for the Total Cost corresponding to each level of production.
4. Producing umbrellas requires inputs of fabric, metal, and labor. Umbra's Umbrella Factory experiences increasing returns to inputs of labor up to a certain point, and constant returns for all levels of production thereafter. There is no range of diminishing returns at Umbra's Umbrella Factory.
- a. What is the shape of the production function for Umbra's Umbrella Factory? Sketch (and fully label) it below.

b. Sketch the total cost curve for Umbra's Umbrella Factory.

c. Sketch the marginal cost curve for Umbra's Umbrella Factory.

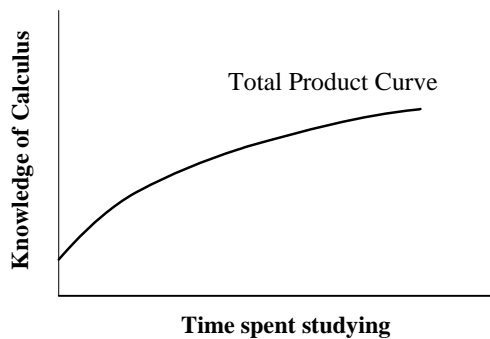
5. Coretta can build three chairs in her first week of work. In the second week, she starts to get tired and has to take time out to clean the workshop, so she can only make two additional chairs. In the third week, she settles into a pattern of one additional chair per week, which she can maintain for a fourth, fifth, and sixth week. In the seventh week, she's exhausted and can only finish half an additional chair.

a. Make a table showing the number of weeks worked and the marginal and total number of chairs produced.

- b. Sketch Coretta's total product curve for chairs, where the variable input is the time she spends, and the output is the total number of chairs produced.

Self Test

For question # 1, refer to the graph shown below:

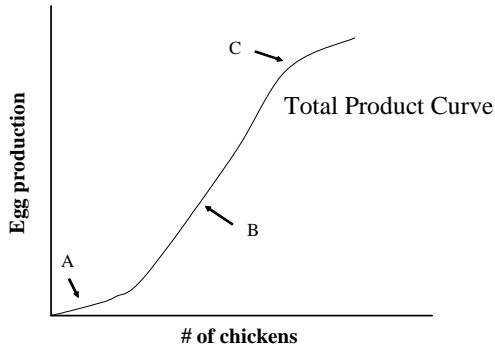


1. You are taking a calculus course. The graph above shows the relationship between time spent studying calculus (input) and knowledge of calculus (output). Based on the graph, you can see that
 - a. Studying calculus is characterized by increasing marginal returns.
 - b. Studying calculus is characterized by diminishing marginal returns.
 - c. Studying calculus is characterized by constant marginal returns.
 - d. Studying calculus has a synergistic effect on calculus knowledge.
 - e. The slope of the studying production curve is constant.

2. A hat maker cuts hats out of felt, then sells the left-over felt scraps to a pillow maker, who shreds the scraps and uses them to stuff pillows. The felt scraps are
 - a. final goods

- b. intermediate goods
- c. principal
- d. internal costs
- e. external costs

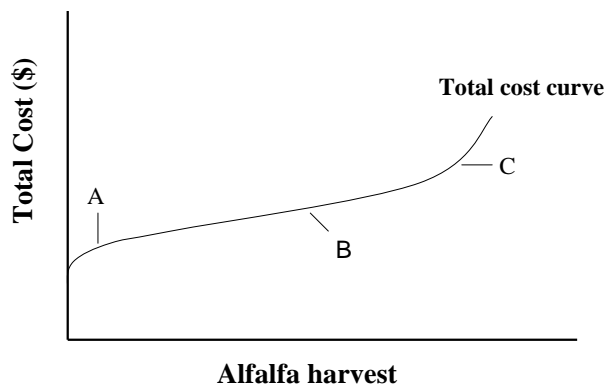
For question #3, refer to the graph shown below:



3. Babette's Barn produces eggs. The production function for Babette's Barn is shown above. Based on the graph (not on your knowledge of chicken biology), which of the following statements is likely to be *false*?

- a. In region A, there's lots of space in the barn and the chickens are lonely. In this region, adding one additional chicken makes all the chickens happier and more likely to lay eggs.
- b. In region B, the barn is overcrowded and each additional chicken increases stress, decreasing the number of eggs laid per chicken.
- c. In region C, the barn is overcrowded and each additional chicken increases stress, decreasing the number of eggs laid per chicken.
- d. Throughout the range of production shown here, the number of chickens has a positive relationship to egg production.
- e. Throughout the range of production shown here, the number of chickens has a direct relationship to egg production.

For question # 4, refer to the graph shown below:



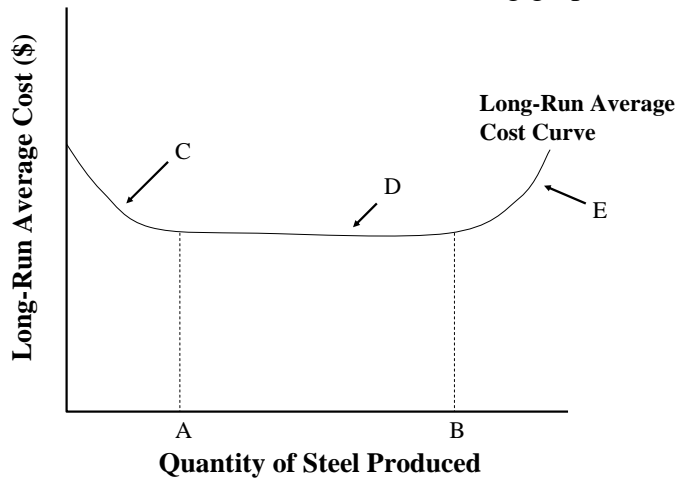
4. The graph above shows the total cost curve for the alfalfa harvest on Alf's Alfalfa Farm. Based on this graph, which of the following statements about Alf's Alfalfa Farm must be *false*?
- In region A, marginal costs are increasing.
 - In region B, marginal costs are constant.
 - Total costs increase as production rises.
 - The marginal cost curve is flat in region B.
 - In region A, the production function is characterized by increasing marginal returns.
5. Jim decides to start a business manufacturing toothpaste. Which of the following would be included in the *accounting* costs of the undertaking?
- \$100,000 of Jim's own money that he invests to start up the business.
 - Interest Jim could have made if he put the \$100,000 into a savings account instead.
 - Money Jim could make if he got a job at a local shampoo factory instead.
 - Costs of toothpaste ingredients Jim needs to purchase each week.
 - Both a and d are true.
6. Albert is interested in opening a bicycle repair shop, but to do so will require getting information about other bike shops in the city, getting a permit to open a new business, and interviewing applicants for the positions of shop manager and accounts manager. All of these factors, which will slow down the process considerably, are
- extra costs
 - external costs
 - equity costs
 - accounting costs
 - transaction costs
7. Which of the following is an example of external costs?
- Mark purchases 10 books and pays 10% tax on the entire purchase.
 - Aurelio sells an acre of land but has to pay to have the land surveyed before the sale is completed.
 - Marty opens a chocolate factory and offers free samples to neighborhood children every Friday.
 - Gustave buys a new piece of equipment for his factory.
 - Georgette operates a noisy machine every morning, and scares away the birds from the local wildlife refuge.
8. A manager decides to site a new factory next to an elementary school. According to his cost analysis, this location will minimize operation costs and maximize overall

production efficiency. However, he does not take into account the large external costs associated with polluting the air near an elementary school. If these costs were taken into account, it would be clear that building the factory is economically inefficient. The manager's decision is an example of

- a. a false economy
 - b. economic efficiency
 - c. internalizing costs
 - d. transaction costs
 - e. productive efficiency
9. You have signed a two-year lease on a building in which you are planning to open a day care center. You have no choice about how much money you spend on rent for the next two years, because you are already committed to this agreement. This is an example of
- a. a variable input
 - b. a short run input
 - c. a long run input
 - d. a fixed input
 - e. a false economy
10. Suppose that adding fertilizer always increases corn growth. The relationship between fertilizer application and corn growth would be
- a. positive
 - b. direct
 - c. fixed
 - d. technically efficient
 - e. both a and b are true.
11. Charlie initially leased a one-room space and started a small day care center with only 4 children and one staff member. But he found that the costs per child were very high. When he leased a larger space, and expanded the center to have more children and staff, the cost per child fell. Which of the following factors came into play when Charlie expanded the center?
- a. economies of scale
 - b. diseconomies of scale
 - c. increasing returns to the labor inputs
 - d. decreasing returns to the labor inputs
 - e. input substitution
12. Which of the following statements is true?

- Long-run average cost is calculated by multiplying marginal cost by the unit of time in question.
- In computing marginal cost, we can ignore fixed costs.
- Constant returns to scale result from increasing marginal returns to production.
- Diseconomies of scale occur when long-run average cost declines with rising output.
- Increasing factory size always leads to decreasing marginal costs.

Questions 13 to 16 refer to the following graph.



13. The graph above shows the long-run average cost curve for a steel foundry. On this graph, point A is

- The minimum efficient scale.
- The maximum efficient scale.
- The point where economies of scale begin.
- The point where diseconomies of scale begin.
- The optimal level of output.

14. The region marked D is characterized by

- Economies of scale.
- Increasing returns to scale.
- Constant returns to scale.
- Diseconomies of scale.
- Maximum average long-run cost.

15. Which of the following statements is true regarding the graph?

- Returns to scale are constant throughout.
- As production increases, the the amount used of all inputs--including the quantity of labor and the size of the factory--increases.

- c. In region E, there isn't enough space for all the workers required to produce at this level and they are getting in one another's way.
- d. The minimum efficient scale is at a production level of zero.
- e. The maximum efficient scale is marked by point A.

16. Which of the points or regions on this graph is associated with diseconomies of scale?

- a. A
- b. B
- c. C
- d. D
- e. E

17. A self-employed accountant spends a lot of money identifying clients and advertising her services. These activities are an example of:

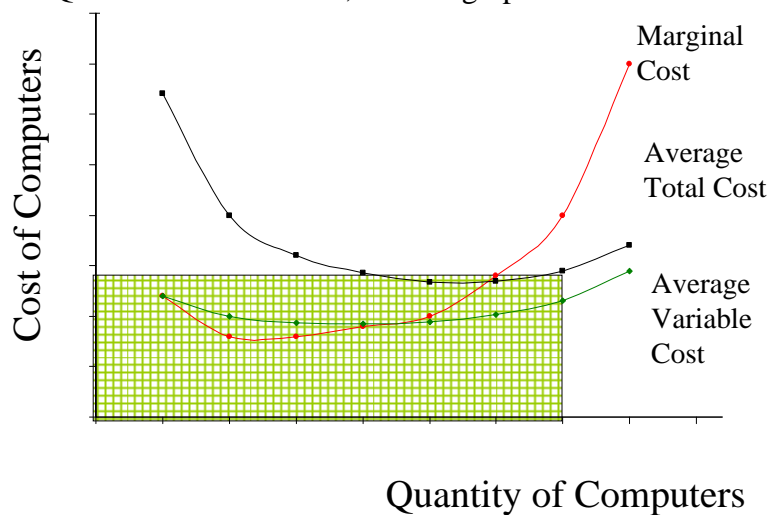
- a. external costs
- b. transaction costs
- c. fixed inputs
- d. marginal returns
- e. opportunity costs

18. In economics, the "long run" is a time period in which

- a. All inputs are variable.
- b. All inputs are paid for.
- c. All outputs are determined.
- d. All loans are repaid.
- e. All interest is paid.

Note: Questions #19 and #20 draw on material contained in the Appendix to Chapter 7.

For Questions #19 and #20, refer to graph below:



19. The shaded area in the graph shown above represents

- a. The total cost of producing computers.
- b. The marginal cost of producing computers.
- c. The average cost of producing computers.
- d. The total number of computers produced.
- e. The variable costs of production.

20. The marginal cost curve represents

- a. Variable costs plus fixed costs.
- b. Fixed costs only.
- c. The cost of producing the last unit at a given level of production.
- d. Per-unit total costs.
- e. Average costs at the margin.

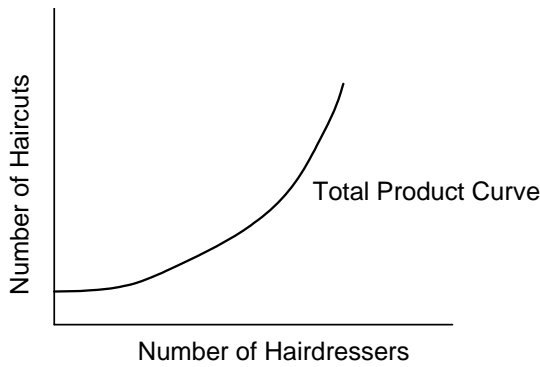
Answers to Active Review Questions

- 1. external
- 2. internal
- 3. technically efficient
- 4. production function or total product curve
- 5. ceteris paribus
- 6. average
- 7. increasing
- 8. diseconomies
- 9. substitution
- 10. True.
- 11. False. For technical efficiency, we need to be able to say that one process requires *less* than some inputs and *no more* of others.
- 12. True.
- 13. False. Economies of scale are present when long-run average cost *declines* with increasing output capacity.
- 14. False.
- 15. False. This is a fixed cost.
- 16. True.
- 17. A project that hires people who would otherwise be unemployed, and pays them the legal minimum wage or union negotiated wage, has economic costs below the accounting costs because it is bringing otherwise unused resources into valuable activity.
- 18. Economic cost is a better guide, because it takes into account the real value of whatever is given up in order to undertake the project.
- 19. The resulting line is curved, because marginal returns diminish with increasing time spent studying.

20. Fixed cost is the cost associated with using fixed inputs, which is the same no matter what quantity of output is produced. For example, if you have signed a lease on a factory building, you have to pay the same amount each month regardless of what you produce. A variable cost is the cost of using variable inputs (e.g. raw materials, energy, labor), which rise with quantity of output.

Answers to Problems

1.



2. a. 2

2. b. constant

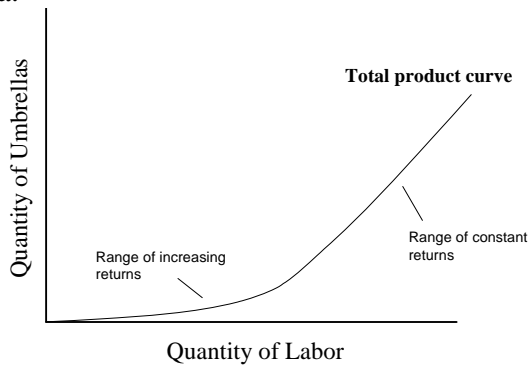
2. c.



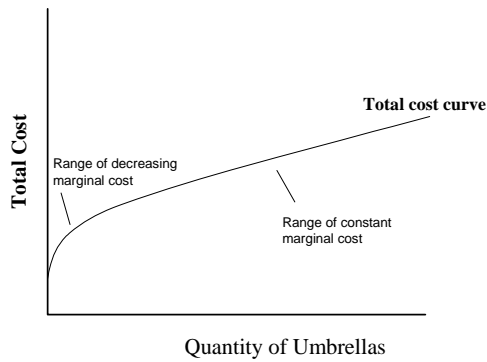
3. The completed table is:

Quantity of Variable Input: Labor	Quantity of Output: Calls	a. Marginal Return to Additional Labor	b. Fixed Cost (\$)	c. Variable Cost (\$)	d. Total Cost (\$)
0	0	--	\$50	0	\$50
1	100	100	\$50	\$80	\$130
2	180	80	\$50	\$160	\$210
3	240	60	\$50	\$240	\$290

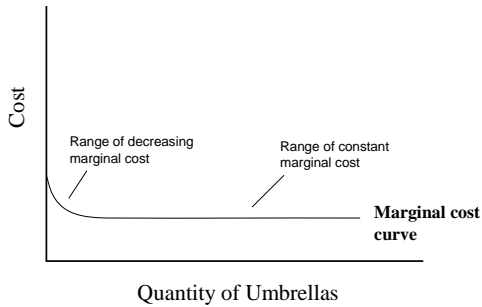
4. a.



4. b.



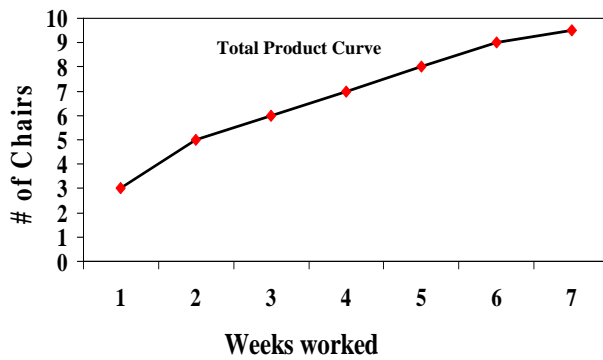
4. c.



5. a.

Number of Weeks worked	Marginal return to additional week of work (number of chairs)	Total Quantity of Chairs Produced
1	3	3
2	2	5
3	1	6
4	1	7
5	1	8
6	1	9
7	1/2	9 1/2

5.b.



Answers to Self Test Questions

- | | |
|-------|--------|
| 1. b | 11. a |
| 2. b | 12. b |
| 3. b | 13. a |
| 4. a | 14. c |
| 5. e | 15. b |
| 6. e | 16. e |
| 7. e | 17. b |
| 8. a | 18. a. |
| 9. d | 19. a. |
| 10. e | 20. c. |

CHAPTER 8

PRODUCTION DECISIONS

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Summary

In this chapter continues the discussion of production with a focus on decision-making. Much of the chapter focuses in on the question of how profit-maximizing firms would choose their level of production, under conditions in which “marginal thinking” applies.

But this chapter also looks at some of the factors that are overlooked in many discussions of this model, including the role played by externalities. Due to externalities, private net benefits from production and social net benefits may not be equivalent. Nor is “marginal thinking” appropriate for all cases. By the time you have finished this chapter, you will understand concepts including nonconvexity, multiple equilibria, path dependence, and network externalities. These concepts are often omitted from introductory textbooks, but are relevant to many real-world situations.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Discuss the role of externalities in decision-making.
2. Understand marginal thinking and how and when it can be used to determine the optimal level of production.
3. Understand discrete thinking, and how and when it is required in decision-making.
4. Discuss why sunk costs are irrelevant for determining the level of production (assuming some production takes place).
5. Define and discuss path dependence.
6. Describe how network externalities can determine production decisions.
7. Understand the importance of financial capital for production decisions.

Key Terms

internal benefits
net benefits
revenue
marginal benefit
marginal revenue
discrete decisions
static analysis
sunk cost
switching costs
perfect capital market

external benefits
cost/benefit analysis
economic profit
marginal thinking
convexity
nonconvexity
dynamic analysis
path dependence
network externality
capital constraint

Active Review Questions

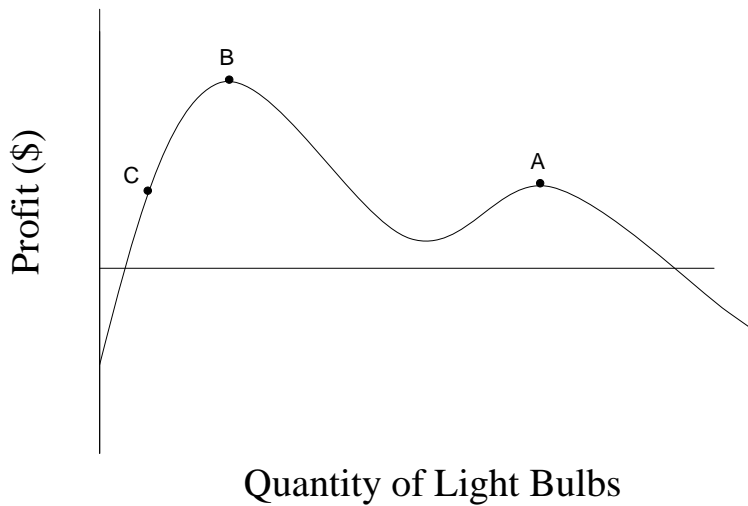
Fill in the Blank

1. Full social efficiency and economic efficiency are achieved when production processes are chosen to maximize _____ benefits.
2. A group of ten people want to start a laundry business together, but due to racial discrimination they cannot obtain adequate financing. These people face a _____ constraint.
3. The benefit that accrues from producing the last unit of output is the _____ benefit.
4. Bob's Barber Shop produces one good: haircuts. Suppose there are no externalities associated with production of haircuts. Bob can maximize net benefits by producing a number of haircuts such that marginal benefit is equal to _____.
5. Cans of sardines sell at a constant rate of \$2.09 each. Thus, we can say that the _____ to a sardine seller is constant at \$2.09.
6. In a perfectly competitive market with no externalities, profits are maximized when _____ is set equal to price.
7. The profit curve for production of travel guides to Denmark has only one peak. Therefore this profit curve can be described as _____.
8. Discrete decision making is necessary when an economic problem is characterized by _____.

True/False

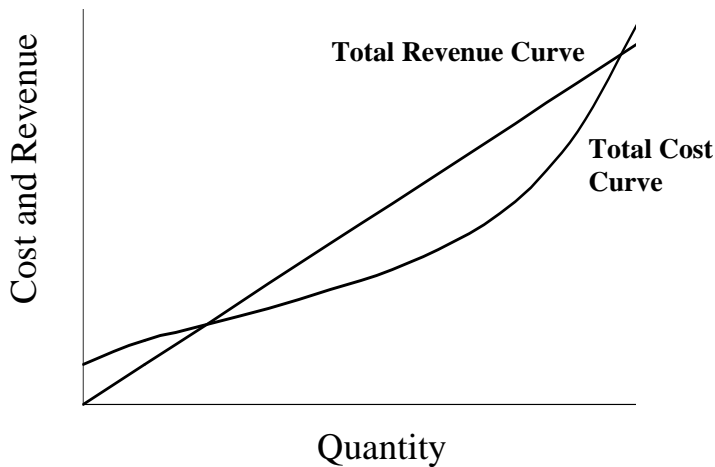
9. Economic profit is equal to the difference between revenues and economic costs.
10. Sometimes, a project with high social benefits may not be undertaken due to capital constraints.
11. When an economic problem displays the characteristic of nonconvexity, marginal thinking is sufficient to maximize net benefits.

Questions #12, #13, and #14 refer to the graph below.



12. The profit function for light bulb production has multiple equilibria.
13. The profit function for light bulb production is convex.
14. Marginal thinking will lead a light bulb producer to move from point A to point B on this profit curve.

Questions #15 and #16 refer to the graph shown below.



15. In the graph shown above, profits are maximized at the point where the total cost curve and the total revenue curve intersect.
16. In the graph shown above, the vertical distance between the two curves at any given point represents the profits earned at that level of production.
17. A shoe factory has fixed costs of \$1,500 per month. If revenues are insufficient to cover these fixed costs in full next month, the factory should shut down.

Short Answer

18. Describe the concept of “lumpiness” in relation to an industry that produces large, expensive goods, such as airplanes.

19. Describe one drawback of cost-benefit analysis as a tool for decision-making by governments.

20. A trolley must have 30 passengers paying \$1 each in order to meet the full cost of a trip across town. Right now, only 10 passengers are willing to pay the \$1 fare to get on the trolley, but the trolley must stick to its schedule, so it sets off on its route even though it is not full. Just as the trolley is starting to move, a group of 10 schoolchildren rush over and ask if they can get on at half-price. Assuming that the driver is in control and wants to maximize profits, should the driver let them on at half-price? Explain why or why not, using the vocabulary of marginal analysis.

21. Describe an example of a network externality. (The textbook describes several examples; try to think of a different one from those presented in the book.)

Problems

1. Suppose that manufacturers of laptop computers are price takers operating in a perfectly competitive market. Each laptop can be sold for \$2,000.
 - a. Sketch the total revenue curve for laptop computers, and explain why it looks the way it does.

- b. Sketch the marginal revenue curve for laptop computers, and explain why it looks the way it does.

2. Suppose that the cost of production of laptop computers shows initially a brief span of decreasing marginal costs, followed by increasing marginal costs.

- a. On the same graph as the total revenue curve you drew for problem #1a, draw a possible total cost curve for laptop computer production. For a given quantity Q_1 (placed at any location you choose on the horizontal axis), show the corresponding profit.

- b. On the same graph as the marginal revenue curve you drew for problem #1b, draw a possible marginal cost curve for laptop computer production. Indicate the profit maximizing output level.

3. A flashlight manufacturing company has the following cost structure (some columns are intentionally left blank):

Quantity	Marginal Cost (\$)			
0				
1	12			
2	8			
3	10			
4	13			
5	17			

a. Supposing that the firm is a price taker and can sell each flashlight it makes for \$13, graph the Marginal Cost and Marginal Revenue curves for this flashlight manufacturer.

b. If you assume that “marginal thinking” applies, what does the figure you drew in part (a) imply is the profit-maximizing output level for the firm?

c. Assume that the firm has fixed costs of \$10. Calculate Total Cost, Total Revenue and Total Profit for the firm at the various production levels, using the blank columns in the table above.

d. With lamps selling for \$13, what is maximum profit the firm can make? What should it do? Explain.

4. A farm can produce either chickens or horses, or both. The chickens eat corn, while the horses eat oats and hay. Both chicken and horse production is characterized by diminishing returns.

a. Draw a production possibilities frontier (PPF) for this farm.

b. Another farm can produce either chickens or turkeys, or both. The chickens and turkeys both require the same food. Furthermore, they fight with each other when they are kept in the same space. Thus, producing a combination of chickens and turkeys is less efficient than producing only chickens or only turkeys. Draw a PPF for this farm.

c. Which of the PPFs you have just drawn has a "corner solution"? Explain what this means.

5. Snuffy's Dog Wash faces both fixed and variable costs as it provides the service of washing and grooming pet dogs.

a. The chart below shows the total costs at Snuffy's Dog Wash at various levels of production. Based on the information shown here, fill in the marginal cost of a dog wash at each level of production.

Number of dogs washed per day	Marginal cost per dog wash (\$)	Total cost (\$)
0		10
1		15
2		19
3		22
4		27
5		37
6		48
7		60

b. Suppose the going rate for a dog wash is \$11. Snuffy's Dog Wash has no control over the price of dog washes, but the manager knows she can always sell as many dog washes as she chooses to produce. To maximize profits, how many dogs will Snuffy's Dog Wash wash per day?

c. Calculate the profit at Snuffy's Dog Wash at the level of production identified in part (b).

Self Test

1. Economic profit is a narrower concept than net benefits because

- a. It includes only accounting profit.
- b. It includes only opportunity costs.
- c. It does not include benefits or costs that are external to the firm.
- d. It does not include marginal benefits or costs.
- e. It does not take long-term average costs into account.

2. Assuming that a problem is “convex,” net benefits are maximized when

- a. Producers select a level of production where internal benefits equal external costs.
- b. Producers select a level of production at which costs equal benefits.
- c. Producers engage in an activity up to the point where marginal benefit exceeds marginal cost.
- d. Producers engage in an activity up to the point where marginal benefit equals marginal cost.
- e. Producers engage in an activity up to the point where total average revenue exceeds total average cost.

Questions 3, 4, and 5 refer to the following scenario.

Handy Hardware Factory produces desk lamps, according to the following cost structure. They are a price taker, and can sell any number of lamps for \$8 each.

Quantity of Lamps	Marginal Cost (\$)	Total Cost (\$)	Marginal Revenue (= Price) (\$)	Total Revenue (\$)	Total Profit (\$)
0	--	50	--		
1	15		8		
2	5		8		
3	6		8		
4	8		8		
5	12		8		

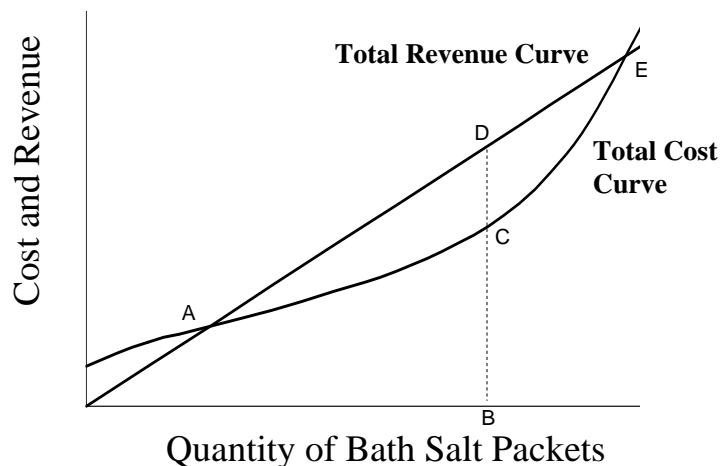
3. What is the total cost of producing 3 lamps?
 - a. \$ 6
 - b. \$ 8
 - c. \$ 50
 - d. \$ 76
 - e. None of the above.

4. What level of total profit will Handy Hardware make, if it produces 3 lamps?
 - a. less than \$ 0 (that is, a loss)
 - b. between \$ 0 and \$20
 - c. between \$20 and \$50
 - d. more than \$50
 - e. Cannot be determined from the information given.

5. What is the profit-maximizing level of output for Handy Hardware?
 - a. 0 lamps
 - b. 1 lamp
 - c. 3 lamps
 - d. 4 lamps
 - e. None of the above.

Questions 6, 7 and 8 refer to the following scenario.

Bertha's Bath Supplies produces packets of bath salts, which are sold for \$5 each. Bertha's Bath Supplies is a price-taking firm. Total revenue and total cost curves for the firm are shown in the graph below.

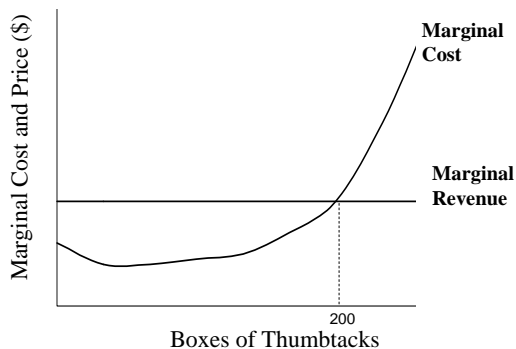


6. Which of the following statements is true regarding the graph shown above?
 - a. Profits are maximized at point E.
 - b. The distance from B to C represents profit earned.
 - c. The distance from B to D represents profit earned.

- d. The distance from C to D represents profit earned.
 - e. At point B, marginal revenue is designated by point D.
7. How would you determine whether point B is the profit-maximizing level of production for Bertha's Bath Supplies?
- a. Compare the slopes of the cost and revenue curves at points C and D.
 - b. Compare the distance from A to C with the distance from A to B.
 - c. Compare the slope of the cost curve at point C with the slope of the marginal cost curve.
 - d. Compare the distance from B to C with the distance from B to D.
 - e. None of the above.
8. Which of the following statements about Bertha's Bath Supplies do you know to be true, based on the information provided above?
- a. Profits are maximized when production reaches 100 packets.
 - b. Profits are maximized at point E.
 - c. Profits are maximized when marginal costs equal \$5 per packet.
 - d. Point B represents a production level yielding zero profit.
 - e. Point E represents a production level yielding positive profit.

Questions 9 and 10 refer to the scenario below.

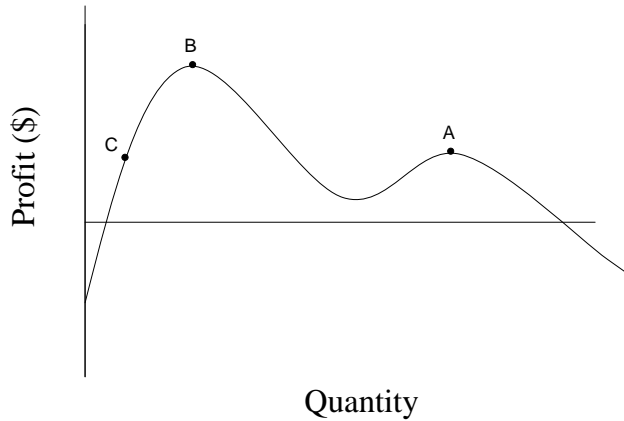
Tillie's Tack Place manufactures thumb tacks and sells them for \$2.00 per box of tacks. The graph below shows marginal cost and marginal revenue for Tillie's Tack Place.



9. When Tillie's Tack Place is producing 200 boxes of thumbtacks, which of the following statements must be true?
- a. Tillie's Tack Place is not yet making a profit.
 - b. Producing more tacks would reduce total profits.
 - c. Producing more tacks would increase total profits.
 - d. Total costs exceed total revenues at this point.
 - e. Producing one more box of tacks would mean that total costs would exceed total revenues.

10. When Tillie's Tack Place is producing 200 boxes of thumbtacks, the marginal cost per box is equal to
- \$50
 - \$25
 - \$5
 - \$2
 - The marginal cost cannot be determined from the information given here.
11. Which of the following is an example of an external benefit?
- Joan enjoys cooking, so she makes herself a three course dinner every night.
 - Marcia volunteers at a local shelter for the homeless.
 - James makes a profit selling apples from his orchard.
 - Susan gives a present to her boss so that her boss will be nicer to her.
 - Sam plants a rose bush outside his home and his neighbors enjoy the sweet smell.
12. George has watched half a movie. He is not enjoying the movie very much, and it occurs to him he could be spending this time visiting with a friend who is only in town for the weekend. George considers staying for the end of the movie since he paid \$8 for the movie ticket, but in the end he decides not to waste any more time watching the movie, and to go see his friend instead. George's decision is an example of
- marginal thinking
 - full cost accounting
 - increasing returns to scale
 - decreasing returns to scale
 - lumpiness
13. The price of lemon candy rises from \$1 per bag to \$1.20 per bag. In response to this price change, candy manufacturers increase production of lemon candy. Assuming candy manufacturers are price-taking, profit maximizing firms, we can conclude that:
- Candy makers have increased production to the point where average costs equal \$1.20.
 - Candy makers have increased production to the point where marginal costs equal \$1.20.
 - Candy makers have colluded to raise prices together.
 - Candy makers were making losses before the price change.
 - Candy makers were not maximizing profits at the lower price.

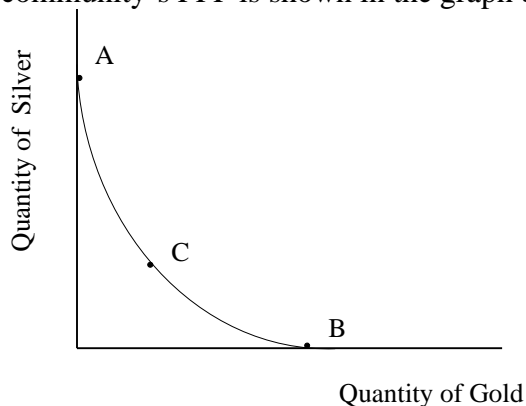
For Question #14 refer to the following graph:



14. Which of the following statements is true about the graph shown above?
- Profit maximization for this firm requires only marginal decision making.
 - Marginal decision making will move the firm gradually from Point A to Point B.
 - Starting from Point C, marginal decision making is sufficient to maximize profits.
 - Starting from Point C, discrete decision making is necessary for profit maximization.
 - The profit function for this firm is convex.
15. A ship builder can build two, three, or four ships, but can't build two and a half ships, even if the profits would theoretically be maximized at that level of production. This inconvenient fact is known as:
- Path dependence
 - Sunk cost
 - Static Analysis
 - Lumpiness
 - Convexity

Questions #16 and #17 refer to the following scenario:

A community has the option to mine for silver, to mine for gold, or to do both. The community's PPF is shown in the graph below.



16. Which of the following outcomes would be preferable for the community?
- a. Specialize in gold mining.
 - b. Specialize in silver mining.
 - c. Mine some of each.
 - d. Specializing in either gold or silver mining is preferable to doing some of each.
 - e. Can't tell from the information provided.

17. Which of the following statements about this graph is false?
- a. It has a corner solution.
 - b. Both silver and gold mining have increasing returns.
 - c. Silver and gold mining require similar resource inputs.
 - d. Point C represents the optimal level of gold and silver production.
 - e. Production efficiency increases with increasing levels of specialization.

For Question #18 and Question #19 refer to the following scenario:

Fuzzy Wuzzy Caterpillar Farm has a profit function with two equilibria. At one equilibrium point, the farm produces 50,000 caterpillars per season and enjoys total profits of \$10,000. At the other equilibrium point, the farm produces only 25,000 caterpillars and makes a profit of \$20,000. The farm started out producing 45,000 caterpillars because that sounded like a good number to the manager, and through marginal decision making has reached the equilibrium point of 50,000 caterpillars.

18. The situation described above is characterized by:
- a. path dependence
 - b. convexity
 - c. corner solution
 - d. sunk costs
 - e. both a and b are correct.
19. The farm conducts an analysis that indicates producing only 25,000 caterpillars would be better than what it is doing right now. But moving to a level of only 25,000 caterpillars requires a variety of adjustments, including laying off several workers and buying smaller caterpillar boxes for shipping smaller caterpillar orders to customers. These costs are known as:
- a. corner costs
 - b. network externalities
 - c. switching costs
 - d. negative costs
 - e. internal costs

20. You like to write papers on your manual typewriter. But when your typewriter runs out of ribbon, you have trouble buying a replacement ribbon. At your local office supplies store, the cashier explains they have stopped carrying typewriter ribbon because most people use computers now. Eventually you switch to using a computer for writing your papers because getting replacement ribbon for your typewriter is too complicated. You have experienced an example of:
- a concave production curve
 - a sunk cost
 - a switching cost externality
 - a path externality
 - a network externality

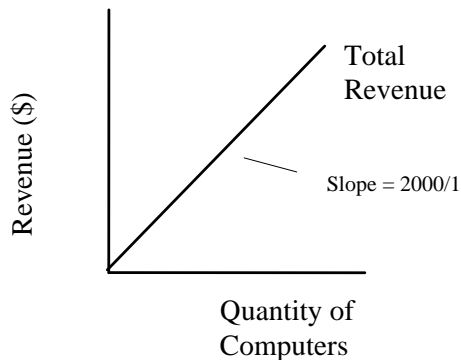
Answers to Active Review Questions

- net
- capital
- marginal
- marginal cost
- marginal revenue
- marginal cost
- convex
- nonconvexity
- True.
- True.
- False.
- True.
- False.
- False.
- False.
- True.
- False.
- Lumpiness refers to the fact that some inputs can be obtained, or outputs produced, only in discrete quantities. On a profit curve for airplane production, it may look as though we have the option to produce a partial airplane because the line we draw is continuous. For example, a profit curve might show that producing 8.5 airplanes will maximize profits. In the real world, because of lumpiness, we have to choose between making 8 airplanes and making 9.
- Some costs and benefits are easier to measure than others. For example, it can be hard -- or impossible -- to quantify the value of preserving an endangered species or maintaining a pristine waterfront. Cost-benefit analyses can be misleading because of the difficulty of coming up with reasonable monetary figures to represent social costs or benefits. Because it is hard to quantify some social costs and benefits, policy analysts sometimes just leave them out, producing a misleading final analysis.

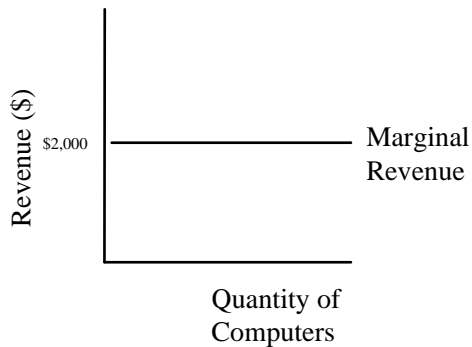
20. Yes, the driver should let the schoolchildren on the trolley, even though they are only paying half-price. The marginal benefit of taking on new passengers, in this case, is \$.50 each. The marginal cost of taking on new passengers, given that the trolley is already set to travel, is either zero or very low (perhaps it will take a little more fuel to move the trolley with the extra weight of the 10 children). Thus, the marginal benefit of taking the children on board exceeds the marginal cost, so it is worthwhile to take them, even though they are not paying enough to cover the average cost per passenger.
21. One example could be the difficulties you might face if you tried to maintain an old model of car that few other people were using. Over time, you would probably find it difficult to get the parts you needed, or even to find a mechanic who understood how to maintain this kind of car. Another example would be trying to get around with a horse and buggy. You would probably find that because cities are set up for traveling by cars and other automated forms of transport, you would have trouble navigating modern city streets with your horse and buggy.

Answers to Problems

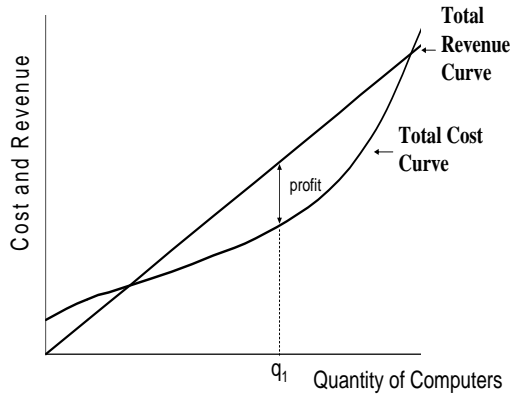
1.a. The total revenue curve for laptop computers is a straight upward-sloping line because in a perfectly competitive market, every laptop will sell for the same price. The slope of the line is +2000.



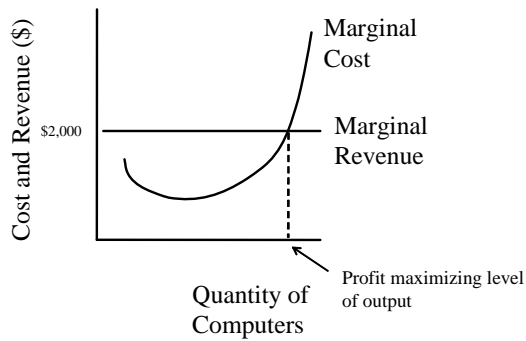
1.b. The marginal revenue curve is a straight line, horizontal at the market price (\$2,000). Each additional laptop sold brings in the same amount.



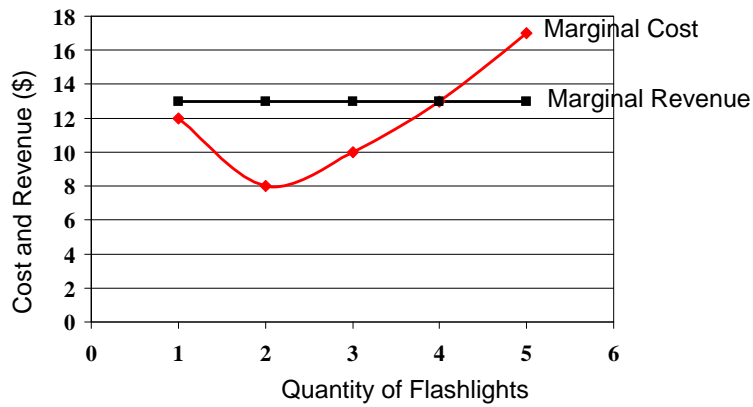
2. a.



2.b.



3. a.



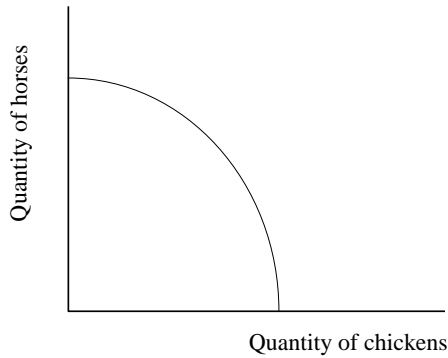
3. b. 4 flashlights (where marginal cost = marginal revenue)

3. c.

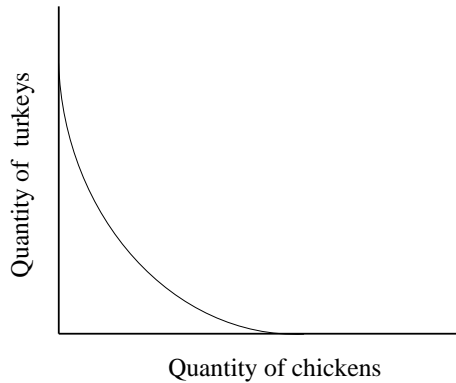
Quantity	Marginal Cost (\$)	Total Cost (\$)	Total Revenue (Price = \$13)	Total Profit
0		10	0	-10
1	12	22	13	-9
2	8	30	26	-4
3	10	40	39	-1
4	13	53	52	-1
5	17	70	65	-5

3. d. At a price of lamps of \$13, the firm's maximum profit is a *loss* of \$1 (achievable at a production level of 3 or 4 lamps). The firm should continue to produce (in the short run), since losing \$1 is better than losing \$10, which is what it would lose if it shuts down.

4.a. (Note that the axes may also be reversed, with "chickens" on the vertical.)



4. b.



4. c. The PPF for part (b) has a corner solution, meaning that the preferred point is at an extreme corner of the graph. The farm can maximize total output by choosing one of the two "corners" -- i.e. by producing only chickens or only turkeys.

5. a.

Number of dogs washed per day	Marginal cost per dog wash (\$)	Total cost (\$)
0	n/a	10
1	5	15
2	4	19
3	3	22
4	5	27
5	10	37
6	11	48
7	12	60

5.b. To maximize profits, Snuffy's will produce six dog washes per day (where marginal revenue = marginal cost).

5.c. Revenue = $\$11 \times 6$ washes = $\$66$, so Profit = Revenue - Cost = $\$66 - \$48 = \underline{\$18}$.

Answers to Self Test Questions

1. c
2. d
3. d

For questions 3-5, note that the complete cost structure for Handy Hardware is as follows. Marginal Cost = Marginal Revenue at a production level of 4, but the firm makes higher profits (that is, lower losses) by making the “discrete decision” to not produce at all.

Quantity of Lamps	Marginal Cost (\$)	Total Cost (\$)	Marginal Revenue (= Price) (\$)	Total Revenue (\$)	Total Profit (\$)
0	--	50	--	0	-50
1	15	65	8	8	-57
2	5	70	8	16	-54
3	6	76	8	24	-52
4	8	84	8	32	-52
5	12	96	8	40	-56

4. a
5. a
6. d
7. a
8. c
9. b
10. d
11. e
12. a
13. b
14. c
15. d
16. d
17. d
18. a
19. c
20. e

CHAPTER 9

DISTRIBUTION: EXCHANGE AND TRANSFER

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Summary

This chapter looks at the two ways in which resources are distributed in an economy: exchange and transfer. It explores the factors that have influenced distribution of resources through history, including legal arrangements about what can be owned and who is allowed to own. You will learn about some of the building blocks of economic analysis of international trade, introducing the concepts of specialization and comparative advantage.

The chapter deals with the real-world strengths and weaknesses of exchange as a form of distribution. Also covered is the role of transfers, such as those from governments to retirees and from parents to children, and an examination of the strengths and weaknesses of transfers as a form of distribution. Finally, you will learn about ways in which economists and others measure the extent of income and wealth inequality in an economy.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Describe the difference between exchange and transfer.
2. Discuss how trade can expand a society's consumption opportunities.
3. Discuss the advantages and disadvantages of exchanges.
4. Discuss the advantages and disadvantages of transfers.
5. Define the difference between wealth and income.
6. Describe the distribution of income and wealth in the United States.
7. Describe how inequality is measured.
8. Present different definitions of equity.

Key Terms

barter
comparative advantage
free trade
tariffs
protectionist policy
in-kind transfers
ability to pay principle
Lorenz curve

use right
comparative advantage (principle of)
infant industry
quotas
import substitution policies
dependency needs
moral hazard
Gini ratio

Active Review Questions

Fill in the Blank

1. Tariffs and quotas are both examples of _____ policies.
2. A government policy undertaken to reduce reliance on inputs and encourage development of domestic industry can be referred to as an import _____ policy.
3. Joe's parents give him a small private jet for his 16th birthday. This is an example of a(n) _____ transfer.
4. The principle of comparative advantage says that a producer should specialize in producing goods for which its opportunity costs are relatively _____.
5. Income inequality in the US _____ (increased/decreased) between 1947 and 1968, and has _____ (increased/decreased) since 1968.
6. The distribution of wealth tends to be _____ (more/less) unequal than the distribution of income.
7. The graph that is used to depict income inequality, showing the percent of households along one axis and the percent of income along the other, is known as the _____ curve.
8. If income were perfectly equally distributed within a country, the value of the Gini ratio for that country would be _____.

True/False

9. The natural environment provides transfers to human society in the form of sunshine, fresh air, and other resources.
10. Suppose Costa Rica and Panama both produce two goods: bananas and beans. According to the principle of comparative advantage, if Costa Rica produces both bananas and beans less efficiently than Panama, it should simply buy both goods from Panama.
11. The principle of comparative advantage applies only to decisions concerning international trade.
12. Increasing capital mobility decreases the likelihood of a "race to the bottom" in social, health, and environmental standards among countries.

13. It is possible to organize an economy strictly on principles of exchange and eliminate all transfers.
14. Transfers can perpetuate inequality.
15. Mary grows tomatoes in her front yard and gives them to her two children to eat. Mary can be described as both a “producer” and a “distributor” of tomatoes.
16. Based on data collected in 2000, the poorest fifth of the US population receives one tenth of all the household income in the country.
17. Specialization in production always increases the prosperity of a country.

Short Answer

18. The US Census Bureau has experimented with a variety of possible definitions of personal income. The Gini ratio in the US varies somewhat, depending which definition of personal income is used. If the Census Bureau starts with a measure of pre-tax money income and then adds the value of health insurance fringe benefits paid by businesses for their employees, as well as the value of net capital gains, how does the Gini ratio change?

19. List five possible standards of equity on fairness.

Problems

1. Suppose that by devoting all its resources to coffee production, Ethiopia can produce 6 tons of coffee, while if it devotes all its resources to peanut production, it can produce 2 tons of peanuts. Senegal can produce 2 tons of coffee if it devotes all its resources there, or 4 tons of peanuts if it grows only peanuts.

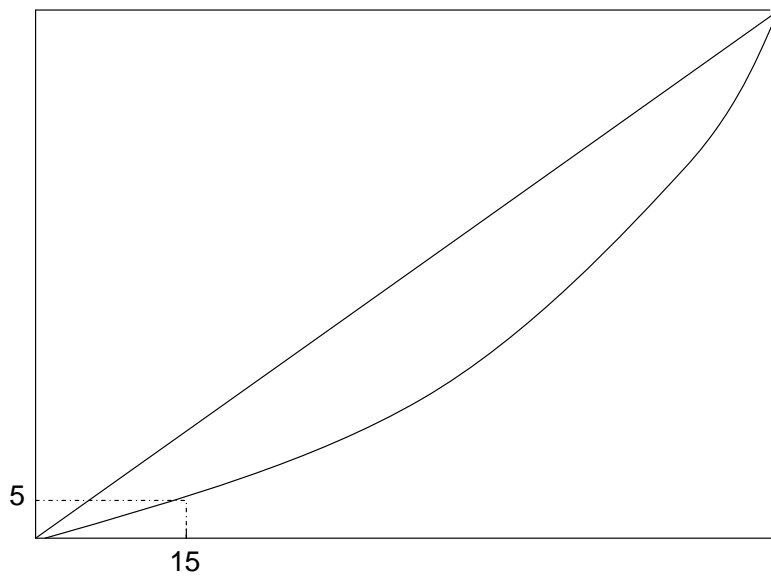
- a. Draw the PPFs for Ethiopia and Senegal. (Put the quantity of coffee on the vertical axes.)

b. Which country is the more efficient producer of coffee? Explain how you got your answer.

c. Suppose that Ethiopia would like to consume 4 tons of coffee and 1 ton of peanuts, while Senegal would like to consume 2 tons of coffee and 3 tons of peanuts. Could either country consume their desired consumption bundle, without trade? Show on your graphs above.

d. If the countries trade, could they each get their desired consumption bundle? If so, how?

Problem #2 refers to following graph.



1. The graph above shows a Lorenz curve for income distribution in the country of Utopia.
 - a. Label the horizontal and vertical axes on this graph.
 - b. In words, explain what information is communicated by the numbers shown on this graph.

 - c. Suppose that the government of Utopia introduces a new tax on the richest 10% of society, and uses the proceeds to supplement the income of the poorest members of society. On the graph, show the direction in which the Lorenz curve will change as a result of the new policy.

Self Test

1. Which of the following is an example of a transfer?
 - a. You get a new job.
 - b. You trade violin lessons for foot massages.
 - c. You buy a bag of groceries.
 - d. You make a donation to a local soccer team.
 - e. You buy stock in a start-up firm.

2. Which of the following statements is false?
 - a. Rules about what can be owned vary across time and across cultures.
 - b. If you have a use right to a good, you cannot necessarily sell that good.
 - c. Transfers are distinguished by being one-way.
 - d. Transfers are distinguished by being voluntary.
 - e. Controversy exists over what sorts of things may be privately owned.

3. According to the principle of comparative advantage:
 - a. Each country should specialize in the good it can produce most efficiently compared with its trading partner.
 - b. Buyers should compare goods before signing a contract.
 - c. Wealthier countries have significant advantages compared to poorer countries.
 - d. Each country should produce at least some quantity of every important consumer good.
 - e. Some countries should act strictly as consumers and not as producers.

4. Which of the following is not cited as an advantage of specialization and exchange?
- a. incentives to be productive
 - b. gains from trade
 - c. non-coercion
 - d. power differentials
 - e. creation of common interests
5. The notion of the gains from trade, looking specifically at the case of two countries exchanging goods based on comparative advantage, was first developed by:
- a. Adam Smith
 - b. Karl Marx
 - c. David Ricardo
 - d. John Maynard Keynes
 - e. John Rawls
6. Which of the following factors is not cited as a problem with exchange?
- a. convexity
 - b. vulnerability
 - c. coercion
 - d. The possibility of temporarily losing access to an essential good.
 - e. The possibility of supply disruptions.
7. According to the infant industry argument:
- a. Government should sometimes protect domestic firms from foreign competition until they can compete on their own.
 - b. Tariffs may be justified to protect an industry until it becomes more competitive.
 - c. Quotas are never justified in an international trade situation.
 - d. Both a and b
 - e. Both b and c
8. Which of the following is a disadvantage of import substitution policies?
- a. Decreased likelihood of lock-in
 - b. Loss of potential gains from trade in the short run
 - c. Loss of infant industry advantages
 - d. Loss of long run comparative advantage
 - e. Diversification of production
9. Marla is a compulsive gambler. Her cousin wants to help her out but is afraid that if he gives her cash, she'll lose it right away. As an alternative, he offers to give her a place to stay for free. This is an example of:

- a. a protectionist approach
- b. marginal thinking
- c. an infant industry approach
- d. an exchange
- e. an in-kind transfer

10. The graph used to describe inequality in a country is called:

- a. a Kuznets curve
- b. a Gini curve
- c. a Lorenz curve
- d. a production possibilities frontier
- e. a comparative advantage function

11. Which of the following is not a potential drawback to specialization and exchange in international markets?

- a. Creation of common interests.
- b. Excessive dependence on another nation for crucial inputs.
- c. Loss of domestic food security.
- d. A “race to the bottom” in environmental standards.
- e. Wars sparked by the need for products or raw materials provided by another country.

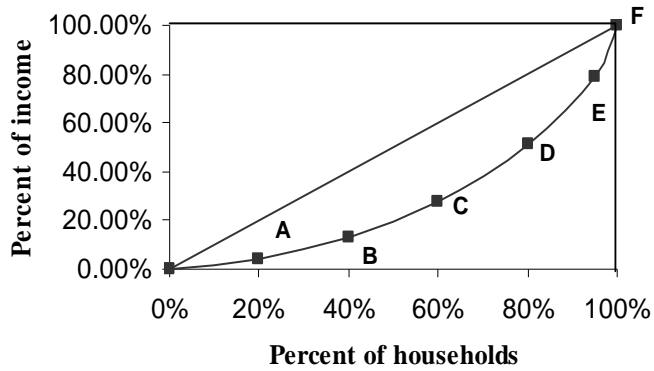
12. Which of the following is a potential advantage of using transfers?

- a. avoiding large transaction costs
- b. ensuring a fair exchange
- c. moral hazard
- d. perpetuation of inequality
- e. lock-in

13. Which of the following is an illustration of moral hazard?

- a. Bicyclists ride down the middle of a busy street.
- b. A young man participates in an anti-war demonstration.
- c. Parents save less for their children’s college education because they know need-based financial aid is available.
- d. A local government funds public education using tax dollars.
- e. None of the above.

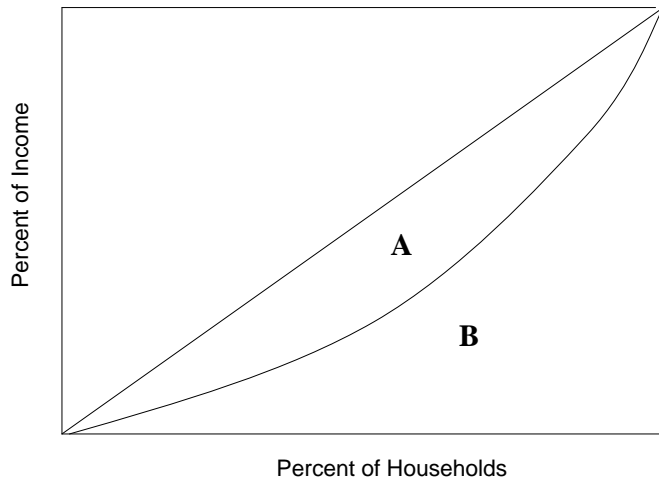
Question #14 refers to the following graph:



14. According to the Lorenz curve above, which of the following statements is true?

- a. The bottom 40% of households earn less than 20% of all income
- b. The bottom 20% of households earn 20% of all income
- c. The society shown here has complete income equality
- d. The more the curve sags downward, the greater income equality
- e. Both a and d are true

Questions #15 and #16 refer to the following graph:



15. Referring to the graph shown above, the Gini ratio is equal to:

- a. $A/(A+B)$
- b. $(A+B)/A$
- c. $B/(A+B)$
- d. A/B
- e. B/A

16. In the year 2010, suppose the Gini ratio for Canada is .3 and the Gini ratio for the US is .5. In the year 2015, the Gini ratio for Canada rises to .35. Which of the following statements is true?

- a. Canada has greater inequality than the US.
- b. Canada has greater inequality in 2015 than it did in 2010.
- c. The US has greater equality than Canada.
- d. Between 2010 and 2015, Canada's Lorenz curve has become flatter (closer to a straight line).
- e. All of the above are false.

17. Which of the following statements is true?

- a. The US has the lowest Gini ratio of all major industrialized countries
- b. The US has the highest Gini ratio of all major industrialized countries
- c. The UK has a higher Gini ratio than the US.
- d. Countries with high levels of equality have high Gini ratios.
- e. The US has a flatter Lorenz curve (closer to a straight line) than any other major industrialized country.

18. The philosopher John Rawls proposed an approach to equity based on:

- a. Equal rewards for equal contribution.
- b. Equal opportunity.
- c. Maximizing average welfare across society.
- d. Equal rights.
- e. Attention to the least fortunate.

19. Which of the following is an example of a protectionist policy?

- a. Ensuring equal pay for men and women.
- b. Social Security.
- c. An excise tax on cigarette consumption.
- d. A quota on imports of sugar.
- e. None of the above.

20. Which of the following statements about income inequality in the US is true?

- a. Income distribution was most equal in 1968.
- b. Income distribution was most equal in 1947.
- c. Income inequality has declined steadily from 1947 to the present.
- d. Income inequality has risen steadily from 1947 to the present.
- e. The US has greater income equality than most industrialized countries.

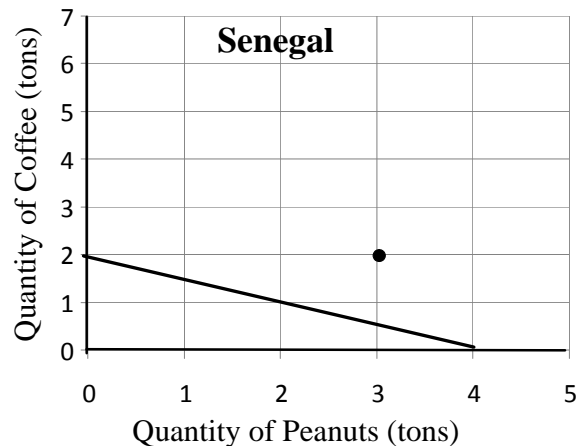
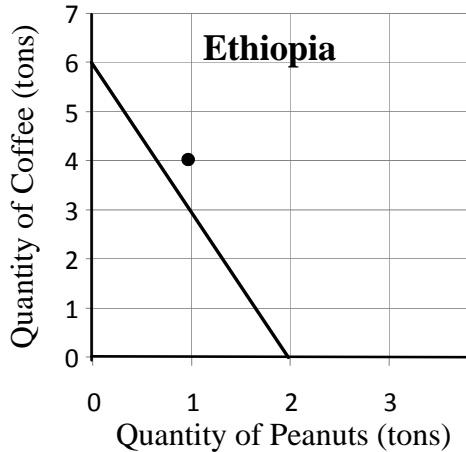
Answers to Active Review Questions

- 1. protectionist
- 2. substitution

3. in-kind
4. low
5. decreased; increased
6. more
7. Lorenz
8. zero
9. True
10. False
11. False
12. False
13. False
14. True
15. True
16. False
17. False
18. It rises, since these benefits are enjoyed primarily by the middle class and the relatively wealthy.
19. Equality of outcomes; equality of opportunity; equal rewards for equal contributions; equal rights; attention to the least fortunate.

Answers to Problems

1.a.



1.b. Ethiopia is the more efficient producer of coffee. Ethiopia can produce 1 ton of coffee at an opportunity cost of only $1/3$ ton of peanuts, while the opportunity cost of a ton of coffee in Senegal is 2 tons of peanuts.

1.c. No. (See the points marked on the graphs above—they are outside the PPFs.)

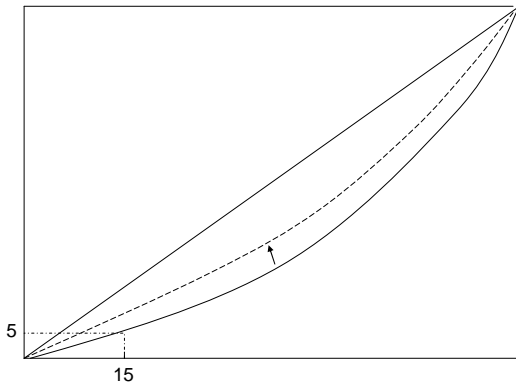
1.d. Yes. If Ethiopia produces 6 tons of coffee and sells 2 tons to Senegal in exchange for 1 ton of peanuts, while Senegal produces only peanuts (keeping 3 tons, and using the

fourth to buy 2 tons of coffee from Ethiopia), both countries will get their desired consumption bundle.

2. a. The horizontal axis should be labeled as “Percent of Households,” and the vertical axis should be labeled as “Percent of Income.”

2. b. Based on this graph, we can see that the poorest 15% of households in Utopia receive 5% of total household income.

2. c. The curve will shift upward, toward the diagonal:



Answers to Self Test Questions

1. d
2. d
3. a
4. d
5. c
6. a
7. d
8. b
9. e
10. c
11. a
12. a
13. c
14. a
15. a
16. b
17. b
18. e
19. d
20. a

CHAPTER 10

CONSUMPTION AND THE CONSUMER SOCIETY

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Summary

In this chapter, we explore the traditional microeconomic model of consumer behavior, in which consumers are assumed to maximize utility using marginal thinking. You will learn how changes in prices and income influence a consumer's budget line.

Also in this chapter you will learn about the psychological models of consumer behavior that are used in marketing research and in other areas of the social sciences. The text raises questions about what it means to pursue well-being, and looks at the ways in which the traditional model can fall short in accounting fully for this process. If your instructor chooses to include the appendix to this chapter, you will learn about the concept of indifference curves in the traditional model.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Describe the marketing view of consumer behavior.
2. Describe the utility theory view of consumer behavior.
3. Discuss the history and institutions of consumer society.
4. Discuss the relationship between consumption and well-being.
5. Comment on the benefits of and problems with consumer society.

Key Terms

consumer sovereignty
attributes (characteristics)
reference group
aspirational group
real income
utility function
diminishing marginal utility
wants
capability approach
relative deprivation

living standard (lifestyle) goals
reference point
membership group
budget line
utility
utils
consumerist values
needs
absolute deprivation

Active Review Questions

Fill in the blank

1. The idea of consumer sovereignty holds that _____ is the ultimate economic goal.

2. A group to which a consumer wishes he or she could belong to is a(n) _____ group.
3. One frequently used categorization of human perceived needs breaks these needs down into five categories: physiological needs, safety needs, social needs, esteem needs, and _____ needs.
4. Goods and services are said to have _____ that are the real items of interest to the consumer.
5. The economic approach that assesses institutions and policies in terms of the opportunities they create for people to live valuable lives is known as the _____ approach.
6. There is about 1 passenger car for every 2 people in the US, about 1 for every _____ people in Europe, and about 1 for every _____ people in developing countries.
7. The purchasing power of income, with prices taken into account, is referred to as _____ income.
8. A _____ line shows all the combinations of two goods that a consumer can purchase, given his or her monetary resources and the prices of the two goods.

True or False

9. About one fifth of the world's population suffers from absolute deprivation.
10. One's relative income level, at a given point in time, has no effect on one's happiness.
11. If China were to increase its car ownership rates to the current level in the US, it would need to pave over an area equivalent to more than 1/10 of its current rice-producing land.
12. Renee allocates her income between soup and nuts. If the price of soup increases while the price of nuts remains constant, Renee's budget line will shift inward to a new, parallel budget line.
13. John allocates his income between bows and arrows. Suppose that a graph of his budget line shows quantity of bows on the horizontal axis and quantity of arrows on the vertical axis. If the price of bows decreases, John's budget line pivots outward to a new line with a shallower slope.

14. According to the traditional model, consumers maximize utility by purchasing goods up to the point where the marginal return on utils is equal to marginal cost.
15. In the standard model of consumer maximization of utility, some goods – such as voting and eating chocolate cake – are considered to be incommensurable, meaning that we cannot meaningfully model decisions between them in the same graph.

Short Answer

16. Name the five steps in the consumption decision making process, according to the marketing view.

17. “Marginal thinking about consumption breaks down if the underlying assumptions are violated.” Explain, and suggest one example that illustrates this point.

18. Briefly explain the difference between old utility theory and new utility theory.

Questions #19 and #20 are based on material covered in the Appendix to Chapter 10.

19. Briefly define the concept of an “indifference curve,” and illustrate it with an example.

20. Explain why indifference curves are generally drawn as a curve that is bowed in toward the origin.

Problems

1. Joel has \$10 to spend on some combination of roses and daisies. Roses cost \$1 each, and daisies cost \$2 each.
 - a. Draw Joel's budget line, putting daisies on the vertical axis.

 - b. If Joel buys four daisies, how many roses can he buy?

2. Continuing the example from above, now suppose that Joel's income increases from \$10 to \$12. Sketch the budget line from problem #1 and then show the change to the new budget line.

3. Continuing with the same example, suppose that Joel takes his \$12 to the flower shop and discovers that someone else just bought almost all the roses and daisies in the shop. Only 4 roses and 2 daisies remain in the shop, so that's all Joel can buy.
 - a. Show this consumption combination on the graph. Does it fall to the left or right of the budget line?

 - b. The next day, Joel goes back to the store with his \$12 and this time there are plenty of roses and daisies available for purchase. However, the price of roses has increased to \$2. Show the budget line before the price change, and then the resulting change in Joel's budget line.
-
4. Jenny divides her income between corn and beans. She has a total of \$100. Beans cost \$10 per sack, and corn costs \$20 per sack.
 - a. Draw Jenny's budget line, with beans on the vertical axis.

- b. The price of both beans and corn decreases by 50%, to \$5 and \$10 respectively. Draw the change in Jenny's budget line on the graph in part (a).
- c. What other event could have produced the change you diagrammed in your answer to part b?

5. Tabitha has \$6 to spend. She has the option to buy two goods: sandwiches and peppermints. Sandwiches cost \$3 each, and peppermints cost \$1 per bag. The table below shows the utility Tabitha derives from consuming sandwiches or peppermints at various levels of consumption.

- a. In the table below, fill in the marginal utility per dollar for each level of consumption.

Units purchased	Sandwiches		Peppermints	
	Marginal utility	Marginal utility/\$	Marginal utility	Marginal utility/\$
1	9		15	
2	6		9	
3	3		4	
4	n/a		2	
5	n/a		1	

- b. How should Tabitha spend her first \$ 3? Explain why.

- c. How should Tabitha spend her remaining \$ 3? Explain why.

Self Test

1. The other consumers whose consumption choices help you decide what to buy are
 - a. your reference group
 - b. your support group
 - c. your self-actualization group
 - d. your budget reference
 - e. your reference point

Questions # 2 and # 3 refer to the budget line graph below:

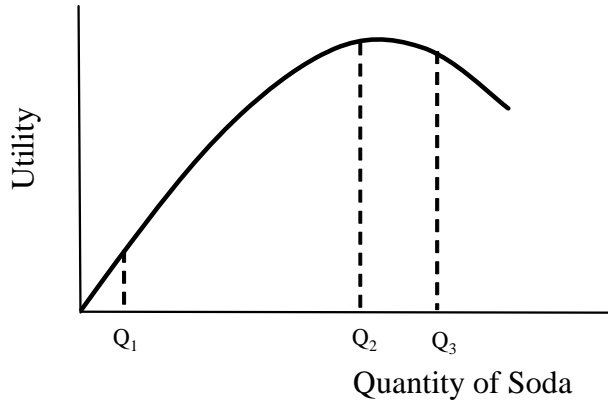


2. Dorothea has to allocate her budget between groceries and rent. Which of the following combinations can Dorothea afford?
 - a. 6 weeks of rent and 20 bags of groceries
 - b. 6 weeks of rent and 10 bags of groceries
 - c. 1 week of rent and 25 bags of groceries
 - d. 5 weeks of rent and 18 bags of groceries
 - e. 6 weeks of rent and no groceries
3. Dorothea has to pay for a trip to the emergency room when her niece has an asthma attack. Now she has less money for groceries and rent. What happens to her budget line?
 - a. The slope increases.
 - b. The slope decreases.
 - c. The budget line does not change.
 - d. The budget line shifts toward the origin while the slope does not change.

- e. The budget line pivots to the right.
4. Which of the following is an example of relative deprivation?
- a. Three teenagers spend their allowances on new clothes.
 - b. Sam can't afford to get trendy clothes like his 9th grade classmates.
 - c. A child gets sick because he doesn't have enough to eat.
 - d. A wealthy donor withdraws support from the local school system.
 - e. A community cannot afford to obtain vaccines against yellow fever.
5. Jane allocates her income between candy and soda. Something happens that causes her budget line to shift toward the origin without a change in slope. What could have caused this change?
- a. Jane's income decreased.
 - b. The price of both candy and soda increased by the same percentage.
 - c. The price of candy increased.
 - d. Jane decided to buy more of both goods.
 - e. Both a and b are true.
6. Consumer sovereignty is the idea that
- a. Businesses should be consumer-oriented.
 - b. Consumers should be independent of the government.
 - c. Consumer satisfaction is the ultimate economic goal.
 - d. It's important to the economy for consumers to be employed independently.
 - e. Both a and c.
7. George buys a fashionable new outfit, hoping to impress his colleagues. In Maslow's hierarchy of needs, George can be said to be fulfilling a(n)
- a. physiological need
 - b. safety need
 - c. esteem need
 - d. self-actualization need
 - e. basic need
8. Psychologists have found that the degree to which we perceive a need is related to
- a. reference points
 - b. reference groups
 - c. our past experience
 - d. the experience of groups to which we compare ourselves
 - e. all of the above

9. The assumption of rational consumer behavior is characteristic of
- the marketing view
 - the utility theory view
 - the traditional microeconomic view
 - both a and c
 - both b and c
10. John divides his income between chips and salsa. If the prices of both chips and salsa decrease by the same proportion, which of the following statements is true?
- The effect on John's budget line is the same as if his income had increased with no change in price.
 - The effect on John's budget line is the same as if his income had decreased with no change in price.
 - John's real income decreases.
 - John's utility decreases.
 - John's budget line pivots outward.
11. Which of the following is *not* an element of a consumer's decision-making process from a marketing perspective?
- problem recognition
 - information search
 - evaluation of alternatives
 - production decision
 - post-purchase behavior
12. According to the theory of consumer maximization of utility,
- People's numeric assessments of utility are obtained from survey data.
 - People trade goods for utility.
 - People are assumed to act as if they were maximizing a quantifiable entity called utility.
 - Marginal utility is always positive.
 - Marginal utility increases as consumption of a good increases.

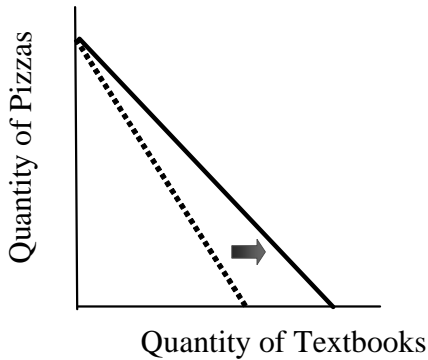
Question #13 refers to the following graph:



13. The graph above shows the utility function of a student consuming bottles of soda. Which of the following statements is *false*, based on the information in this graph?
- The marginal utility of an additional can of soda in the region from Q_1 to Q_2 is positive.
 - Diminishing marginal utility first occurs at Q_3 .
 - Soda consumption is characterized by diminishing marginal utility.
 - Marginal utility is greater at Q_1 than at Q_2 .
 - At Q_3 , an additional bottle of soda makes the student feel worse, not better.
14. At the utility-maximizing level of consumption,
- The last dollar spent on each good produces the same marginal utility.
 - Total expenditure equals total utility.
 - Marginal expenditure is the same for both goods in question.
 - Consumption is at competitive equilibrium.
 - Marginal expenditure is equal to total utility.
15. Which of the following statements is true regarding the relationship between income and feeling happy, according to the information presented in the textbook?
- At a given point in time, people with higher incomes tend to be happier than people with lower incomes.
 - At a given point in time, income has no effect on happiness.
 - Rising incomes throughout the 20th century have been accompanied by rising levels of reported happiness.
 - Average levels of happiness increase as an economy grows.
 - Aggregate happiness increases with rising income inequality.
16. About what proportion of the world's population experiences *absolute deprivation*?
- 1%
 - 5%
 - 10%

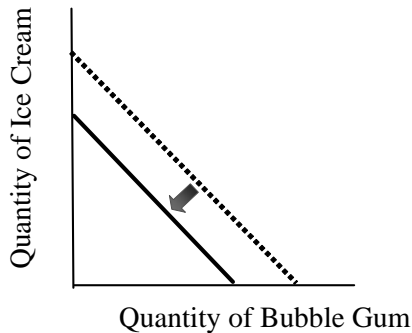
- d. 20%
- e. 30%

Question #17 refers to the following graph:



17. Marnie allocates her income between pizzas and textbooks. The graph above shows Marnie's budget line. Which of the following events could produce the shift from the dotted line to the solid line?
- a. A decrease in the price of textbooks
 - b. An increase in the price of textbooks
 - c. An increase in the price of pizzas
 - d. A decrease in the price of pizzas
 - e. Marnie signing up for a class that requires her to buy more textbooks

Question #18 refers to the following graph:



18. James allocates his income between bubble gum and ice cream. The graph above shows James' budget line. Which of the following events could cause James' budget line to shift inward, from the dotted line to the solid line?
- a. A decrease in James' income.
 - b. An increase in James' income.
 - c. An increase in the price of bubble gum relative to ice cream.
 - d. An increase in the price of one good and a decrease in the price of the other.
 - e. None of the above.

19. All of the following scholars are known for their work on the conceptual or practical problems associated with an economic model of ever-increasing consumption except

- a. Milton Friedman
- b. John Kenneth Galbraith
- c. Tibor Scitovsky
- d. Juliet Schor
- e. Robert Frank

20. According to the textbook, which of the following changes has tended to accompany and facilitate increased consumption?

- a. Increase in consumer credit.
- b. Decrease in advertising revenues.
- c. Increase in labor union power.
- d. Increase in political freedom.
- e. Reduction in government spending.

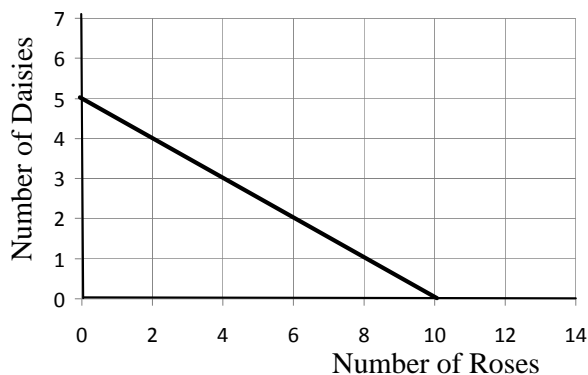
Answers to Active Review Questions

- 1. consumer satisfaction
- 2. aspirational
- 3. self-actualization
- 4. attributes (or characteristics)
- 5. capability
- 6. 3.5; 68
- 7. real
- 8. budget
- 9. True.
- 10. False.
- 11. False. The estimate is that China would need to pave over the equivalent of more than *half* its rice-producing land.
- 12. False.
- 13. True.
- 14. False.
- 15. False. The standard model assumes that all goods can be compared.
- 16. Problem recognition, information search, evaluation of alternatives, purchase decision, post-purchase behavior.
- 17. Assumptions underlying the traditional model of utility maximization include the assumption that all benefits from consumption can be compared and summed up, so that only one measure, utility, needs to be considered. The model also assumes that consumers' preferences can be taken as given, that consumers have perfect information, and that there are no externalities or multiple equilibria in consumption. One example of a situation the model does not account for is a case in which aggressive or misleading advertising convinces people to start buying a

18. In old utility theory, there is an assumption that utility can be measured, and that it can be compared across individuals (i.e., it is possible to say that a rich person may value an extra dollar less than a poor person). The tenets of old utility theory allow economists to justify redistributive policies and efforts to alleviate poverty from the perspective of utility. New utility theory, in contrast, assumes that utility cannot be measured, and that interpersonal comparisons of utility are impossible. In new utility theory, there is also an assumption that consumer behavior reveals people's true preferences (such that, for example, a person who eats unhealthy food must have made a conscious decision to do so).
19. An indifference curve shows the combination of two goods with which a consumer would be equally satisfied. For example, a consumer might theoretically be equally satisfied with one ice cream cone and seven cookies, or with three cookies and two ice cream cones.
20. The shape of the indifference curve reflects the assumption that the consumer experiences diminishing marginal utility for both goods in question.

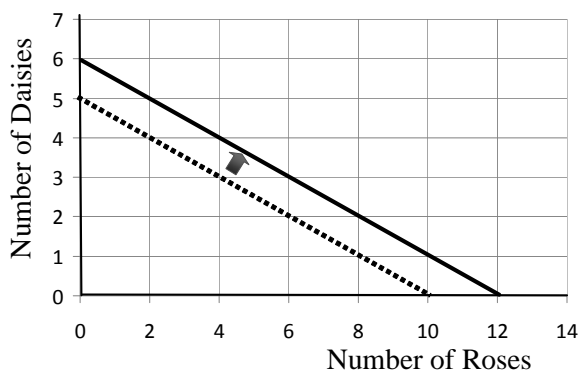
Answers to Problems

1. a.

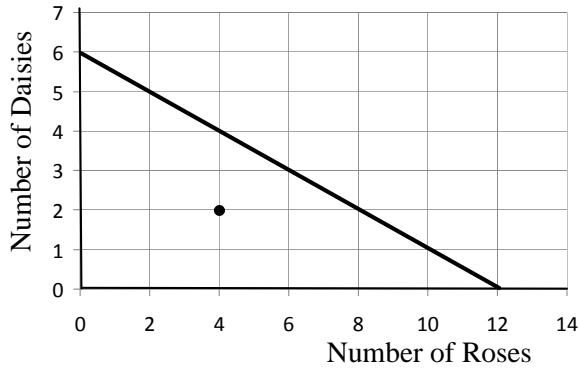


1. b. After spending \$8 (= 4 × \$2) on daisies, Joel has enough left to buy 2 roses.

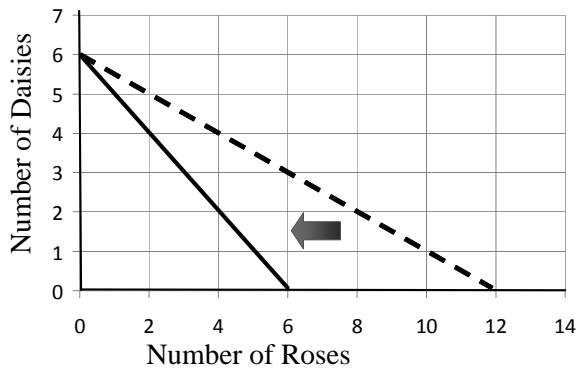
2.



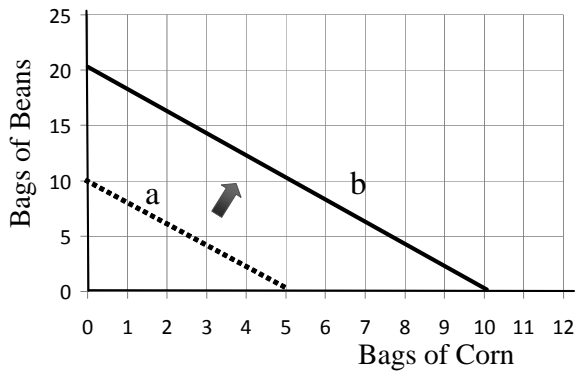
3. a. This consumption combination, shown as a point, falls well to the left of the budget line.



3. b.



4. a and b



4. c. An increase in Jenny's income from \$100 to \$200 would have produced the same change.

5. a.

Units purchased	Sandwiches		Peppermints	
	Marginal utility	Marginal utility/\$	Marginal utility	Marginal utility/\$
1	9	3	15	15
2	6	2	9	9
3	3	1	4	4
4	n/a	n/a	2	2
5	n/a	n/a	1	1

b. Tabitha would spend her first dollar on peppermints, gaining 15 utils; her second dollar on peppermints gaining an additional 9 utils; and her third dollar on peppermints, gaining an additional 4 utils. (Her marginal utility from peppermints is higher in this range than her marginal utility from sandwiches. Spending the initial \$3 on sandwiches would only have gotten her 3 utils per dollar, or 9 utils total.)

c. She would spend her remaining \$ 3 on a sandwich, which gives her a marginal utility per dollar of 3 utils. (If she had spent her fourth dollar on peppermints, her gain in utility would only be 2 utils, and after that even lower for additional dollars.)

Answers to Self Test Questions

1. a
2. e
3. d
4. b
5. e
6. c
7. c
8. e
9. e
10. a
11. d
12. c
13. b
14. a
15. a
16. d
17. a
18. a
19. a
20. a

CHAPTER 11

MARKETS WITHOUT POWER

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Summary

This chapter presents the traditional, idealized model of perfect competition. In it, you will learn that profit-maximizing perfectly competitive firms (perhaps surprisingly) make zero economic profit. You will learn more about the concept of efficiency; and the concepts of consumer and producer surplus and deadweight loss will be introduced and used for policy analysis.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Describe the three different views of market power.
2. List the assumptions behind the traditional model of perfectly competitive markets.
3. Describe how the situation facing the individual firm relates to the overall market situation, in perfect competition.
4. Describe the difference between economic profits and normal profits.
4. Indicate how firms maximize profits under perfect competition.
5. Explain how, under certain conditions, a perfectly competitive market is economically efficient.
6. Apply the concepts of consumer surplus, producer surplus, and deadweight loss to policy analysis.

Key Terms

market power

zero economic profit

allocative efficiency

producer surplus

competitive equilibrium

positive economic profit

consumer surplus

deadweight loss

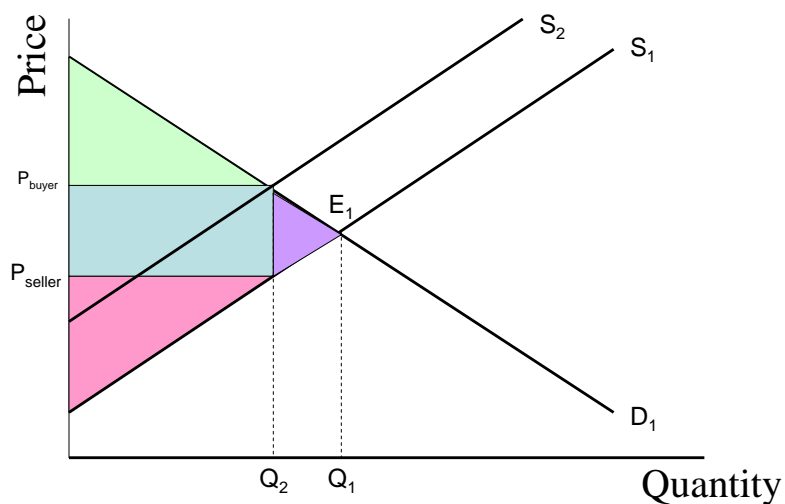
Active Review Questions

Fill in the Blank

1. The ability to affect the terms and conditions of the exchanges in which you participate is referred to as _____.
2. In the perfect competition model, buyers and sellers have _____ information.

3. Under conditions of perfect competition, a profit-maximizing firm will choose a level of production such that marginal cost is equal to _____.
4. The supply curve of a perfectly competitive firm is a portion of its _____ curve, while the demand curve it faces is perfectly (elastic/inelastic) _____.
5. At competitive equilibrium, all firms make (positive/zero/negative) _____ economic profit.
6. In a perfectly competitive market, the entrance of new firms into the market will drive prices (up, down) _____.
7. Perfectly competitive firms operate at production levels characterized by (decreasing/constant/increasing) _____ returns to scale.
8. There are (many/few) _____ real world examples of perfectly competitive markets.
9. The traditional neoclassical view generally considers market power to be (good/bad) _____ and competition to be (good/bad) _____.

Questions #10 and #11 refer to the following graph and scenario.



10. The graph above depicts the effects of a tax. The shaded rectangle shows the magnitude of _____.
11. The shaded triangle *above* the rectangle shows the magnitude of _____ surplus.

True or False

- 12. Deadweight loss occurs when the supply curve shifts inward due to a change in input prices.
- 13. Taxes create deadweight loss for consumers only.
- 14. The existence of deadweight loss means that taxation is always harmful to the economy.
- 15. Under conditions of perfect competition, all firms make positive economic profits.
- 16. Consumer surplus refers to the additional consumers who cannot obtain the goods they wish to purchase.
- 17. Producer surplus refers to the difference between the price a producer receives, and the lowest price at which the producer would have been willing to sell a good.
- 18. Under perfect competition, individual economic actors have no market power.
- 19. If a perfectly competitive firm wants to sell a larger quantity of goods, it must lower its selling price.

Short Answer

- 20. The model of perfect competition starts with the assumptions of the traditional neoclassical model and then adds some further assumptions. List the four main additional assumptions of the model of perfect competition.

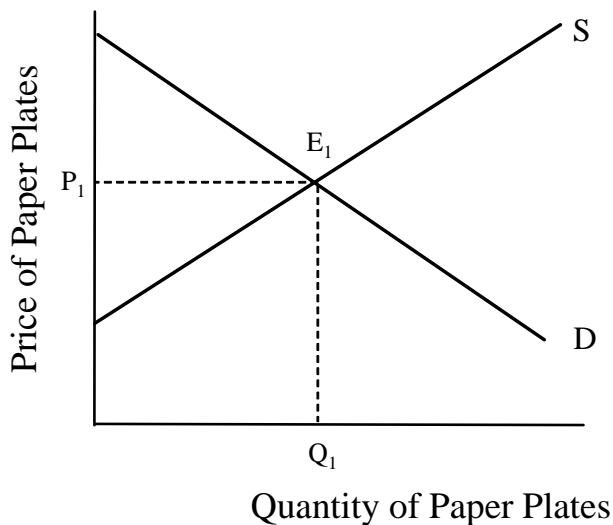
- 21. Explain why taxation can increase total well-being despite the existence of deadweight loss.

22. Explain why it may not be a good idea to tax a good or service that is characterized by high price elasticity of demand.

23. In a market with perfectly inelastic supply, what is the effect of a price ceiling?

Problems

1. Suppose that the market for paper plates is perfectly competitive. The graph below shows hypothetical supply and demand curves for the paper plates market.

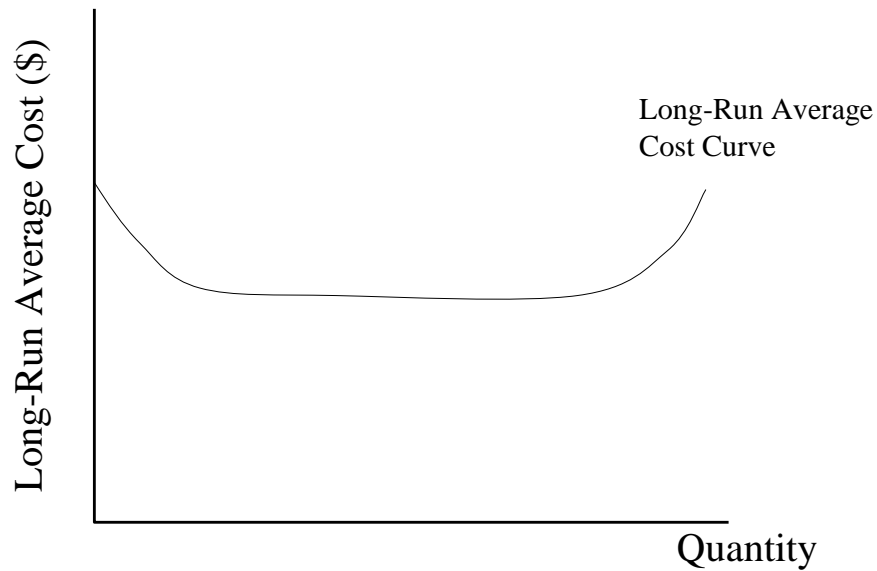


- a. Indicate the areas of consumer surplus and producer surplus in the graph shown above.

- b. Suppose that several new firms enter the paper plates market. Sketch the effect of this development on the competitive equilibrium price and quantity.

- c. Sketch the effect of this price change on a supply and demand graph for an *individual* firm participating in this market.

2. The following graph represents the long-run average cost curve for the market in paper plates:



- a. On the graph, label the region characterized by economies of scale and the region characterized by diseconomies of scale.
- b. Assuming conditions of perfect competition, indicate on the graph the region in which firms will operate in the long run.

3. Suppose that the government institutes a sales tax on purchases of paper plates. Graph the effects of this tax.

4. Sometimes countries will put price ceilings on basic foodstuffs, in an effort to assure that its poorest citizens will be able to afford to eat. Suppose a country puts a price ceiling on the price of rice (and that the ceiling is set below the equilibrium market price).

a. In the very short run, suppose that the supply of rice is perfectly inelastic, since it depends only on the size of a national rice harvest that has already taken place. Assuming that demand is moderately elastic, illustrate graphically the effects on consumer and producer surplus.

b. Over a longer span of time, rice farmers will be able to adjust the amount of rice that they grow. Illustrate graphically the effect on consumer and producer surplus when the supply and demand for rice are both moderately elastic.

c. Supposing that the majority of rice eaters are workers who live in cities, while rice is grown by many small farmers living in the countryside. Describe the likely effects of this policy on urban and rural well-being, and on well-being overall.

Self Test

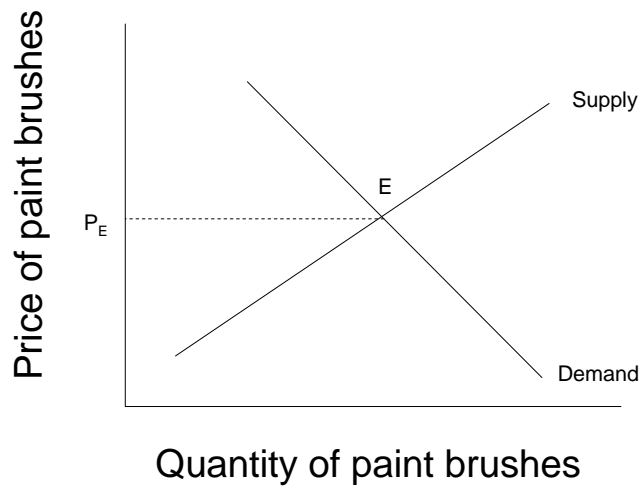
1. In the market structure known as perfect competition, which of the following statements is assumed to be true all the time?
 - a. All economic actors have market power.
 - b. Big business has significant influence on public policy.
 - c. Competition is considered a harmful force.
 - d. Economic actors are concerned citizens.
 - e. Individual economic actors have no market power.

2. Which of the following is *not* a condition of the model of perfect competition?
 - a. Each individual buyer can affect the market price.
 - b. Within a given market, only one kind of good or service is traded.
 - c. Producers can freely enter the industry.
 - d. Producers can freely exit the industry.
 - e. Sellers all have perfect information.

3. Which of the following is assumed to be true within the model of perfect competition?
 - a. Exchange is envisioned as occurring in a large double-auction spot market.
 - b. Exchange is envisioned as occurring within an open auction.
 - c. Individual sellers can raise their prices without losing all their customers.
 - d. Transaction costs act as an important obstacle to full information sharing.
 - e. None of the above.

4. The individual price-taking firm faces
 - a. A perfectly inelastic demand curve.
 - b. A horizontal demand curve.
 - c. A perfectly elastic demand curve.
 - d. A vertical demand curve.
 - e. Both b and c are true.

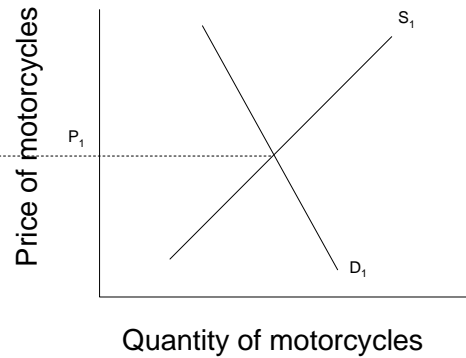
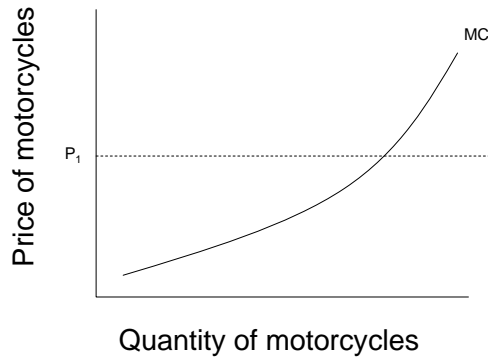
Question #5 refers to the graph shown below.



5. Assume the market for paint brushes is perfectly competitive. At point E in the graph shown above,
 - a. Firms are making positive economic profit.
 - b. Firms are making above-normal profit.
 - c. Marginal cost is equal to price p_E .
 - d. All buyers have market power.
 - e. Both a and c are true.

6. Over the long run, which of the following statements is true about profit-maximizing firms in a perfectly competitive market?
 - a. Economic profits are zero.
 - b. Economic profits are negative.
 - c. Economic profits are positive.
 - d. Accounting profits are zero.
 - e. Both c and d are true.

Questions #7 to #9 refer to the following graphs:



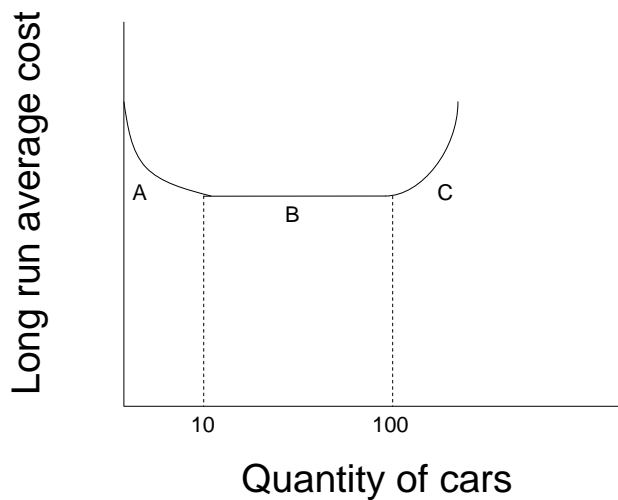
7. Suppose that at price p_1 , motorcycle manufacturers are making positive economic profits. Assuming the market in motorcycles is perfectly competitive, which of the following will occur in the long run?
- The supply curve will shift to the right.
 - The demand curve will shift to the right.
 - Price will rise.
 - Price will remain constant.
 - Marginal costs will increase.
8. Suppose now that motorcycle producers are making economic losses. Which of the following will happen in the long run?
- Competitive pressures will drive economic profits toward zero.
 - Some firms will exit the market.
 - The supply curve will shift to the right.
 - Both a and b are true.
 - Both b and c are true.
9. Suppose that competitive pressures drive the price of motorcycles downward. Which of the following statements is an accurate description of the situation that results?
- Revenues and profits are reduced.
 - Revenues fall, while profits remain constant.
 - The supply curve shifts to the left.
 - Marginal cost rises.
 - The demand curve shifts to the right.
10. Under certain assumptions perfectly competitive markets are efficient and lead to the best possible social outcomes. Which of the following is *not* one of these assumptions?
- Production generates positive externalities.

- b. Consumption does not generate any externalities.
- c. There are no public goods.
- d. All costs and benefits can be captured in a static model.
- e. Society is not concerned about distribution.

11. When resources are allocated to various production processes based on the exact marginal value to buyers of the goods and services produced, the result is known as

- a. Allocative equilibrium.
- b. Normal profit allocation.
- c. Consumer surplus.
- d. Competitive efficiency.
- e. Allocative efficiency.

Question #12 refers to the following graph:



12. Which of the following statements is true about production of cars, based on the graph shown above?

- a. Region A is characterized by diseconomies of scale.
- b. Region B is characterized by economies of scale.
- c. When 50 cars are being produced, increasing production to 51 cars will bring diseconomies of scale into play.
- d. When 90 cars are being produced, competitive firms are producing at low unit costs.
- e. All of the above are true.

13. Consumer surplus refers to

- a. The area below the demand curve and above the supply curve.
- b. The area between the supply curve and the equilibrium price.
- c. The area between the demand curve and the equilibrium price, to the left of the equilibrium point.
- d. The excess of the amounts sellers actually receive, beyond the amount that would make them just willing to supply the good or service.
- e. The excess number of consumers who want to buy a product and cannot do so.

14. Deadweight loss refers to

- a. An increase in consumer surplus.
- b. An inefficiency that arises when people are prevented from making certain mutually beneficial trades.
- c. The difference between consumer and producer surplus.
- d. The sum of consumer and producer surplus.
- e. The excess of the amounts that buyers would be willing to pay, over the amount they actually pay.

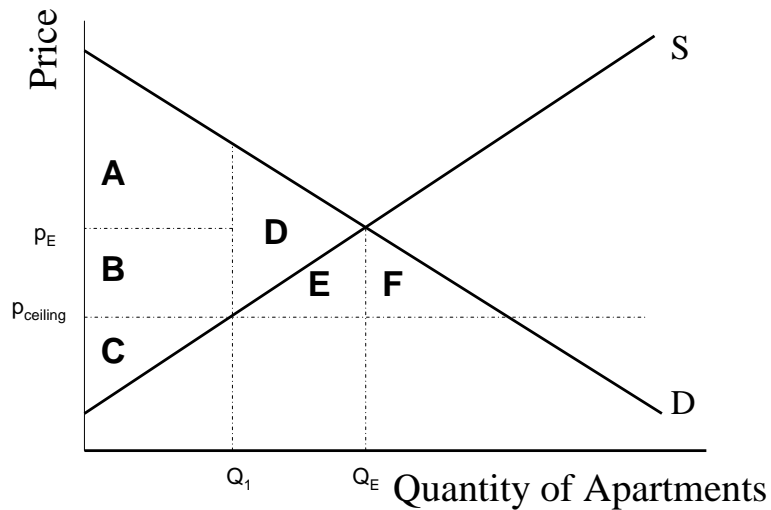
15. Suppose the market for cigarettes is at competitive equilibrium. The government decides to impose a tax on cigarettes. Which of the following does *not* occur?

- a. Deadweight loss is created.
- b. The price faced by buyers is greater than the price received by sellers.
- c. Tax revenue is equal to quantity sold multiplied by the difference between p_{buyer} and p_{seller} .
- d. Consumer and producer surplus are both reduced.
- e. The demand curve shifts to the left.

16. When demand for a good is very price elastic, which of the following statements is false?

- a. Addition of a tax will cause buyers to reduce their purchases significantly.
- b. Addition of a tax will raise relatively little revenue compared with a tax on a less elastically demanded good.
- c. Addition of a tax will generally cause more efficiency loss than addition of a tax on a less elastically demanded good.
- d. Addition of a tax will cause producer surplus to increase.
- e. All of the above are true.

Questions #17 and #18 refer to the following graph, which shows a housing market in which a price ceiling has been imposed on rentals:



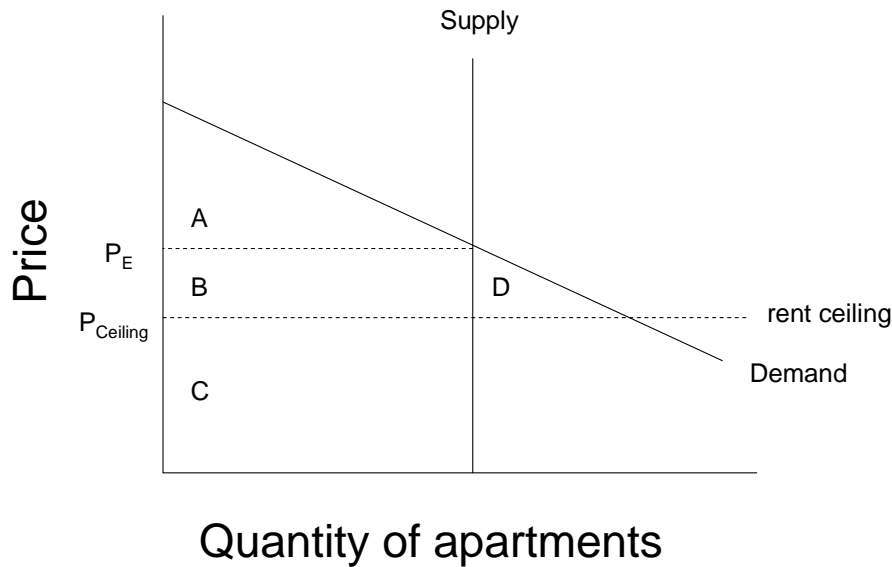
17. Producer surplus is represented by area(s)

- a. A
- b. A and B
- c. B
- d. C
- e. E and F

18. Area B represents

- a. Consumer surplus.
- b. Tax revenue.
- c. Producer surplus.
- d. A transfer from building owners to renters.
- e. The number of apartments supplied at p_{ceiling} .

Questions #19 and #20 refer to the following graph:



19. The graph shown above represents, once again, a housing market in which a price ceiling has been established for rents. Which of the following statements is true regarding the market as it is depicted in this graph?

- a. Supply of apartments is perfectly elastic.
- b. Demand for apartments is perfectly inelastic.
- c. Decreasing prices below $p_{ceiling}$ will lead building owners to withdraw apartments from the rental market.
- d. The stock of apartments for rent is variable.
- e. Increasing rents above $p_{ceiling}$ would not increase the number of apartments available for rent.

20. Deadweight loss resulting from the rent ceiling is represented as

- a. Area A.
- b. Area B.
- c. Area C.
- d. Area D.
- e. There is no deadweight loss.

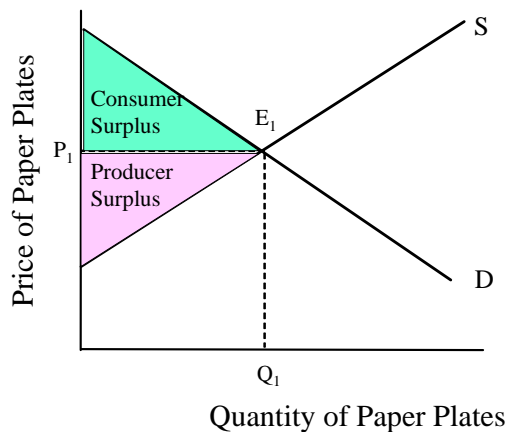
Answers to Active Review Questions

1. market power
2. perfect
3. price
4. marginal cost; elastic
5. zero

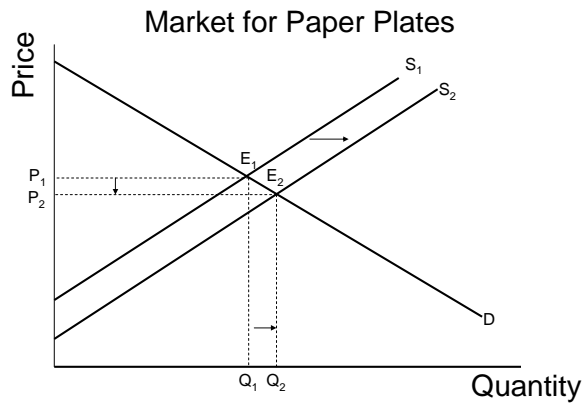
6. down
7. average
8. upward
9. bad; good
10. tax revenue
11. consumer
12. False.
13. False.
14. False.
15. False.
16. False.
17. True.
18. True.
19. False.
20. 1. There are numerous small sellers and buyers, so small that no individual seller or buyer can affect the market price. 2. Within any particular market, only one kind of good or service is traded, and all units are identical. 3. Producers can freely enter or exit the industry. 4. Buyers and sellers all have perfect information.
21. The deadweight loss shows a loss of consumer and/or producer surplus in *one* market (e.g. the market for cars, or the market for apples). However, the money collected through the tax may then be spent in other markets (e.g. the market for roads or for fire department services) on goods or services that the producers and consumers value just as much or more. Thus, the value of the surplus lost will return to producers and consumers – potentially with even more benefits – via the goods and services purchased with the tax funds.
22. When demand for a good or service is very price-elastic, addition of a tax will cause buyers to reduce their purchases significantly. As a result, revenues will be relatively small (fewer people buying the good means fewer people paying the tax), and deadweight loss will be relatively large.
23. Under these conditions, a price ceiling will have purely distributional effects (a transfer from buyers to sellers), and there will be no deadweight loss.

Answers to Problems

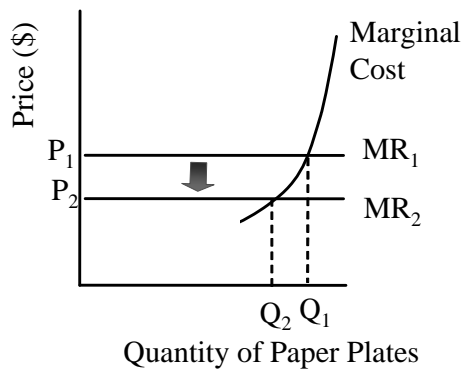
1. a.



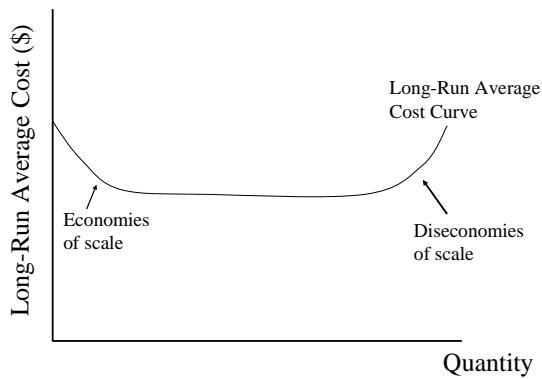
1. b.



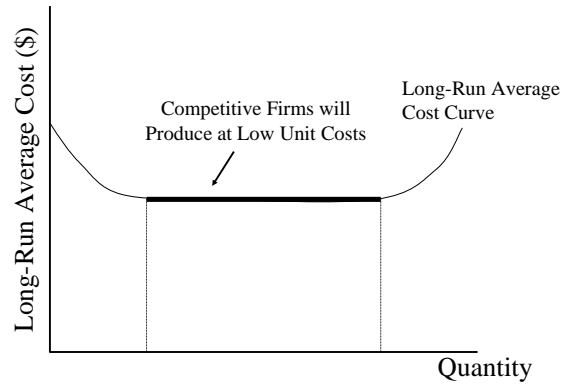
1. c.



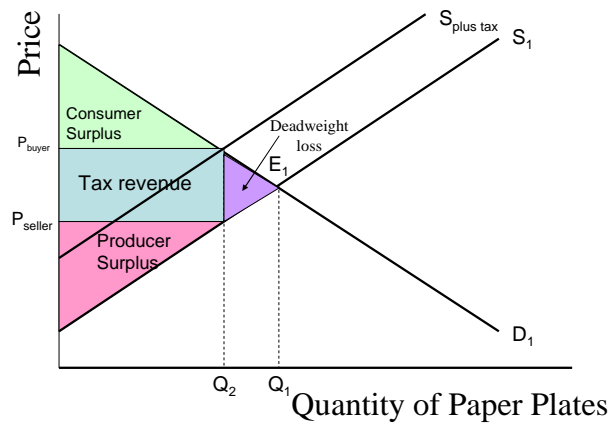
2. a.



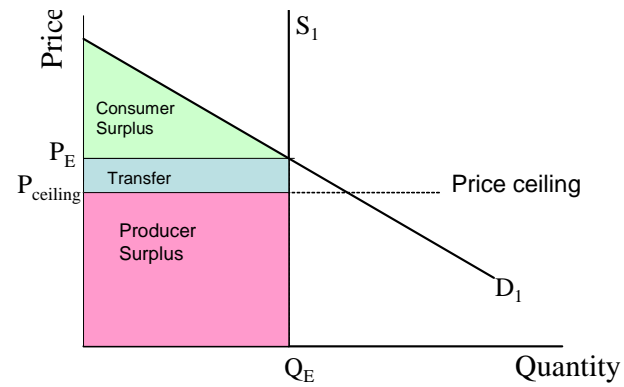
2. b. Under conditions of perfect competition, in the long run, firms will produce in the region marked in bold in the graph below.

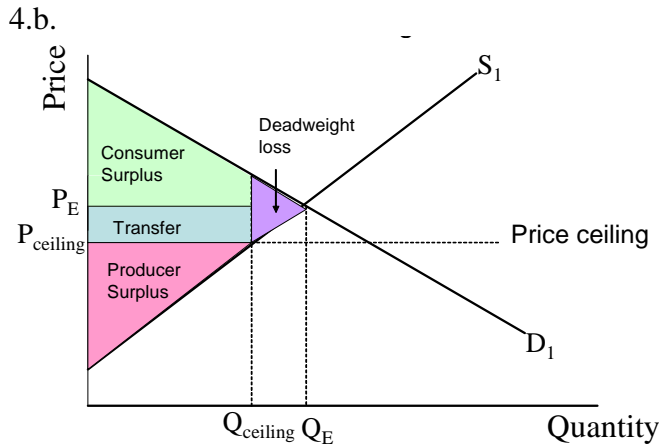


3.



4. a.





4.c. Urban consumers receive a transfer from the producers, so that rural producers are worse off. In the case of inelastic supply, urban consumers get to consume the same amount of rice but pay less for it, so they are clearly better off with the price ceiling. In the case of moderately elastic supply, there is still a transfer from producers to consumers, but there is a loss to society overall because rice production is cut back.

Answers to Self Test Questions

1. e.
2. a.
3. a.
4. e.
5. c.
6. a.
7. a.
8. d.
9. a.
10. a.
11. e.
12. d.
13. c.
14. b.
15. e.
16. d.
17. d.
18. d.
19. e.
20. e.

CHAPTER 12

MARKETS WITH MARKET POWER

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Summary

Now that you understand the model of a perfectly competitive market, this chapter complicates the picture by adding the element of market power. You will be introduced to the traditional models of monopoly, monopolistic competition, and oligopoly. You will learn about how firms maximize profits in these more complicated theoretical situations, and also about some of the ways in which firms may negotiate with one another – either explicitly or implicitly – to attain their preferred outcomes.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Define a monopoly and describe how a monopolist maximizes profits.
2. Understand why a monopoly may or may not be efficient.
3. Define monopolistic competition and describe how profits are maximized in these markets.
4. Define oligopoly and discuss firm behavior under conditions of oligopoly.

Key Terms

barriers to entry
exclusionary practices
dumping
regulated monopoly
rent-seeking behavior
nonprice competition
duopoly
price war
tacit collusion
price leadership

natural monopoly
predatory pricing
local monopoly
price-maker
price discrimination
concentration ratio
payoff matrix
collusion
price-fixing

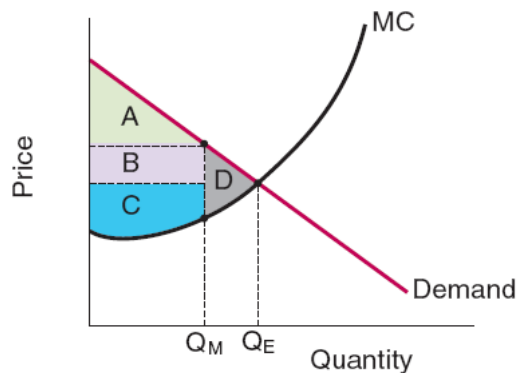
Active Review Questions

Fill in the Blank

1. A monopoly that emerges because of economies of scale is called a _____ monopoly.

- Joe's Superstore prevents competitors from entering the market by temporarily pricing its goods below cost, thus driving new entrants out of business. This practice is known as _____ pricing.
- Selling goods to another country at a price below the cost of production is known as _____.
- The marginal revenue curve for a monopolist is (flat/downward-sloping/upward-sloping) _____.
- Market power in the form of a monopoly creates benefits for the (buyer/seller) _____ at the expense of the (buyer/seller) _____.

Questions #6, #7, and #8 refer to the graph below. In this graph, Q_E refers to the quantity of a good that would be provided under conditions of perfect competition, and Q_M refers to the quantity of the same good that is provided under conditions of monopoly.



- Area A shows the magnitude of _____.
- Area D shows the magnitude of _____.
- Area B represents a transfer from _____ to _____.
- A firm that charges different prices to different buyers depending on their ability and willingness to pay is referred to as a _____ seller.

True/False

- In a hypothetical case of perfect price discrimination, producer surplus is completely eliminated.
- In a hypothetical case of perfect price discrimination, deadweight loss is completely eliminated.

12. “Monopolistic competition” includes some characteristics of perfect competition and some characteristics of monopoly.
13. In a situation of monopolistic competition, no close substitutes are available.
14. Monopolistically competitive firms have higher unit costs than would occur in a perfectly competitive market.

Short Answer

15. Describe one way in which monopolistically competitive firms work to protect their “miniature monopoly”.

16. List three conditions of the idealized market structure of monopoly.

17. Explain how network externalities can lead to monopolization.

18. Briefly describe the pros and cons of offering patents on new drugs.

19. Briefly explain how monopolistic competition differs from perfect competition.

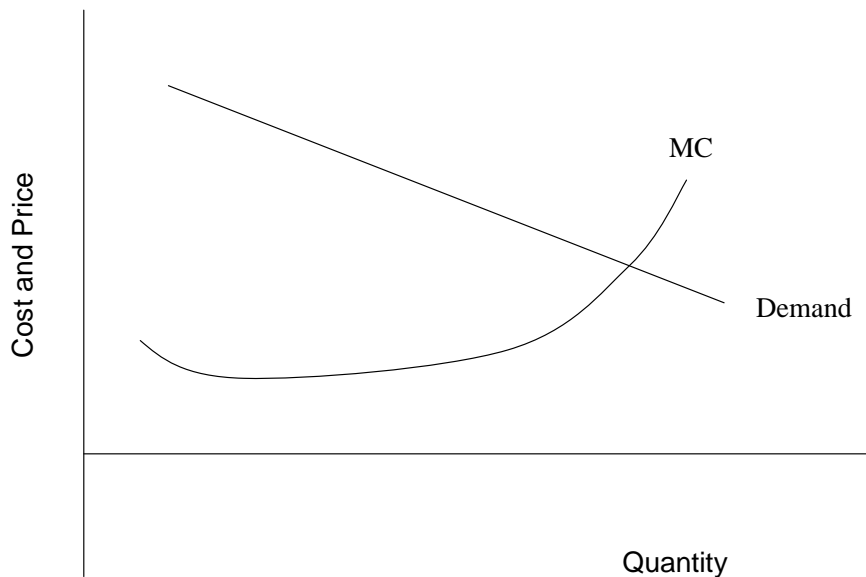
20. Describe the conditions of the idealized market structure of oligopoly.

Problems

1. Suppose hair dryers are produced by a monopolistic firm. The chart below shows the quantities of hair dryers that can be sold at various prices.

Quantity of Hairdryers	Price of hairdryers	Total Revenue	Marginal Revenue
1	\$100		
2	\$90		
3	\$80		
4	\$70		
5	\$60		
6	\$50		

- a. Fill in the total and marginal revenue columns in the chart shown above.
- b. If marginal cost is equal to marginal revenue at $MC=MR=\$20$, what is the profit maximizing level of production (assuming that the firm should produce at all)?
2. The following graph shows the demand curve and the marginal cost curve for a monopolistic firm producing electric cars.



- a. Sketch a possible marginal revenue curve for this firm.
- b. On the horizontal axis, label the profit-maximizing level of production as Q_1 . On the vertical axis, label the price P_1 that the firm will charge at the profit maximizing level of production.
- c. Label the area of deadweight loss in the graph you draw for part (b).
- d. How do the monopolistic price and quantity compare to those of competitive market equilibrium?

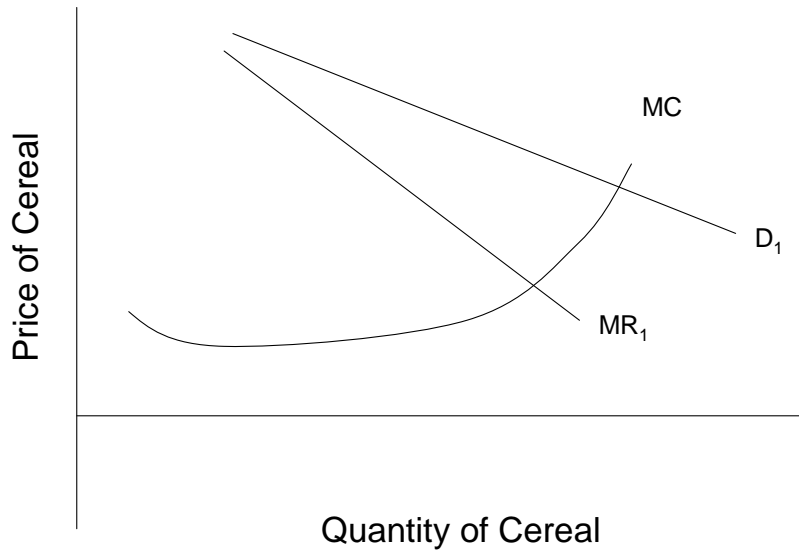
3. Harry's Auto Shop is a perfectly price discriminating seller. Harry has an uncanny ability to assess how much people are willing to pay for a car, and he sets prices accordingly.

- a. Sketch the demand curve and the marginal cost curve for Harry's Auto Shop.

- b. Show the area that represents consumer surplus on the graph you drew for part (a).

- c. Show the area of the producer surplus on the same graph.

4. Ten breakfast cereal producers operate in a market characterized by monopolistic competition. The demand, marginal revenue, and marginal cost curves faced by an individual breakfast cereal producer are shown below.



Suppose that five new breakfast cereal producers enter the market. Show the new demand curve and the new marginal revenue curve that result on the graph above.

5. Suppose the market for cookbooks is a duopoly. The chart below shows a payoff matrix for the two cookbook producers.

		Producer 2's options	
		Low Price	High Price
Producer 1's options	Low Price	\$20 / \$20	\$80 / \$1
	High Price	\$1 / \$80	\$100 / \$100

- Based on the information shown in the payoff matrix above, how much profit will each firm make if the firms are non-cooperative?
- If producer 2 charges a high price and producer 1 charges a low price, how much profit will producer 1 make?
- If the firms collude and set prices together, how much profit will each producer make?

Self Test

1. All of the following are idealized types of market structure except:
 - a. perfect competition
 - b. monopolistic competition
 - c. oligopolistic monopoly
 - d. pure monopoly
 - e. oligopoly

2. Which of the following is a condition of monopoly?
 - a. Two or more sellers.
 - b. Only one buyer.
 - c. A good with several close substitutes.
 - d. Barriers to entry.
 - e. None of the above.

3. A “natural monopoly” is
 - a. An oligopoly.
 - b. A monopoly characterized by diseconomies of scale.
 - c. A monopoly that emerges because of economies of scale.
 - d. A monopoly on a scarce natural resource.
 - e. A monopoly that solves the problem of diseconomies of scale.

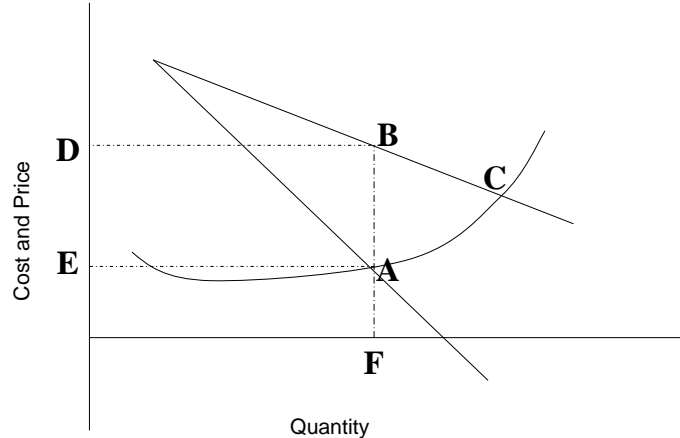
4. In international trade, “dumping” refers to
 - a. Exclusionary practices.
 - b. Charging unfairly high prices.
 - c. Providing unwanted goods free of charge.
 - d. Selling goods at a price below the cost of production.
 - e. Selling goods above market price.

5. Which of the following statements is *false*?
 - a. Monopolistic firms maximize profits at the point where $MC=MR$.
 - b. Monopolistic firms are price takers.
 - c. Monopolistic firms face a downward sloping demand curve.
 - d. Monopolistic firms face a downward sloping marginal revenue curve.
 - e. All of the above are true.

6. The demand curve for the output of a monopolistic firm is equal to
 - a. The marginal revenue for the product in question.
 - b. The market supply curve for the product in question.

- c. The market demand curve for the product in question.
 - d. The demand curve for a firm in a perfectly competitive market.
 - e. The concentration ratio of the firm.
7. A monopolistic firm can sell more by
- a. Advertising its product successfully.
 - b. Competing effectively with other firms.
 - c. Lowering the price of its product.
 - d. Both a and c are true.
 - e. Options a, b, and c are all true.
8. Suppose a firm can sell five units of output at a price of \$10 each. To sell six units of output, the firm must lower its price to \$9 per unit. To sell seven units, the firm must lower its price to \$8 per unit. Which of the following statements is *true*?
- a. The firm can maximize profits at all of the production levels listed above.
 - b. The firm faces an upward sloping demand curve.
 - c. Based on the information given above, we can conclude that seven units is the profit maximizing level of production.
 - d. Based on the information given above, we can conclude that this firm faces net losses at the levels of production considered here.
 - e. The firm can be described as a “price maker”.
9. Suppose a firm can sell one unit of product for \$50, two units for \$45 each, three units for \$40 each, or four units for \$35 each. When the firm sells four units, marginal revenues is equal to
- a. \$5.
 - b. \$20.
 - c. \$25.
 - d. \$30.
 - e. \$35.
10. Which of the following statements is *true*?
- a. Monopolistic firms face zero profits in the long run.
 - b. Monopolistic situations do not involve any inefficiencies.
 - c. The monopolistic firm always faces a downward sloping marginal cost curve.
 - d. The perfectly competitive firm faces a horizontal marginal revenue curve.
 - e. The monopolistic firm faces a horizontal marginal revenue curve.

Questions #11 and #12 refer to the graph below.



The graph shown above depicts the demand, marginal revenue, and marginal cost curves faced by a monopolistic firm.

11. Point A indicates

- a. Total cost.
- b. The point where $MR=MC$.
- c. The price buyers are willing to pay at equilibrium.
- d. The point where $MC=P$.
- e. Total revenue.

12. Which of the following statements is *false*?

- a. When the firm chooses a level of production F, buyers will pay a price E.
- b. Point A is on the marginal cost curve.
- c. Point B shows the level of demand that corresponds to the profit maximizing level of production.
- d. Point C indicates the price and quantity of production that would exist in a competitive equilibrium.
- e. Because the firm described by this graph is a monopoly, production is lower and price is higher than they would be at competitive equilibrium.

13. Rent-seeking behavior is

- a. An effort to find affordable housing.
- b. An effort to get transfers or favors.
- c. A behavior of all monopolists.
- d. A behavior of governments only.
- e. A behavior that facilitates creation of a perfectly competitive market.

14. Which of the following statements is *false*?

- a. In some cases, monopoly can be a preferable option for society as a whole compared with a situation of perfect competition.
 - b. For some services, such as passenger rail transportation, government subsidies to a monopolist may produce the most socially beneficial outcome.
 - c. Government regulation of an industry characterized by natural monopoly can help to reduce the inefficiencies associated with market power.
 - d. Optimally efficient pricing always leads to self-sustaining revenues.
 - e. All of the above are true.
15. Which of the following is an example of a price discriminating seller?
- a. Frank sells condominiums only to buyers of a certain ethnic background.
 - b. Ellen charges different prices to different buyers, depending on their ethnic or religious background.
 - c. Amelia charges different prices to different buyers depending on their ability or willingness to pay.
 - d. An airline charges the same price to all travelers.
 - e. Both a and b are correct.
16. When you go shopping you discover that you can choose among twenty different brands of breakfast cereal, all with about the same nutritional content. The proliferation of cereal options is an example of
- a. product differentiation
 - b. oligopoly
 - c. perfect competition
 - d. a price war
 - e. monopoly
17. Which of the following statements is *true* of a monopolistically competitive firm?
- a. It faces a downward sloping demand curve.
 - b. It earns positive economic profits in the long run.
 - c. It produces more than a perfectly competitive firm.
 - d. It charges lower prices than a perfectly competitive firm.
 - e. Its profits are protected by significant barriers to entry.
18. Under conditions of oligopoly, firms may collude in order to
- a. Avoid the outcome associated with the prisoner's dilemma.
 - b. Increase competition.
 - c. Solve the concentration ratio problem.
 - d. Create a prisoner's dilemma for buyers.
 - e. Initiate a price war with one another.

19. Which of the following is a form of implicit collusion?
- a. Duopoly
 - b. Price wars
 - c. Non-price competition
 - d. Prisoner's dilemma
 - e. Price leadership
20. Which of the following statements about oligopoly is *false*?
- a. Under conditions of oligopoly, entry into the market is difficult.
 - b. The amount of long-run economic profit made by oligopolistic firms is variable.
 - c. Each firm in an oligopoly makes decisions without regard for the actions of other firms.
 - d. Game theory is used to analyze the behavior of firms in an oligopoly.
 - e. Firms in an oligopolistic market often have an incentive to collude.

Answers to Active Review Questions

- 1. natural
- 2. predatory
- 3. dumping
- 4. downward-sloping
- 5. seller; buyer
- 6. consumer surplus
- 7. deadweight loss
- 8. consumer; producer
- 9. price discriminating
- 10. False. In a hypothetical case of perfect price discrimination, *consumer* surplus is completely eliminated.
- 11. True.
- 12. True.
- 13. False.
- 14. True.
- 15. Monopolistically competitive firms often engage in non-price competition (e.g. advertising, using attractive packaging, etc.).
- 16. (1) There is only one seller. (2) The good being sold has no close substitutes. (3) Barriers to entry prevent other firms from starting to produce the good in question.
- 17. Network externalities can “lock in” one technology, product, or system, making it hard for other options to gain a foothold in the market. The textbook discusses the example of computer operating systems: once a large number of

people have adopted one operating system, the firm producing that system has a significant advantage over new entrants that might attempt to compete.

18. Offering patents can create an incentive to develop new drugs. On the other hand, the high prices of patented drugs can mean that life-saving drugs are denied to thousands or even millions of people who need them. (It is worth noting that other options are available to motivate research and development in pharmaceuticals.)

19. The conditions of monopolistic competition are identical to those of perfect competition except that in monopolistic competition, products are differentiated instead of identical.

20. In the idealized structure of oligopoly, (1) the market is dominated by a few sellers, at least some of which control enough of the market to be able to influence price; and (2) entry is difficult.

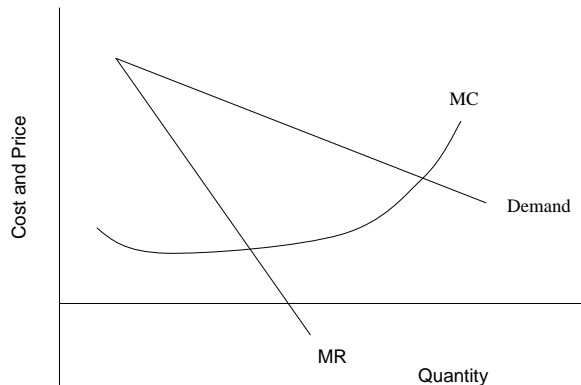
Answers to Problems

1. a.

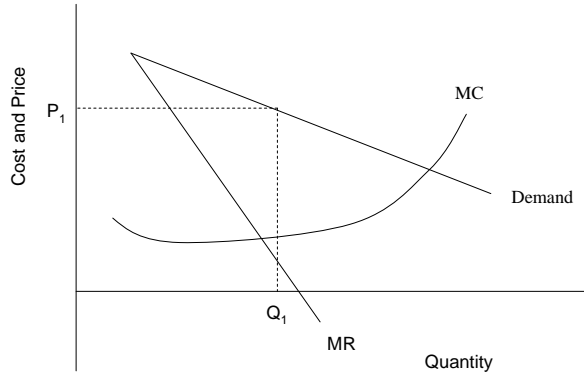
Quantity of Hairdryers	Price of hairdryers	Total Revenue	Marginal Revenue
1	\$100	\$100	\$100
2	\$90	\$180	\$80
3	\$80	\$240	\$60
4	\$70	\$280	\$40
5	\$60	\$300	\$20
6	\$50	\$300	\$0

b. 5 hairdryers

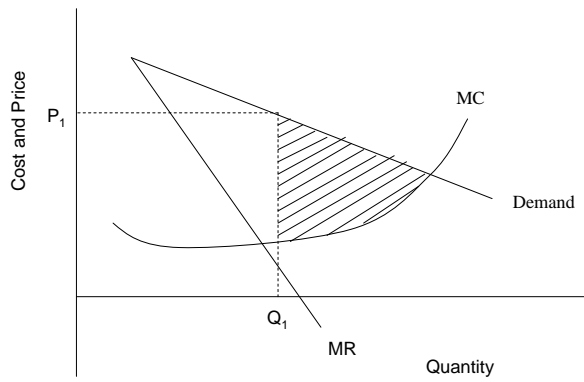
2. a.



2.b.

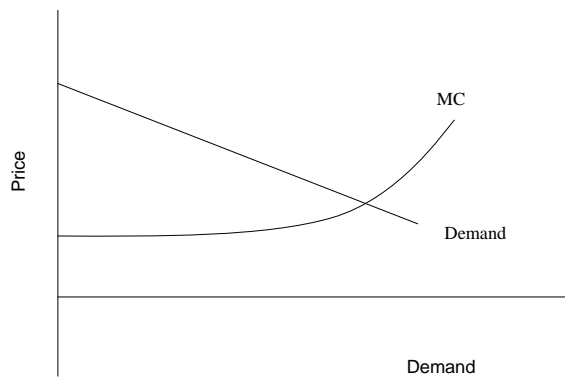


2. c.



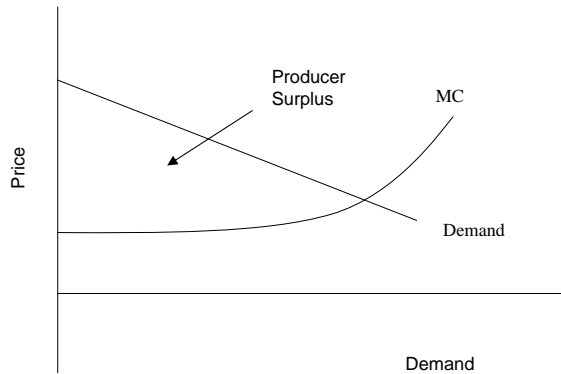
2. d. The quantity sold by the monopolist is lower, and the price charged is higher, than in perfect competition.

3. a.

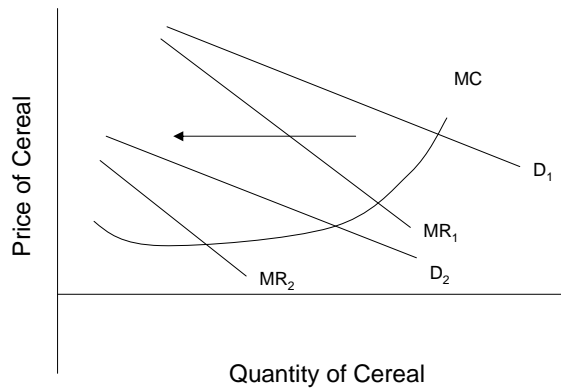


3.b. There is no area of consumer surplus on this graph.

3. c.



4.



- 5. a. They will each make \$20.
- 5. b. Producer 1 will make \$80.
- 5. c. Both firms will make \$100.

Answers to Self Test Questions

- | | |
|-------|-------|
| 1. c | 11. b |
| 2. d | 12. a |
| 3. c | 13. b |
| 4. d | 14. d |
| 5. b | 15. c |
| 6. c | 16. a |
| 7. d | 17. a |
| 8. e | 18. a |
| 9. b | 19. e |
| 10. d | 20. c |

CHAPTER 13

MARKETS FOR LABOR

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Summary

This chapter deals with supply and demand for labor. You will learn about why the supply curve for paid labor is generally depicted as sloping upward, and why the labor supply curve for an individual worker may bend backward. Also included are topics such as market power in labor markets, the notion of compensating wage differentials, and labor market discrimination. Also highlighted are the ways in which historical and social factors can influence wage patterns over long periods of time.

Objectives

After reading and reviewing this chapter, you should be able to:

1. List and describe the factors that affect worker productivity.
2. Discuss how individuals make decisions about entering the market for paid labor.
3. Understand the ambiguity regarding the slope of the labor supply curve at the individual level.
4. Describe the interaction of supply and demand in the aggregate labor market.
5. Explain variations in wages among workers.
6. Discuss wage discrimination based on race and gender.
7. Describe the simple mechanical model of the labor market.

Key Terms

labor force participation rate
employer-specific human capital
economic rents
bilateral monopoly
compensating wage differentials
efficiency wage theory
wage contours
dual labor markets
occupational segregation
marginal factor cost of labor

general human capital
signaling theory
monopsony
oligopsony
monitoring costs
employee morale
seniority
labor market discrimination
marginal revenue product of labor
backward-bending individual paid
labor supply curve

Active Review

Fill in the blank

1. The upward-sloping supply curve for labor reflects the _____ effect of a change in the wage.

2. The higher wages are, the more leisure people may want to “buy”. This phenomenon can be described as the _____ effect of rising wages.
3. If a variation in wages produces little change in the quantity of labor supplied, we can say that the market labor supply is relatively _____.
4. The _____ theory of education suggests that the value of an advanced degree lies in the information it provides about how good a worker and learner the person holding the degree is likely to be.
5. Returns earned on factors that are in fixed supply, such as extraordinary sports ability, are referred to as economic _____.
6. A situation in which there is only one buyer for a good is known as _____.
7. A situation in which there is only one buyer and one seller is known as a _____ monopoly.
8. Suppose there are many talented musicians hoping to sell their music, and just a few record label buyers of musical works. This situation, in which there are just a few buyers, is known as _____.
9. A company that spends a lot of money on the salaries of inspectors and supervisors to oversee workers and make sure they keep up a high rate of production has high _____ costs.
10. Historically determined patterns of relative wages among occupations are known as wage _____.
11. A profit maximizing firm will hire workers up to the point where the marginal revenue product of labor is equal to the _____.
12. If a firm brings labor in a perfectly competitive labor market, it will maximize profits at the point where _____ is equal to wage.

True or False

13. According to the theory of compensating wage differentials, non-unionized workers are more likely to take low-paying, unpleasant jobs.
14. In a dual labor market, each worker either holds two jobs or is qualified to hold two possible jobs.
15. Any given worker’s wage can be taken as an accurate representation of that worker’s contribution to well-being in the economy.

16. If a firm is a monopsonist in a labor market, it will pay wages above the marginal factor cost of labor.
17. Oligopsonistic employers will tend to hire fewer workers than firms operating in a perfectly competitive labor market.

Short Answer

18. If the wages of car mechanics rise, would you expect a movement along the supply curve for car mechanics, a shift in the supply curve for car mechanics, or both?

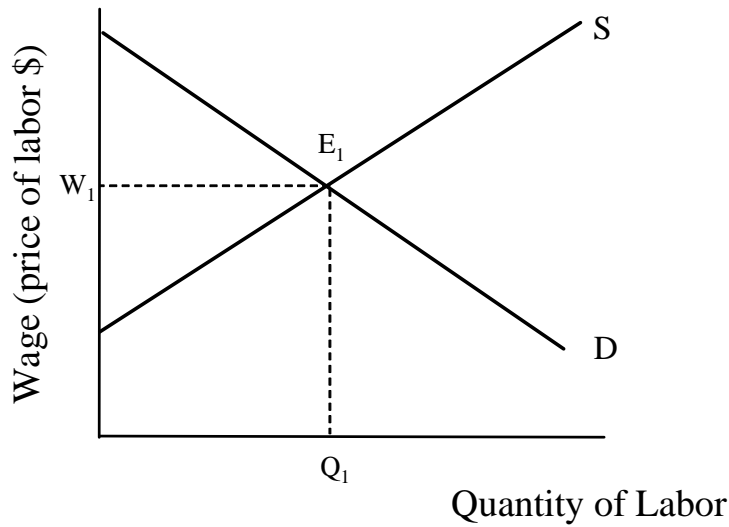
19. Explain the concept of “efficiency wage”.

20. What conditions are necessary in order for the theory of compensating wage differentials to operate in reality?

Problems

1. Sketch a backward-bending individual labor supply curve, and indicate where on the curve the income effect is stronger than the substitution effect.

2. The following graph shows the labor market for pastry chefs.



Suppose a popular new diet book is published that says people should eat at least one fancy French pastry per day, for optimum health. Show the change that might result in the labor market for pastry chefs, and indicate the new quantity of labor supplied and the new equilibrium wage.

3. Suppose Amy’s Applesauce company produces jars of applesauce. The chart below shows the total number of applesauce jars produced for a given number of workers.

Number of Workers	Number of Jars	Marginal physical product of labor	Marginal revenue product of labor
1	30		
2	70		
3	120		
4	140		
5	150		

a) Fill in the marginal physical product of labor for each level of production.

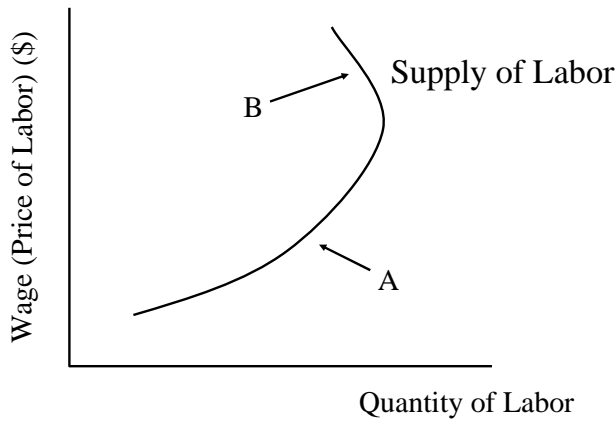
b) Now suppose each jar of applesauce sells for \$5. Fill in the marginal revenue product of labor for each level of production.

Self Test

1. Which of the following would *not* be considered an opportunity cost of paid employment?

- a. Caring for an elderly relative
- b. Education
- c. Self-employment
- d. Leisure
- e. Transportation costs of commuting to work

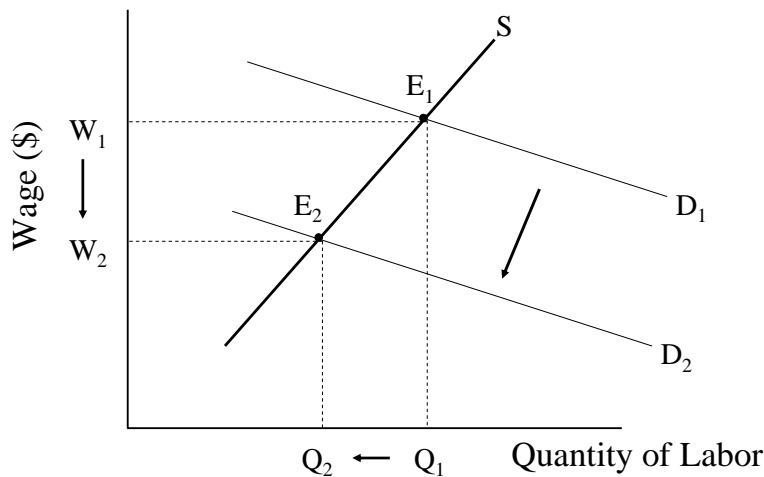
Question #2 refers to the following graph.



2. Which of the following statements is true?

- a. The income effect is stronger than the substitution effect at point A.
- b. The income effect is stronger than the substitution effect at point B.
- c. This graph represents the market supply of labor.
- d. An individual labor supply curve like that shown in the graph above could not occur in the real world.
- e. The shape of the curve is determined by the average cost of production.

Question #3 refers to the graph shown below.



3. Suppose that the graph shown above depicts a change in the labor market for graphic designers. Which of the following events could have produced the change we see in this graph?
- A new computer program allowed people to complete graphic designs automatically, without the aid of a trained designer.
 - Many new graphic designers graduated from a top training program.
 - The wage offered for specialized graphic design services rose.
 - The market for graphic designers expanded.
 - None of the above.
4. A situation in which there are many sellers of labor but only one employer (i.e. buyer of labor) can be referred to as
- Monopolistic labor
 - Monopoly
 - Monopsony
 - Competitive equilibrium
 - Labor equilibrium
5. Suppose there is only one company that hires skilled machinists, and all skilled machinists belong to one union. This situation, in which a single employer faces a single seller of labor, is known as
- Monopsony
 - Oligopsony
 - Oligopoly
 - Bilateral monopoly
 - Monopolistic competition
6. Factors that might make one job more appealing than another include
- working conditions
 - wages
 - amount of vacation offered
 - both a and c are true
 - a, b, and c are all true
7. The notion that, all else equal, workers will accept lower wages for jobs with better characteristics is known as the theory of
- social contribution
 - consumer sovereignty
 - market power
 - compensating wage differentials
 - employee morale

8. Efficiency wage theory holds that
- Workers will work harder when they know their current employer is paying them more than they could get elsewhere.
 - Workers work less when they know they are being overpaid.
 - Employee morale is not a factor influencing total productivity.
 - Raising wages is the best way to increase output per worker.
 - All of the above.
9. A situation in which some workers get high wages, job security, and other benefits while other workers, doing similar jobs, get low wages, no job security, and few other benefits, is known as
- An efficiency wage situation
 - A wage contour
 - A dual labor market
 - A price discriminating labor force
 - A high monitoring costs employment structure
10. The tendency of men and women to be employed in different occupations is referred to as
- occupational segregation.
 - gender inequality.
 - racial segregation.
 - contour segregation.
 - occupational dysphoria
11. Which of the following is *not* an assumption of the traditional model of the labor market?
- The firm is a unitary decision maker.
 - The firm is interested only in profit maximization.
 - The firm faces a convex decision problem.
 - The firm faces multiple equilibria.
 - All of the above are true
12. When a firm hires an additional worker, all else being equal, which of the following statements is false?
- Costs rise by the amount of the additional wages paid.
 - Revenue increases.
 - Revenue only increases if the firm makes a positive profit.
 - Profits may or may not increase.
 - Output increases.

13. A profit-maximizing firm should keep hiring more labor until the point where the marginal revenue product of labor is equal to
- Marginal productivity of capital.
 - Factor cost of capital.
 - Monopolistic wage.
 - Marginal factor cost of labor.
 - Marginal factor cost of fixed assets.
14. If a firm can maximize profit simply by setting $MRP_L = \text{wage}$, then we know that the firm must be
- A monopolist.
 - A monopsonist.
 - An oligopolist.
 - A monopolistic producer.
 - Operating in a perfectly competitive labor market.
15. Which of the following statements is true regarding monopsonistic employers?
- They hire more workers than firms that operate in perfectly competitive markets.
 - They pay workers more than their marginal revenue product of labor.
 - They pay workers less than firms that compete in labor markets.
 - They reward workers better than oligopsonistic firms.
 - Both a and c are true.
16. According to US census data for the year 2006, the median wage for women of all races was _____ of that of men.
- 20%
 - 50%
 - 77%
 - 80%
 - 93%
17. Which of the following statements is true?
- In 2006, college educated women age 55 or older earned on average only slightly more than high school educated men of the same age.
 - In 2006, college educated men aged 55 or older earned on average only slightly more than high school educated women of the same age.
 - Earning differences between gender groups tend to even out by age 50.
 - In 2000, African-American men made about 90% as much as their white male counterparts.
 - Both a and d are true.

18. From the perspective of an individual, the upward-sloping labor supply curve reflects the _____ effect of changes in wages.

- a. income
- b. substitution
- c. downward
- d. backward-bending
- e. upward

19. Which of the following jobs is most likely to have a relatively inelastic labor supply curve?

- a. cashier
- b. garbage collector
- c. janitor
- d. nuclear physicist
- e. none of the above

Question #20 refers to material presented in the Appendix.

20. Suppose a firm manufactures bags of peanuts. A single worker can produce 20 bags of peanuts, but adding a second worker makes it possible to produce 45 bags of peanuts. The marginal physical product of the second worker is

- a. Equal to \$20.
- b. Equal to \$25.
- c. 20 bags of peanuts.
- d. 25 bags of peanuts.
- e. Measured in dollars but unknown from the information given in this problem.

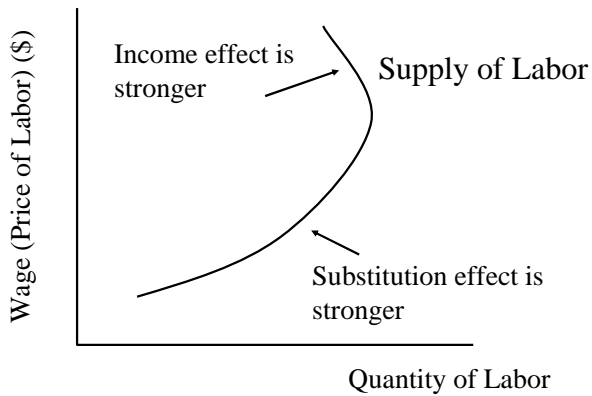
Answers to Active Review Questions

- 1. substitution
- 2. income
- 3. wage inelastic
- 4. signaling
- 5. rents
- 6. monopsony
- 7. bilateral
- 8. oligopsony
- 9. monitoring
- 10. contours
- 11. Marginal factor cost of labor
- 12. Marginal revenue product of labor

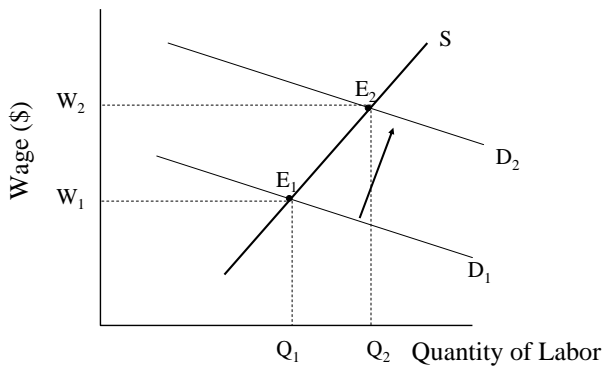
13. False. It is true that non-unionized workers are more likely to be found in low-paying, unpleasant jobs, but this is not the focus of the theory of compensating wage differentials. The theory of compensating wage differentials holds that workers will be willing to accept lower wages for jobs with better characteristics and will demand higher wages for jobs with unappealing characteristics, all else being equal.
14. False.
15. False.
16. False.
17. True.
18. Rising wages for car mechanics will produce movement along the supply curve only.
19. Efficiency wage theory suggests that workers perform better when they know their current employer is paying them more than they would receive elsewhere. Efficiency wages may be profit maximizing since the cost to the firm may be counterbalanced by superior work effort and loyalty on the part of the employees.
20. Workers must have very good information about job conditions and risks, and must be able to move freely to alternative jobs.

Answers to Problems

1.



2.



3.

Number of Workers	Number of Jars	Marginal physical product of labor	Marginal revenue product of labor
1	30	30	\$150
2	70	40	\$200
3	120	50	\$250
4	140	20	\$100
5	150	10	\$50

Answers to Self Test Questions

1. e
2. b
3. a
4. c
5. d
6. e
7. d
8. a
9. c
10. a
11. d
12. c
13. d
14. e
15. c
16. c
17. a
18. b
19. d
20. d

CHAPTER 14

MARKETS FOR OTHER RESOURCES

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Summary

Having learned about the market for labor, in this chapter you will look at the markets for other resources, with a particular focus on capital stocks. The material in this chapter will be particularly important for you if you are interested in business, finance, or environmental studies.

One of the important concepts explored in this chapter is discounting. Discounting is a method for taking time into account in valuation of capital. When you are finished with this chapter, you will be able to explain why a payment of \$1,000 today is more valuable than a payment of \$1,000 two years from now. You will also be able to explain the difference between discounting sums of money over time and the much more complicated question of whether other values can or should be discounted over time.

You will also learn about the debates surrounding the Coase Theorem, one approach that has been proposed for dealing with the problem of externalities; you will be able to explain the role of social capital in estimating the value of a business; and you will understand the basics of how stock and bond markets operate.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Discuss how the value of a capital stock is determined.
2. Understand the concept of discounting.
3. Describe the difference between risk and uncertainty.
4. Define how a firm in the simple mechanical model makes decisions about capital.
5. Explain the difference between the economic and ecological view of natural capital.
6. Describe the Coase Theorem.
7. Discuss how social capital is taken into account when estimating the value of a business.
8. Discuss the role of financial capital markets in business decisions.
9. Summarize how bond and stock markets operate, and what factors affect bond and stock prices.

Key Terms

returns to capital
discount rate
uncertainty

present discounted value
risk
sensitivity analysis

appreciation
marginal revenue product of
 (manufactured) capital
Coase Theorem
goodwill
bond
maturity date
bond price
stocks
annual return on a share of stock
growth stocks
institutional investors

investor confidence
marginal factor cost of
 (manufactured) capital
liquidation value
retained earnings
coupon amount
face value
bond yield to maturity
dividends
speculation
speculative bubble

Active Review

Fill in the blank

1. The value today of a payment you will receive ten years from now is the _____ of the payment.
2. An increase in expected returns on a capital investment will (increase/decrease) _____ the present discounted value of the investment.
3. The _____ Theorem holds that if property rights are well defined and transaction costs are minimal, then markets can allocate resources efficiently even in the presence of externalities.
4. The value of the physical assets of a firm, if the firm were sold and its assets sold separately, is the firm's _____ value.
5. The country of Economica has only a few banks. Most loans are arranged through personal connections, and they generally involve a high interest rate to compensate for the risk taken on by the lender. This situation can be described as a(n) _____ financial market.
6. A large business sells a bond. The amount of principal that will be repaid is called the _____ of the bond.
7. The fixed amount paid on a bond per year is called the _____ amount.
8. The annual rate of return on a bond if you hold it until it returns is the _____.
9. A portion of a company's profits are distributed to stockholders in the form of _____.

10. Buying and selling assets in the hope of profiting from appreciation or depreciation in asset values is known as _____.

11. Pension funds and insurance companies can act as _____ investors.

True or False

12. Assuming there is no inflation, a payment of \$5,000 today has the same value as a payment of \$5,000 six months from now.

13. When you purchase a bond, you get partial ownership of a firm.

14. Growth stocks are investments that are guaranteed to increase over time.

15. Rates of household saving in Japan are about the same as rates of household saving in the U.S.

Short Answer

16. Describe how a downturn in the stock market could affect bond prices.

17. Explain why decision-making about radioactive pollution from a nuclear power plant should not necessarily involve discounting.

18. Suggest one reason why discounting may be inappropriate for decisions that weigh human well-being in the present against human well-being in the future. Illustrate with an example.

Problems

1. Annika wants to buy a computer from Jeremy. However, she doesn't have the money right now, so she arranges to pay him one year from today. Jeremy's bank account pays an interest rate of 7%. Ignoring the factor of risk, if the price of the computer is \$1,000 today, what should Annika pay Jeremy in one year?

2. You work as a consultant for a small company. The company offers you a contract in which you will receive a payment of \$5,000 one year from today. Using a discount rate of 7%, what is the present discounted value of the payment?

3. Roxanne will receive a total of \$20,000 over a period of four years. She will receive an initial installment of \$8,000 one year from now; then she will receive \$4,000 per year for the next three years. Calculate the total present discounted value of the \$20,000, using a discount rate of 5%.

4. a. Calculate the present discounted value of \$100,000 received five years from now, using a discount rate of 5%. (Note that the present discounted value formulas given in the Math Review in your text generalize to the following formula for discounting, where t is the number of years in the future and i is the discount rate:
$$\text{Value}_0 = \text{Value}_t / (1+i)^t$$
)

b. Repeat the calculation, using an 8% discount rate.

c. Explain the effect of increasing the discount rate as you did from part a to part b.

5. Describe the information that is represented by the following website entry for a bond in a hypothetical company, Fred's Frozen Foods.

		<u>Yield</u>	<u>Close</u>	<u>Chg.</u>
Fred's Frozen Foods	9 ¾ 12	2.5	86	+.01

6. (Advanced) A company releases toxic waste into a lake used for drinking water. 100 years later, a child develops leukemia caused by the contaminated water.

(Note that the present discounted value formulas given in the Math Review in your text generalize to the following formula for discounting, where t is the number of years in the future and i is the discount rate: $Value_0 = Value_t / (1+i)^t$)

- a. Suppose the cost of treating the child with leukemia is \$100,000, paid as a lump sum 100 years from today. Using a discount rate of 5%, what is the present discounted value of this cost?

- b. Suppose the child dies after two years of treatment (i.e. 102 years from today). An estimated value of \$1 million is recorded as the "cost" of this death. Still using a discount rate of 5%, what is the present discounted value of this cost?

- c. Do you think it makes sense to calculate future “costs of illness” or “costs of death” in this way? What are the problems with applying a discount rate to this kind of calculation?

Self Test

1. You purchase a company bond that will pay \$90 per year for 5 years and then pay you \$500 at the end of 5 years. The \$500 you receive at the end of the 5 years is known as the
 - a. Coupon amount of the bond.
 - b. Bond value of the bond.
 - c. Maturity value of the bond.
 - d. Face value of the bond.
 - e. Discounted value of the bond.

2. You hold a company bond that pays \$2 per year for 5 years and then pays \$100 at the end of 5 years. Currently, however, bond buyers can get bonds that pay \$3 per year. As long as you continue to hold the bond, its yield to maturity is equal to
 - a. \$2
 - b. 2%
 - c. \$3
 - d. 3%
 - e. \$6.66

3. Joan buys a new bread-making machine, which she plans to use to make bread for sale. The monetized value of what Joan expects to get back from this investment in the future is referred to as
 - a. marginal returns to scale
 - b. discounted capital
 - c. returns to capital
 - d. variable return
 - e. capital risk

4. Company ABC runs a calculation of expected returns using several possible assumptions about the life of capital investments, interest rates, and other factors. The company is carrying out a(n)
 - a. market value analysis
 - b. sensitivity analysis
 - c. risk analysis
 - d. risk assessment
 - e. cost-benefit analysis

5. A profit-maximizing firm in the traditional neoclassical model hires capital services up to the point where the marginal revenue product of manufactured capital is equal to
 - a. MFC_{MK}
 - b. Wages
 - c. Price of the good demanded
 - d. MRF_{MK}
 - e. MP_Q

6. According to the economic view of natural capital,
 - a. Resources are valuable only to the extent that they contribute to profitability.
 - b. Natural resources have no value.
 - c. Natural resources are valued for their contribution to our long-term survival on earth.
 - d. Endangered species are valued above other, non-endangered species.
 - e. None of the above.

7. A factory discharges toxic waste into a river, killing the fish that people depend on for food. According to the Coase Theorem,
 - a. Defining clear property rights to the resources of clean water and healthy fish can solve this problem, if transaction costs are not too high.
 - b. There is no solution to the problem of externalities created by the factory.
 - c. This problem could potentially be solved by the people owning the river, and charging the factory owner for discharging waste.
 - d. This problem could potentially be solved by factory owner owning the river, and collecting fees from the people for *not* discharging waste.
 - e. Options a, c, and d are all correct.

8. A company goes out of business and sells all its physical assets one by one. The money earned on these sales is the company's
 - a. liquidation value

- b. liquidity value
 - c. good-will value
 - d. discounted value
 - e. social capital
9. Which of the following is *not* a way in which a company that wants to finance growth can get funds?
- a. taking out a loan
 - b. using retained earnings
 - c. selling stock
 - d. borrowing on an informal financial market
 - e. buying a bond
10. The fixed amount paid each year on a bond is its
- a. face value
 - b. coupon amount
 - c. maturity value
 - d. immature value
 - e. bond price
11. A speculative bubble is a situation in which
- a. People stop buying assets suddenly.
 - b. People start buying assets suddenly.
 - c. People's optimism causes stock values to rise higher than the value that would match the actual assets and profitability of a firm.
 - d. Mutually reinforcing pessimism causes bond prices to plummet.
 - e. People share inaccurate information about a firm, causing prices to fluctuate rapidly above and below true prices.
12. The sum of dividends on a share of stock, plus any capital gains and losses this year, is the
- a. Annual return on a share of stock.
 - b. Dividend return on a share of stock.
 - c. Growth stock value.
 - d. Speculative value of a stock.
 - e. Face value of a stock.

13. Suppose you are trying to sell a machine that makes candy. The machine is capable of making \$1,000 worth of candy every year for eight years. At the end of that time, the machine will have to be discarded and will have no more value. Which of the following statements is true?
- A buyer would be expected to pay exactly \$8,000 for the machine.
 - A buyer would be expected to pay more than \$8,000 for the machine.
 - The value of the machine is exactly \$8,000, but a buyer is likely to pay slightly less.
 - A buyer would be expected to pay less than \$8,000 for the machine.
 - The value of the machine is \$7,400.
14. Risk refers to a situation in which
- Exact outcome can be predicted.
 - The outcome is known, but hazardous.
 - Exact outcome is not known, but the likelihood of each possible outcome is known.
 - Exact outcome is unknown and the likelihood of any given possible outcome is also unknown.
 - None of the above.
15. Investor confidence can be an important factor helping to determine
- The inherent value of natural capital.
 - The price of a capital asset.
 - The demand for a firm's product.
 - The sensitivity analysis of demand for a product.
 - The social value of a capital asset.
16. Which of the following statements is true regarding financial markets?
- They tend to adjust very slowly to changes in supply and demand.
 - Active traders work on one side of the market only.
 - Resale markets are very important.
 - They are characterized by low volatility.
 - All of the above are true.

17. Which of the following statements is true?
- a. \$100 received next year is worth \$105 if received today, using a 5% discount rate.
 - b. Risk refers to a situation in which the probabilities of possible outcomes are unknown.
 - c. The stock and bond markets operate completely independently from one another.
 - d. Discounting allows future costs to be expressed in terms of present value.
 - e. All of the above are false.
18. Which of the following is unlikely to change the market value of a company's stocks?
- a. An increase in the value of negative externalities.
 - b. An increase in the value of positive externalities.
 - c. Changing levels of investor optimism.
 - d. An increase in the interest rate.
 - e. Both a and b are true.
19. In which of the following situations would it be most appropriate to use discounting?
- a. Choosing what school your child should attend.
 - b. Deciding how much to pay for a business asset.
 - c. Deciding where to site a nuclear facility.
 - d. Deciding on an acceptable level of water pollution.
 - e. Deciding whether to cut down a stand of trees.
20. Suppose you possess an asset that produces \$2,000 in income each year. Assuming a discount rate of 5%, what is the present discounted value of the returns to capital on the asset three years from now?
- a. \$1,728
 - b. \$2,000
 - c. \$2,700
 - d. \$2,315
 - e. \$2,997

Answers to Active Review Questions

1. present discounted value
2. increase
3. Coase
4. liquidation
5. informal
6. face value
7. coupon
8. bond yield to maturity
9. dividends
10. speculation
11. institutional
12. False
13. False.
14. False.
15. False.
16. A downturn in the stock market can lead investors to buy more bonds, thus driving up bond prices.
17. Negative effects of the radioactive pollution could occur many years in the future. Using discounting can make those future costs appear very small, and thus can lead to poor decision-making.
18. Discounting is designed to answer relatively straightforward questions about the role of time in the value of payments made or received by one person or entity at different possible points in time. When decisions are being made about human well being at different points in time, the picture gets more complicated. For example, what if a decision is weighing one person's enjoyment of a technology (e.g. a polluting motor boat) now, versus her grandchild's likelihood of developing a disease related to that technology (e.g. asthma from air pollution) in the future? Enjoyment of a motor boat and suffering caused by asthma are hard to convert into money values, although economists often do attempt to monetize values of this kind. Even if you believe it is possible to monetize these values, discounting does not take into account the fact that different people are involved at different times. Discounting might show that the grandchild's suffering from asthma has a low value because it occurs far in the future – but the grandchild might disagree with that assessment.

Answers to Problems

1. $\$1,000 \times 1.07 = \$1,070$
2. $\frac{\$5,000}{1.07} = \$4,672.90$
- 3.

Year	Present Discounted Value of \$ Received
1	$= \frac{\$8,000}{(1.05)} = \$7,619$
2	$= \frac{\$4,000}{(1.05)^2} = \$3,628$
3	$= \frac{\$4,000}{(1.05)^3} = \$3,455$
4	$= \frac{\$4,000}{(1.05)^4} = \$3,291$
Total	\$17,993

4. a. $\frac{\$100,000}{(1.05)^5} = \$78,352.62$

4. b. $\frac{\$100,000}{(1.08)^5} = \$68,058.32$

4. c. Using a higher discount rate produces a lower present discounted value.

5. This bond carries a coupon of 9 $\frac{3}{4}$ % and matures in 2012. At the close of yesterday's trading, the bond price was \$86, a one cent gain over the closing price from the day before. The yield to maturity is 2.5%.

6. a.

$$\frac{\$100,000}{(1.05)^{100}} = \$760$$

6. b.

$$\frac{\$1,000,000}{(1.05)^{102}} = \$6,897$$

6.c. Discounting makes sense for a situation in which one person is making decisions about a sum of money (e.g. understanding the difference between \$100 received today and \$100 received next year). In contrast, a human life is not a value that can be discounted over time; presumably, a child's untimely death 100 years from now is just as tragic as it would be if it occurred today. Furthermore, a situation such as that described here involves intergenerational effects. The person who will develop

leukemia is not even alive at the time of the decision about whether to pollute the lake, and thus has no opportunity to express his or her preference for clean, safe water.

Answers to Self Test Questions

1. d
2. b
3. c
4. b
5. a
6. a
7. e
8. a
9. e
10. b
11. c
12. a
13. d
14. c
15. b
16. c
17. d
18. e
19. b
20. a

CHAPTER 15

THE CORE SPHERE: HOUSEHOLDS AND COMMUNITIES

Microeconomics in Context (Goodwin, et al.), 2nd Edition

Chapter Summary

This chapter addresses the important economic activities of households and communities, the historical shifts that have moved many traditional core activities from non-market to market arenas, and contemporary strains in the relationship between market and non-market work. In this chapter, you will learn some important (and perhaps surprising) facts about pay scales, social services, and other key economic factors in the United States. You will also learn about some of the approaches that economists have developed for analyzing the economic decisions that occur within individual households.

Objectives

After reading and reviewing this chapter, you should be able to:

1. List the functions of the core sphere.
2. Describe the data collected in the United States and internationally regarding the core sphere.
3. Discuss the historical development of the core sphere, including the cult of domesticity, the increasing entry of women into the paid labor force in the 20th century, the persistence of discrimination, and the crisis in caring labor.
4. Describe employer and government policies designed to improve the well-being of the core sphere.
5. Define the “glued together” family theory of household behavior and discuss its strengths and limitations.
6. Define the dictatorship theory of household behavior and discuss its strengths and limitations.
7. Define the specialization and exchange theory of household behavior and discuss its strengths and limitations.
8. Define the bargaining theory of household behavior and discuss its strengths and limitations.

Key Term Review

neighborhood effects

family

cult of domesticity

“pin money”

dictatorship model (of households)

threat point (or fall-back position)

household

time use survey

“family wage”

“glued together” family model

bargaining theory

Active Review Questions

Fill in the Blank

1. The effects on an individual of the local community to which he or she belongs are known as _____ effects.
2. A survey designed to find out how much time people spend in various activities is known as a _____ survey.
3. According to economist Gary Becker's model of household decision making, each household is assumed to include a decision maker referred to as the _____.
4. An alternative view of Becker's model of the family calls his model the _____ model of behavior.
5. James and John experience greater utility when they are together than they would if they were alone. James' utility level if he is alone can also be called his _____ point.
6. In the 19th century, women's wages were sometimes referred to as _____ money.
7. The simplest model of families, in which the whole family is assumed to act like a single individual, is sometimes referred to as the _____ family model.
8. Suppose you wanted to use a family model in which parents, children, and other family members were seen as different people who might have conflicting interests. For your analysis of this family model you would probably draw upon _____ theory.

True or False

9. In more just over half of households of married couples with children under the age of 6, both parents engage in paid employment.
10. World-wide, almost 10% of the world's households contain adult women but no able-bodied adult man.
11. Most of the household theories presented in the textbook build in consideration of the special interests, needs, and vulnerabilities of children.
12. In bargaining theory, when two actors come to an agreement, both of them arrive at their fall-back position.

13. Bargaining theories of household behavior focus on the ways in which households negotiate with one another in a neighborhood, city, or other socioeconomic grouping.
14. According to Gary Becker's theory of family behavior, each household contains an "optimizer" who optimizes production and consumption decisions.
15. Most European countries offer longer parental and family leave periods than the U.S.
16. Most full-time workers in the U.S. are able to set their work hours flexibly to accommodate child care and other needs.
17. World-wide, men and women bring in roughly equivalent amounts of total money income.

Short Answer

18. According to time use surveys compiled by the U.N. Development Program, about how much of people's economically productive time is included in conventional production measures (such as GDP)?

19. Briefly explain the meaning of the term "cult of domesticity."

20. How are notions associated with the "cult of domesticity" reflected in the systems of national accounts (such as GDP) that we use today?

Problems

1. John and Sally have recently married and are trying to decide how much money to spend on groceries each month. Jane prefers purchasing organic food even though it costs slightly more. Joe would prefer to save money and buy generic, non-organic food brands.

a. Draw a utility frontier with Sally's utility on the X axis and John's utility on the Y axis.

b. On the graph above, choose threat points for John and Sally and label them. Label one point on the utility frontier that would be acceptable to both John and Sally.

c. Label a point on the utility frontier that would not be acceptable to Sally.

2. Use the same example as above to answer the following questions.

a. Highlight the set of all points along the utility frontier where both John and Sally will be willing to come to an agreement.

- b. Suppose Sally loses her job, thus decreasing her ability to purchase groceries of any kind. Label a possible new fall-back position for Sally.
- c. On the graph above, highlight the new set of all points along the utility frontier where both John and Sally will be willing to come to an agreement.

Self Test

1. Currently, about ___% of women and ___% of men over the age of 16 in the United States are in the paid labor force.
 - a. 30; 95
 - b. 80; 100
 - c. 50; 50
 - d. 60; 75
 - e. 40; 90
2. Which of the following is an example of an activity of the core sphere?
 - a. Child care in the home.
 - b. The final stage of production of many goods and services.
 - c. Decision-making about consumption.
 - d. Organization of the use of leisure time.
 - e. All of the above.
3. Which of the following is *not* an example of a neighborhood effect?
 - a. A mother cares for her children at home.
 - b. Teenagers from a relatively wealthy neighborhood have a high rate of acceptance at respected colleges.
 - c. All the children from a certain neighborhood perform below average on a standardized test.
 - d. Children raised in an affluent neighborhood have a greater likelihood of acquiring higher paying jobs.
 - e. Children who live in a neighborhood where Spanish is spoken are more likely to learn Spanish.

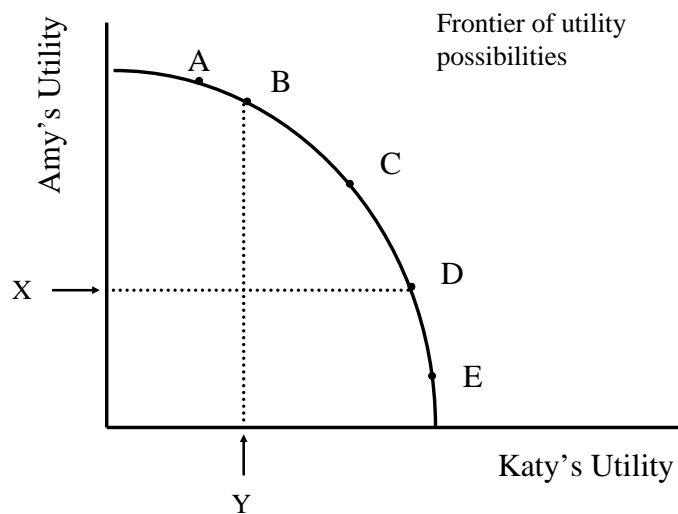
4. Which of the following activities might fall into the category of unpaid labor in a less-industrialized country?

- a. producing food
- b. obtaining drinking water
- c. caring for livestock
- d. producing clothing
- e. all of the above

5. All of the following are elements of the “cult of domesticity” except:

- a. Seeing men as better suited to business life.
- b. Seeing men as better suited to public policy activities.
- c. The stay-at-home wife.
- d. The dependent child.
- e. The core sphere as a center of economic activity.

Questions #6, #7, and #8 refer to the following diagram and scenario. (Note that bargaining models can be applied to cases other than marriages.)



Suppose that Amy and Katy run a graphic design business together. Points X and Y show the level of utility that Amy and Katy would achieve if each of them worked alone.

6. Which point on the utility frontier corresponds to Amy’s threat point?

- a. A
- b. B
- c. C
- d. D
- e. E

7. Which of the following statements is true?
- Amy and Katy will prefer working together if their utility combination is somewhere between point B and point D.
 - Amy and Katy will prefer to work together so long as their utility combination is somewhere between point A and point E.
 - Amy and Katy will only choose to work together if they can achieve the utility combination corresponding to point C.
 - Katy's threat point is point X.
 - Katy will *not* want to work with Amy if their utility combination is at point E.
8. Working from the same example as above, now suppose that Amy breaks her arm. She can still work effectively with someone else, but her productivity alone is now very low. Which of the following statements accurately describes Amy and Katy's new situation?
- Amy's threat point has risen.
 - Amy's threat point has fallen.
 - Amy's threat point has fallen while her fall-back position has improved.
 - Katy's threat point has fallen.
 - Both Amy and Katy have a new fall-back position.
9. The concept of a "family wage" refers to
- Pocket money for a married woman.
 - Earnings of all household members combined.
 - A concept also referred to as "pin money."
 - A wage set high enough to support a man and his dependents.
 - Any level of earning, if it is earned by a man.
10. Which of the following statements is accurate regarding the Personal Responsibility and Work Opportunity Reconciliation Act of 1996?
- It was popularly known as "Welfare reform."
 - It increased the requirements on poor mothers to engage in paid work.
 - It requires fathers to take greater responsibility for child support payments.
 - Both a and b are true.
 - a, b, and c are all true.
11. Which of the following statements supports the view that the "cult of domesticity" has not completely disappeared in the US?
- The Personal Responsibility and Work Reconciliation Act reinforced the idea that "work" is something that only occurs *outside* the home.
 - Labor market discrimination has been eliminated.
 - Official GDP statistics do not account for work in the core sphere.

- d. Nursing and child care jobs are now considered high-paying jobs.
- e. Both a and c are true.

12. In Spain, how many weeks of maternity leave are guaranteed to everyone at full pay?

- a. 0
- b. 4
- c. 8
- d. 16
- e. 32

13. In the US, how many weeks of maternity leave are guaranteed to everyone at full pay?

- a. 0
- b. 4
- c. 8
- d. 16
- e. 32

14. The model in which a family is portrayed operating as an individual, with a unified set of goals, is known as

- a. The dictatorship model
- b. The “glued together” family model
- c. The bargaining theory model
- d. The threat point model
- e. The altruistic model

Questions #15 and #16 refer to the following scenario.

Jane and Jim are a married couple. Each of them experiences greater utility as a member of the couple than he or she would alone.

15. Jim’s utility level if he were not married is

- a. His fall-back position.
- b. Jane’s threat point.
- c. Identical to Jane’s.
- d. Higher than Jane’s.
- e. Cannot be determined from the information provided here.

16. Suppose that Jim becomes disabled and can no longer earn a living. Jane is considering leaving him. Which of the following statements is true, based on the information given here?

- a. Jane's threat point has fallen.
- b. Jim's threat point has fallen.
- c. Jane's fall-back position has improved.
- d. Jim's fall-back position is unchanged.
- e. Agreements within the marriage are likely to turn out better than before, from Jim's point of view.

17. Which of the following situations might lower Jane's threat point?

- a. She gets a higher-paying new job.
- b. She inherits money from a distant cousin.
- c. Jim threatens to have her fired from her job if she leaves him.
- d. Jim gets a high-paying new job.
- e. Jane's adult daughter offers her a place to live.

18. Robert Putnam's book, *Bowling Alone*, argues that

- a. Americans have more social contact with one another than they used to have.
- b. Americans participate in more community groups than they did 100 years ago.
- c. Decreasing participation in community groups has led to declines in social trust and reciprocity.
- d. Americans waste increasing amounts of time on unproductive social activities.
- e. People with children spend more time socializing than people without children.

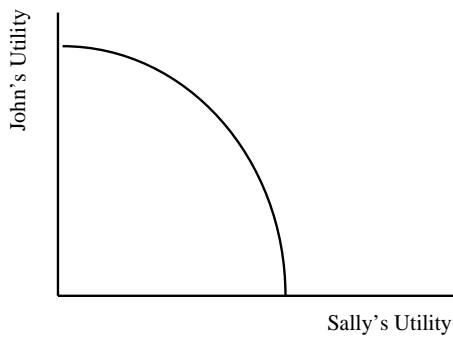
Answers to Active Review Questions

- 1. neighborhood
- 2. time use
- 3. altruist
- 4. dictatorship
- 5. threat
- 6. pin
- 7. "glued together"
- 8. bargaining
- 9. True.
- 10. False. The figure is almost 1/3.
- 11. False.
- 12. False.
- 13. False.
- 14. False.
- 15. True.
- 16. False.
- 17. False.
- 18. Slightly more than half of the total time spent on economically productive activities is included in these measures.

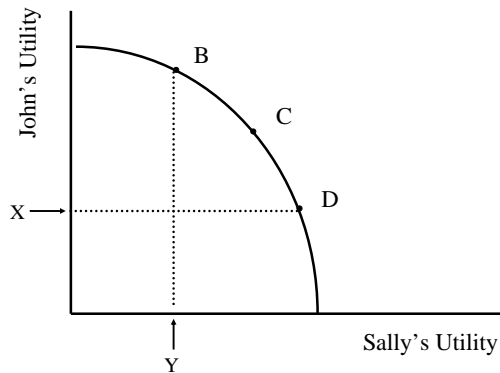
19. The “cult of domesticity” is a term used by historians to describe the ideology according to which business activities, market life, and public policy were the sphere of men, while women were better suited to take care of the home. The “cult of domesticity” also included the notion of childhood as a period of life meant for attentive nurturing and education, rather than a period of contributing to the economic well being of a household.
20. Systems of national accounts, such as GDP, were designed primarily to track activities outside the core sphere, excluding household and community production.

Answers to Problems

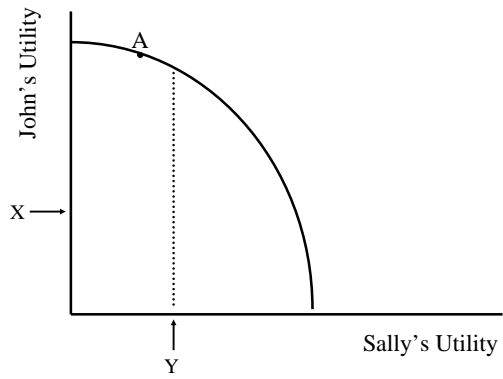
1. a.



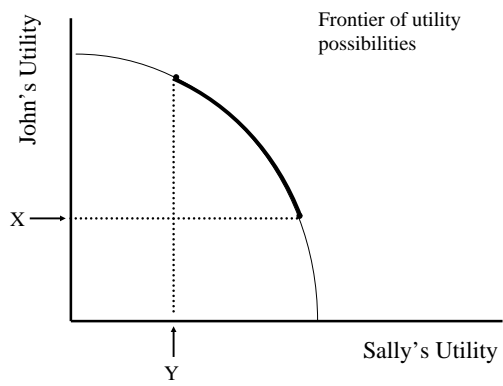
b. John will have utility X if he is not with Sally. Sally will have utility Y if she is not with John. Thus X and Y are John and Sally’s threat points, respectively.



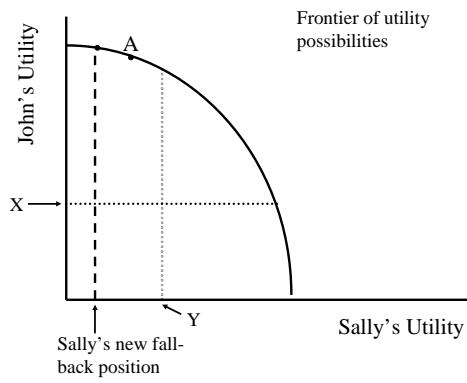
c. Point A represents an outcome that Sally will not accept.



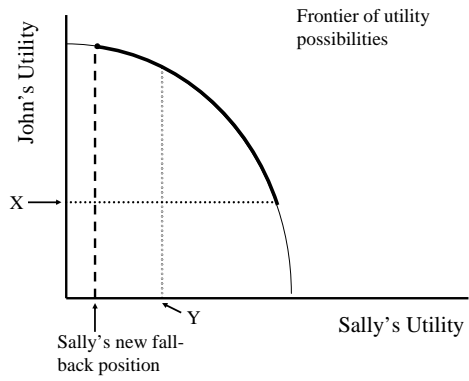
2. a.



b.



c.



Answers to Self Test Questions

1. d
2. e
3. a
4. e
5. e
6. d
7. a
8. b
9. d
10. d
11. e
12. d
13. a
14. b
15. a
16. b
17. c
18. c

CHAPTER 16

THE BUSINESS SPHERE: FOR-PROFIT FIRMS

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Summary

This chapter looks at topics including the legal organization of firms, economies of scale and scope, and principal-agent theory. This chapter is an important complement to the material on market power that you studied in Chapter 12.

This chapter aims to provide an understanding of contemporary business issues and corporate power that goes beyond the basic concepts of “imperfect competition.” After studying this chapter you will have a deeper understanding of the goals of firms, the role of transactions costs, and the issue of worker motivation. You will also learn about trends in business mergers and growth, the activities of multinational corporations, the growth of global markets and global competition, and activities such as global subcontracting and offshoring.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Describe the differences between the four legal forms of for-profit enterprises.
2. Comment on the magnitude of the largest firms.
3. Describe the shareholder, stakeholder, and principal-agent theories of business behavior.
4. Describe the conflict and cooperation theories of business management.
5. Discuss the historical development of business firms during the nineteenth and twentieth centuries.
6. Describe some of the reasons firms have increased in magnitude, including economies of scale and scope, integration, and transactions cost economies.
7. Discuss why small firms are likely to continue to coexist besides large, multinational corporations, including the theory of dual sectors.
8. Explain why the information revolution, accompanied by globalization, has been called the “third industrial revolution,” and then list some of the positive and negative aspects of globalization.

Key Term Review

proprietorship
limited liability
cooperative
stakeholder theory
X-inefficiency
economies of scope
vertical integration

partnership
corporation
shareholder theory
principle-agent theory
horizontal integration
transaction cost economies
conglomerates

franchise
globalization
transfer prices
offshoring

dual-sector theory
multinational corporations
subcontracting (outsourcing)

Active Review Questions

Fill in the Blank

1. The main legal forms of private for-profit enterprises are proprietorships, partnerships, corporations, and _____.
2. A business owned by a single individual or family is known as a _____.
3. Corporations are characterized by _____ liability for owners.
4. The larger the enterprise, the greater the benefits of _____ for the owners and investors.
5. A very (large/small) _____ proportion of U.S. businesses have fewer than 20 employees. These small businesses employ a (large/small) _____ proportion of the U.S. labor force.
6. The idea that corporations are merely legal instruments for carrying out the will of their shareholders is known as the _____ theory of the corporation.
7. In the _____ theory of the corporation, the contemporary corporation is seen as a complex social organization with multiple constituencies.
8. A “_____ statute” makes a corporation’s board of directors accountable to groups other than just shareholders.
9. In principal-agent theory, lower-level managers can be described as a(n) _____ to workers.
10. The term _____ refers to a situation in which more labor is used in a production process than is actually necessary.
11. _____ theory focuses on ways of eliciting work through coercion (such as threats of demotion or job loss).
12. Economies of scale arise when larger enterprises operate at a (lower/higher) _____ cost per unit of output.
13. The shifting of production units to foreign locations is known as _____.

14. A legal agreement in which an independent enterprise agrees to abide by standards set by a larger corporation and to compensate it for use of its brand name and other services is known as a _____.

True or False

15. Over half of U.S. employees work for large firms that employ 100 or more workers.

16. The biggest companies in the world--those on the Fortune Global 500 list--are all based in the U.S. or Europe.

17. By definition, and in practice, CEOs, managers, and workers all work in the interest of shareholders.

18. In principal-agent theory, the agent is an economic actor who has an objective that he or she cannot achieve alone.

19. In principal-agent theory, the principal must devise strategies to motivate the agent.

20. A situation in which a company merges with other companies that make similar products can be referred to as horizontal integration.

21. Dual-sector theory describes markets as divided into primary and secondary sectors, where the primary sector consists of perfectly competitive firms while firms in the secondary sector have market power.

Short Answer

22. What is one difference between a corporation and a cooperative?

23. Suggest some ways in which large corporations frequently exercise market power.

24. Explain one possible drawback of attempting to motivate managers through gain-sharing arrangements, such as stock options.

25. Describe two possible ways in which a corporation can respond to a significant increase in international competition.

Self Test

1. Sonya is a partial owner of a business. If the business fails, Sonya's losses cannot exceed the amount of financial capital that she herself has invested in the business. This arrangement is known as

- a. liquid liability
- b. liquidity
- c. a cooperative
- d. limited liability
- e. cooperative liability

2. About what percentage of employers in the U.S. have 100 or more employees?

- a. 2%
- b. 20%
- c. 50%
- d. 65%
- e. 95%

3. In the U.S., about what percentage of employees worked at firms with 100 or more employees?

- a. only a tiny percentage
- b. about a third
- c. over half
- d. nearly all
- e. none

4. The region with the fewest countries in the Fortune Global 500 is
- Western Europe
 - East Asia
 - South Asia
 - Africa
 - North America
5. Which of the following is *not* a reason why many businesses have grown over time?
- economies of scale
 - breakthroughs in communication technology
 - “first mover” advantage
 - economies of scope
 - consumer desires for unique goods
6. A corporation with market power
- Has zero economic profits.
 - Can distribute surplus revenues to shareholders.
 - Can use surplus revenues for environmental clean-up.
 - Both a and b are true.
 - Both b and c are true.
7. The stockholders of a corporation can be considered
- agents to the board
 - a principal
 - an agent
 - a principal-agent combination
 - agents to the workers
8. A situation in which more labor is used for production than is actually necessary is known as
- x-efficiency
 - x-inefficiency
 - labor efficiency
 - principal-agent theory
 - the conflict model
9. The owner of an oil refinery purchases another, similar oil refinery. This is an example of
- vertical integration

- b. horizontal integration
 - c. a transaction cost
 - d. economy of scope
 - e. none of the above
10. A store that sells ice skates decides to start selling hats and mittens as well. This store is taking advantage of
- a. economies of integration
 - b. vertical integration
 - c. horizontal integration
 - d. economies of scope
 - e. both c and d are true
11. Vertical integration can be a way to achieve
- a. x-efficiency
 - b. horizontal economies
 - c. transaction cost economies
 - d. x-economies
 - e. principal-agent economies
12. A large producer of bread expands by purchasing a flour mill and a large area of land for producing grain. The bread producer now uses its own land to produce flour for the bread it makes. This is an example of
- a. franchise advantage
 - b. first mover advantage
 - c. horizontal integration
 - d. vertical integration
 - e. dual sectors
13. Which of the following is an example of a firm taking advantage of *economies of scope*?
- a. An oil refinery expands to produce more oil.
 - b. An oil refinery purchases an oil extraction firm.
 - c. A hot chocolate shop starts selling cold lemonade in the summer.
 - d. A restaurant expands by opening a new wing.
 - e. An aircraft producer takes over ownership of a small firm that supplies its engines.
14. A company whose subsidiaries carry out unrelated activities is known as a
- a. conglomerate
 - b. vertically integrated firm

- c. franchise
 - d. horizontally integrated firm
 - e. dual sector firm
15. In the situation known as an “oligopoly with a competitive fringe,”
- a. Large companies control all production.
 - b. A small number of small companies control production.
 - c. Each oligopolistic firm makes two main products.
 - d. A few large companies capture the stable core of market demand.
 - e. A few large companies produce for the fluctuating part of the market.
16. Of the 500 CEOs of the largest US companies in 2005, how many were women?
- a. none
 - b. fewer than 10
 - c. about 50
 - d. about 100
 - e. about half
17. A multinational corporation is defined as a corporation that
- a. Outsources production.
 - b. Is not subject to national laws.
 - c. Is always vertically integrated.
 - d. Owns and operates subsidiaries in more than one country.
 - e. All of the above.
18. The prices that subsidiaries within a firm charge to one another are known as
- a. transfer prices
 - b. internal prices
 - c. conglomerate prices
 - d. globalized prices
 - e. subcontract prices
19. A US-based firm decides to move all its clothing production to a country where wages are lower. This is an example of
- a. transfer pricing
 - b. dual sectors
 - c. offshoring
 - d. oligopoly with a competitive fringe
 - e. both a and c are true

20. A business owned by a group of workers, suppliers, or consumers, in which each member has one and only one vote, is known as a

- a. proprietorship
- b. partnership
- c. corporation
- d. cooperative
- e. none of the above

Answers to Active Review Questions

- 1. cooperatives
- 2. proprietorship
- 3. limited
- 4. incorporation
- 5. large; small
- 6. shareholder
- 7. stakeholder
- 8. constituency
- 9. principal
- 10. x-inefficiency
- 11. conflict
- 12. lower
- 13. offshoring
- 14. franchise
- 15. True.
- 16. False.
- 17. False.
- 18. False.
- 19. True.
- 20. True.
- 21. False.
- 22. Corporate ownership generally takes the form of owning stocks. Shareholders govern according to the principle of one share, one vote. Cooperatives, in contrast, cannot issue stock. They are governed according to the principle of one member, one vote. Thus, ownership in a cooperative cannot be accumulated.
- 23. Large corporations often sell their products under oligopolistic conditions. They also buy inputs in markets where they are major players.
- 24. Giving managers interests in the stock value of a firm can create an incentive for them to focus on short-term profitability -- or even just a short-term *appearance* of profitability -- while potentially neglecting the long-term health of the firm.
- 25. One option is for the company to maintain its existing workforce and wage levels, while retraining workers and redesigning products to increase revenues. Another option is for the company to cut costs through measures such as firing workers and reducing wages.

Answers to Self Test Questions

1. d
2. a
3. c
4. d
5. e
6. e
7. b
8. b
9. b
10. d
11. c
12. d
13. c
14. a
15. d
16. b
17. d
18. a
19. c
20. d

CHAPTER 17

THE PUBLIC PURPOSE SPHERE: GOVERNMENTS AND NONPROFITS

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Summary

Having looked in detail at the private sector in the previous chapter, the text now turns to the role of governments and nonprofit organizations in this chapter. For example, the coordination and regulation functions of government, without which markets could not function in the way they do is included. The chapter explores the ways in which organizations within the public purpose sphere address both short- and long-term aspects of people's needs. This chapter will be particularly important for those of you who are interested in public policy, international economics, business, finance, health, education, the nonprofit sector, and environmental studies.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Define the two primary functions of public purpose organizations.
2. Describe the three basic types of public purpose organizations.
3. Discuss the historical development of public purpose organizations regarding social welfare.
4. Discuss the historical development of public purpose organizations regarding the regulation of monopolies and trade practices.
5. Discuss the historical development of public purpose organizations regarding the regulation of financial markets.
6. Discuss the historical development of public purpose organizations regarding environmental protection.
7. Define the three major theories of organizational behavior: the theory of pure public service, the theory of "capture," and the theory of civic responsibility.

Key Term Review

regulation

Progressive Era

means-tested programs

World Trade Organization

Pigovian taxes

public service (pure theory of)

civic responsibility (theory of)

open access resources

social insurance programs

Interstate Commerce Act

Securities Act of 1933

self-regulation

"capture" (theory of pure

special interest)

Active Review Questions

Fill in the Blank

1. The two main categories of economic functions carried out by public purpose organizations are _____ and direct provision.
2. Taxes that are designed to help internalize external costs are known as _____ taxes.
3. The notion that public purpose organizations are always taken over by powerful special interests is known as the theory of pure special-interest _____.
4. When the use of a good by one person does not reduce the amount of it that someone else can enjoy, it is called _____.
5. A resource that is diminishable, but from which no one can be prevented from benefiting, is called a(n) _____ resource.
6. The National Board of Medical Examiners in the US provides the exams that physicians take in order to become licensed. This Board is required by law to channel any financial surpluses back into the organization, because it is a _____ organization.
7. Labor unions, farmers' cooperatives, and social clubs are all examples of _____ - _____ nonprofit organizations.
8. The period in US history from the late 1800s to the early 1920s, during which many government social welfare programs began, is known as the _____ era.

True or False

9. Sunlight is a diminishable open-access resource.
10. Only government organizations are involved in the regulation of economic activity.
11. Charitable foundations such as the Ford, Rockefeller, and Gates Foundations are nonprofit organizations.
12. Nonprofit organizations often depend on fees and government funds for a significant portion of their revenues.
13. A labor union is an example of a "public benefit service and action" organization.
14. The period known as the Progressive Era in the US occurred primarily in the 1930s.

Short Answer

15. Suggest an example of a diminishable open access resource.

16. Name the four main types of nonprofit organizations.

17. Suggest three examples of public benefit service and action nonprofit organizations.

18. Name an example of an international nongovernmental organization.

19. In what year did labor standards, including limitations on child labor, begin to be regulated at the national level in the US? What was the name of the law that introduced these standards?

20. Explain how a Pigovian tax can, at least theoretically, discourage activities that have negative externalities.

Self Test

1. Which of the following is an example of direct provision by the public purpose sphere?
 - a. Advocacy for civil rights.
 - b. Setting standards for licensing physicians.
 - c. Health care provided by a nonprofit clinic.

- d. Funding for other nonprofits provided by a charitable foundation.
 - e. All of the above.
2. Which of the following is an example of a nonprofit organization?
- a. a labor union
 - b. The National Board of Medical Examiners
 - c. The American Medical Association
 - d. a church
 - e. All of the above
3. Which of the following is an example of a diminishable open access resource?
- a. sunlight
 - b. clean water in a lake
 - c. the eradication of an infectious disease
 - d. the social benefits of a high literacy rate
 - e. all of the above
4. Which of the following is *not* a public good?
- a. eradication of polio
 - b. a high literacy rate
 - c. infrastructure for provision of safe drinking water
 - d. national defense
 - e. an exclusive resort
5. Which of the following activities of the US federal government accounts for the most employment?
- a. welfare programs
 - b. tertiary education
 - c. primary and secondary education
 - d. national defense
 - e. transportation infrastructure
6. Which of the following could be an example of a domestic nonprofit organization?
- a. A local environmental protection organization
 - b. The United Nations
 - c. The International Monetary Fund
 - d. A state housing authority
 - e. The International Organization for Standardization
7. In what year were labor standards first regulated at the national level in US?

- a. 1800
 - b. 1838
 - c. 1919
 - d. 1920
 - e. 1938
8. The “Great Society” plan was a project of which decade?
- a. 1900-1910
 - b. The 1920s
 - c. The 1820s
 - d. The 1930s
 - e. The 1960s
9. Which of the following statements is true?
- a. Social insurance programs in the United States generally require a history of market work in order to qualify for benefits.
 - b. Means-tested programs generally require a history of market work in order to qualify for benefits.
 - c. Both social insurance programs and means-tested programs are meant only for people with low resources.
 - d. Means-tested programs are available to anyone who has worked for pay.
 - e. Both a and c are true.
10. The two general categories of purposes for which public purpose organizations work are
- a. regulation and monetary purposes
 - b. regulation and direct provision
 - c. resource management and regulation
 - d. charity and direct provision
 - e. resource management and advocacy
11. Both open-access resources and public goods are
- a. excludable
 - b. non excludable
 - c. diminishable
 - d. provided by governments only
 - e. provided by nature only
12. In 2000, what percentage of cash transfers at all levels of government went to the categories we generally think of as “welfare” (i.e. payments under the Transitional Assistance to Needy Families and general assistance programs)?

- a. 5%
- b. 10%
- c. 50%
- d. 83%
- e. 88%

13. Social security and unemployment compensation are both examples of

- a. public-private partnerships
- b. transitional assistance to needy families
- c. means-tested programs
- d. social insurance programs
- e. both a and c are true

14. The Interstate Commerce Act was the first federal law intended to

- a. Prevent monopoly.
- b. Set environmental standards.
- c. Regulate international trade.
- d. Govern the activities of states trading with one another.
- e. Facilitate discriminatory pricing.

15. The World Trade Organization (WTO)

- a. Can discipline member countries that do not abide by its rules.
- b. Has now been replaced by the GATT.
- c. Was established to enforce environmental standards internationally.
- d. Was established to develop and enforce labor standards at the international level.
- e. None of the above.

16. A small tax on currency trades, proposed as a means to discourage speculative trades, is known as a(n)

- a. Pigovian tax
- b. Tobin tax
- c. James tax
- d. Pigou tax
- e. Externalities tax

17. The theory of pure special interest capture holds that

- a. People are motivated primarily by altruism.
- b. Organizations generally pursue their stated goals.
- c. Organizations are most efficient when governed by private sector special interest groups.

- d. Special interest groups are the dominant force in American politics.
 - e. Any organization, regardless of its stated purpose, will eventually be taken over by special interest groups.
18. The view of public purpose organizational behavior in which people are seen as responding both to extrinsic and to intrinsic motivation and which assumes people have both altruistic and selfish motivations is known as the
- a. Theory of moral values
 - b. Theory of public service
 - c. Theory of civic responsibility
 - d. Theory of special interest capture
 - e. Theory of personal responsibility
19. Organizations with ‘501(c)(3)’ status
- a. Can receive tax-deductible donations.
 - b. Are for-profit organizations.
 - c. Are lobbying organizations.
 - d. Are set up to support political candidates.
 - e. Are always member-serving organizations.
20. Which of the following is *not* one of the main types of non-profit organizations?
- a. public benefit service and action
 - b. member-serving
 - c. religious
 - d. funding intermediaries
 - e. governmental

Answers to Active Review Questions

- 1. regulation
- 2. Pigovian
- 3. capture
- 4. non-diminishable
- 5. open access
- 6. nonprofit
- 7. member-serving
- 8. Progressive
- 9. False. Sunlight is not a diminishable resource, because the amount available does not decrease with increasing use.
- 10. False.
- 11. True.
- 12. True.
- 13. False.

14. False.
15. Examples provided in the text include fish stocks; water in a lake or river; and trees in natural forests.
16. Public benefit service and action; member serving; religious; and funding intermediaries.
17. Examples of this category of nonprofit institution include hospitals, educational institutions, and advocacy organizations, among others.
18. The textbook describes the example of International Organization for Standardization (ISO). You may be able to think of other specific organizations of this kind.
19. National regulation of labor standards began with the Fair Labor Standards Act of 1938.
20. Taxing activities that have negative externalities makes those activities more expensive to carry out, thus decreasing the incentives to engage in those activities.

Answers to Self Test Questions

1. c
2. e
3. b
4. e
5. d
6. a
7. e
8. e
9. a
10. b
11. b
12. a
13. d
14. a
15. a
16. b
17. e
18. c
19. a
20. e

CHAPTER 18

THE VARIETY OF ECONOMIC SYSTEMS

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Summary

As global economic relations have become increasingly important, it is crucial to understand how the core, business, and government spheres have developed differently in various countries. This chapter looks at some of the historical factors that have shaped economic development, and explores the differences among economic systems in different parts of the world. This chapter is particularly important for students interested in international relations, development economics, or public policy.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Describe in further detail the four basic modes of organization.
2. Define the four major types of systems of ownership.
3. Classify capitalist and socialist systems according to the relative level of state activity.
4. Summarize the historical development of laissez-faire capitalism in England and the United States.
5. Summarize the experience of Western Europe with capitalism and social democracy.
6. Summarize the successes and failures of Japan's system of coordination between industry and government.
7. Summarize the economic systems and conditions in Russia and other transitional economies, China, and some less industrialized countries.
8. Compare the performance of different economic systems in terms of incomes, health, literacy, and sustainability.

Key Terms

comparative economic systems
market economies
corporate ownership
government ownership
socialism
state socialism
administrative capitalism
administrative socialism
privatization
newly industrializing countries

command (planned) economies
individual ownership
cooperative ownership
capitalism
corporate capitalism
laissez-faire capitalism
market socialism
common property resource
deregulation
transition economies

Active Review Questions

Fill in the Blank

1. The four major modes of economic organization are customary, consensual, administrative, and _____.
2. A national economy characterized by administrative direction of economic via central bureaucracy is known as a _____ economy (or a _____ economy).
3. Economies in which exchange plays a major role are often referred to as _____ economies.
4. The major systems of ownership are individual ownership, corporate ownership, _____ ownership, and _____ ownership.
5. In corporate ownership, assets are owned by _____.
6. Resources that are owned collectively by a defined group (e.g. a group of farmers who collectively own grazing land) are known as _____ resources.
7. South Korea, Taiwan, Singapore, and Hong Kong are all examples of _____ countries.
8. The countries of the former Soviet Union and the countries of Eastern Europe and Asia that used to be under Soviet influence are referred to as _____ economies.

True or False

9. Market economies are almost always associated with democracy.
10. In command economies, people cannot have any private possessions.
11. Open access resources such as fish in the ocean are owned strictly through systems of government ownership.
12. Modernization in France and Germany involved considerably less government regulation than had characterized modernization in England and the United States.
13. The newly industrialized countries of East Asia are known for their success in using a laissez-faire approach to economic development.

14. The Japanese Ministry of International Trade and Industry (MITI) helps Japanese corporations to identify and move into promising areas of industry.

Short Answer

15. Suppose that a friend tells you market economies only exist in democratic societies. What examples from history could you cite to contradict this view?

16. In the countries that began to modernize in the mid to late 19th century (such as France, Germany, and Sweden), the state played a relatively large role in development. Briefly describe the nature of this involvement.

17. In Sweden, anyone who has a child receives the same cash benefit from the government, regardless of income level. Describe some possible advantages and disadvantages to this approach.

18. What areas of production received the most emphasis in the economy of the Soviet Union? What areas tended to be neglected?

19. Briefly describe the role of labor unions in the development of the post-World War II Japanese economy.

20. Name three possible criteria that could be used to compare economies with one another.

Self Test

1. A system in which a great deal of the ownership of productive assets is through corporations, which in turn are owned by private shareholders, is known as
 - a. democracy
 - b. democratic capitalism
 - c. the corporate society
 - d. corporate capitalism
 - e. state socialism

2. Which of the following countries has an economy characterized by administrative capitalism?
 - a. Japan
 - b. China
 - c. Vietnam
 - d. USA
 - e. North Korea

3. Which of the following countries has an economy characterized by market socialism?
 - a. Japan
 - b. China
 - c. France
 - d. Sweden
 - e. All of the above

4. Under laissez-faire capitalism,
 - a. There is substantial state activity alongside market-organized activity.
 - b. The role of the state is supposed to be relatively small.
 - c. All ownership is through corporations.
 - d. There is a continuous spectrum from the completely unregulated to the heavily administrative form of capitalism.
 - e. Both b and c are true.

5. Which of the following statements best describes the difference between market socialism and administrative socialism?
- a. In market socialism, state ownership predominates but much activity is organized by exchange; in administrative socialism, activity is primarily organized by public administration.
 - b. In market socialism, activity is primarily organized by public administration; in administrative socialism, state ownership predominates but much activity is organized by exchange.
 - c. In market socialism, there is little state ownership; in administrative socialism, there is much state ownership.
 - d. In market socialism, there is political freedom, whereas administrative socialism requires political repression.
 - e. Both b and d are true.
6. Which of the following statements concerning the Anglo-American experience is *false*?
- a. England had a highly market-oriented economy by 1700.
 - b. England enjoyed more than a century of uniquely favorable conditions for economic development.
 - c. At the time of the American Revolution, the American colonies had about the same average standard of living as England.
 - d. Industrialization led to immediate improvements in the living standards of the poor.
 - e. Privatization and deregulation programs were undertaken in the 1970s.
7. In which of the following countries did the government play a relatively large role in regulating and guiding economic development?
- a. The United States
 - b. The United Kingdom
 - c. Germany
 - d. France
 - e. Both c and d are true.
8. In which of the following is an example of a service provided free or at a very low cost by the government in Sweden?
- a. child care
 - b. health care
 - c. higher education
 - d. primary education
 - e. all of the above

9. Which of the following is *not* considered a “newly industrializing country” (NIC)?
- a. South Korea
 - b. Taiwan
 - c. Japan
 - d. Singapore
 - e. Hong Kong
10. The economic performance of a country depends on its
- a. mode of economic organization.
 - b. natural resources.
 - c. climate
 - d. history
 - e. all of the above
11. The mode of economic organization in which people come to explicitly negotiated agreements about production is known as
- a. administrative
 - b. corporate
 - c. governmental
 - d. consensual
 - e. customary
12. What is the defining characteristic of socialism?
- a. Democratic decision-making.
 - b. Public ownership of productive assets.
 - c. A repressive government.
 - d. Cooperative decision-making.
 - e. Proxy voting by all shareholders.
13. Which of the following terms best describes the economic system of Cuba?
- a. administrative capitalism
 - b. laissez-faire socialism
 - c. administrative socialism
 - d. market socialism
 - e. socialist capitalism

14. Which of the following statements about Japanese economic development is true?
- The government adopted a laissez-faire approach after World War II.
 - Large and small businesses in Japan provide equally good benefits.
 - The concept of life-long employment was proposed by the American post-War occupiers of Japan.
 - The presence of strong unions had a major effect on Japanese post-war development.
 - Military production has continued to be a major driver of economic growth in Japan.
15. Russia can be described as a(n)
- Transition economy.
 - Administrative capitalist economy.
 - Newly industrializing country (NIC).
 - Corporate governance economy.
 - None of the above.
16. Which of the following statements is *false*?
- The United States leads the world in per capita industrial CO₂ emissions.
 - China is a close second to the United States total CO₂ emissions.
 - The United States has a relatively high rate of deaths in early childhood compared with most high income countries.
 - Vietnam has directed substantial resources to reducing child mortality compared with many low income countries.
 - All of the above are true.
17. About what percentage of the world's population lives in countries classified as "high-income"?
- 1%
 - 4%
 - 15%
 - 55%
 - 43%
18. Which of the following countries has the largest percentage of the world's population?
- United States
 - United Kingdom
 - China
 - India
 - Russia

19. Which of the following statements is *true*?
- a. Clothing manufacture and electronics assembly have largely disappeared from the richest countries.
 - b. A substantial governmental role in the economy nearly always produces successful economic development.
 - c. India began its process of industrialization from an advantageous position, compared to that of the United Kingdom and the United States when they began to industrialize.
 - d. Chinese economic development after 1978 was characterized by administrative socialism.
 - e. Hong Kong, Taiwan, and Singapore are all considered “transition economies.”
20. A mode of economic organization that uses traditions and habits to answer the basic economic questions is called
- a. exchange.
 - b. customary.
 - c. consensual.
 - d. capitalism.
 - e. administration.

Answers to Active Review Questions

- 1. exchange
- 2. command; planned
- 3. market
- 4. cooperative; state
- 5. shareholders
- 6. common-property
- 7. newly industrializing
- 8. transition
- 9. False. Market systems are compatible with widely varying political systems.
- 10. False.
- 11. False. Fish in the ocean do not come under any single country’s jurisdiction, and thus none of the four ownership categories described in the text can be applied precisely.
- 12. False.
- 13. False.
- 14. True.
- 15. The textbook points out a number of examples of market systems that have coexisted with repressive dictatorships: Spain in the 1950s and 1960s, Chile in the

- 1970s and 1980s, Indonesia from 1967 to 1998, and South Korea for most of the years since World War II.
16. In these countries, government took an active role in development both by adopting social policies to protect the most vulnerable members of society and by promoting industrial growth.
 17. Advantages include low administrative costs, broad popular support for the program, and the elimination of any need for the government to collect details on industrial citizens' financial circumstances. Disadvantages include high costs.
 18. Heavy industry and military production were emphasized, while consumer goods and agriculture tended to be neglected.
 19. Rapid unionization of the work force was allowed after Japan's surrender in 1945. By 1948, more than half of all Japanese employees belonged to unions. These labor unions had important effects on the development of today's Japanese economic system; for example, workers in large enterprises are guaranteed lifetime employment.
 20. Some possible criteria include GDP, health and literacy, or sustainability.

Answers to Self Test Questions

1. d
2. a
3. b
4. b
5. a
6. d
7. e
8. e
9. c
10. e
11. d
12. b
13. c
14. d
15. a
16. b
17. c
18. c
19. a
20. b

CHAPTER 19

MARKET SYSTEMS AND NORMATIVE CLAIMS

Microeconomics in Context (Goodwin, et al.), 1st Edition (Study Guide 2008)

Chapter Summary

This final chapter brings together many of the themes previous chapters have explored throughout the book. It explains a powerful – and sometimes misleading – concept in standard economic theory, the idea of Pareto efficient outcomes. After studying this chapter, you will be able to explain the concept of Pareto efficiency as well as the intellectual history of the idea. You will also understand the normative and positive assumptions that underlie this concept and the some of the major policy-related conclusions that people have drawn from it.

This chapter also provides an overview of the different schools of economic thought that we have drawn on throughout this textbook, and explains the background to some of the arguments about “free trade” and “small government” that arise frequently in real-world economic debates.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Define the basic tenets of neoclassical economics.
2. List the assumptions used to support the “free market” argument.
3. Describe the principle of Pareto efficiency.
4. State the first fundamental theorem of welfare economics.
5. Describe the policy prescriptions of the simple mechanical model.
6. Describe the historical development of alternatives to neoclassical economics.
7. Briefly characterize varieties of economic thought, including institutionalist economics, social economics, Marxist economics, post-Keynesian economics, Austrian economics, ecological economics, and feminist economics.
8. Describe the limitations of the Pareto efficiency criterion for addressing intergenerational equity and the relationship between individuals and society.

Key Terms

neoclassical economics

first fundamental theorem of welfare economics

new institutionalist economics

institutionalist economics

Marxist (radical) economics

Austrian economics

feminist economics

Pareto efficiency

general equilibrium

second-best theorem

social (socio-) economics

post-Keynesian economics

ecological economics

individualistic ethic

Active Review Questions

Fill in the Blank

1. The school of economics that takes the traditional model as its starting point is known as _____ economics.
2. A situation in which there is no way to make one person better off without making anyone else worse off is known as _____ efficiency.
3. According to the “first fundamental theorem of welfare economics,” a _____ economy will be _____ efficient.
4. A situation in which information flows are instantaneous and all prices and quantities are determined simultaneously is known as _____.
5. The school of economics that emphasizes the complex nature of organizations and the strong influence of habit on people’s behavior is known as _____ economics.
6. The normative judgment that only the preferences and choices of individuals carry ethical weight is known as the _____ ethic.
7. The school of economics that emphasizes the power that comes with the ownership and control of capital is known as _____ or radical economics.
8. Economists Lipsey and Lancaster demonstrated that if just one condition for full Pareto efficiency is not met, then the next best outcome can generally be reached only by departing from all of the other conditions. This insight is known as the _____ - _____ theorem.
9. A statement about how something *should* be done can be referred to as a _____ statement.
10. Concerns about _____ equity arise when we look at the possible effects of today’s economic decisions on the well-being of future generations.

True or False

11. The statement “all economies should become socialist” is normative.
12. The neoclassical approach to economics has increasingly dominated teaching and economic scholarship since the 1930s.
13. In the pure neoclassical model, marginal thinking is assumed not to exist.

14. A concern with people's survival needs is very important in justifying the view that "free markets" are best.
15. Pareto efficiency requires relatively egalitarian distribution of resources as a precondition for utility maximization.
16. A situation is Pareto inefficient if there exists an option for change to which all parties would agree.
17. Market forces generally solve intergenerational equity problems if government interference is kept to a minimum.
18. Austrian economics embodies the principle of both ecological economics and feminist economics.
19. The term "contextual economics" is used synonymously with the term "institutionalist economics."

Short Answer

20. Briefly state the viewpoint that is sometimes referred to as a "neoliberal" position.

21. "Market outcomes necessarily reflect only the interests of current market participants." Briefly explain the implications of this statement for intergenerational equity.

22. The textbook states that the free market general equilibrium model is *precise*, but not necessarily *accurate*. Explain the difference between precision and accuracy, and illustrate this difference with an example.

23. Briefly summarize the defining characteristics of institutionalist economics.

Problems

1. Imagine a hypothetical two-person economy inhabited by two individuals, Joe and Antoine. Joe is very rich and has a high level of utility. Antoine is very poor and has a low level of utility. Joe's utility level is 500 utils. Antoine's utility level is 10 utils.

a. Suppose a different production situation in the economy would cause Joe's utility to rise to 550 utils and Antoine's utility to rise to 20 utils. Would changing to this new situation be justified by the Pareto efficiency standard? Why or why not?

b. Suppose another production situation in the economy would cause Joe's utility to fall from 500 utils to 495 utils, while Antoine's utility would rise from 10 utils to 450 utils. Would changing to this new situation be justified by the Pareto efficiency standard? Why or why not?

c. Suggest a possible reason why Joe might be willing to agree to the production change described in part (b), even though it decreases his utility slightly.

Self Test

1. Which of the following is *not* an element of the stylized economic system that forms the basis for the basic neoclassical model?

- a. perfect information
 - b. perfect competition
 - c. rationality
 - d. the desires of future generations
 - e. production by firms
2. A Pareto efficient situation is one in which
- a. At least one person can be made better off without making anyone else worse off.
 - b. Everyone enjoys the maximum possible utility, as defined by that person, given global resource constraints.
 - c. There is no way to make one person better off without making another person worse off.
 - d. Utility levels can be compared across individuals.
 - e. All firms are able to make positive profits, due to market power.
3. Which of the following is *not* an assumption of the theory underlying “free market” thinking?
- a. All needs can be satisfied through market transactions.
 - b. There is perfect information.
 - c. People’s basic needs for food and clothing must be satisfied.
 - d. Markets are perfectly competitive.
 - e. Production technology is characterized by diminishing returns.
4. Which of the following is a normative statement?
- a. Capitalism should be adopted worldwide.
 - b. Capitalism exists in a variety of forms.
 - c. The economy includes both firms and households.
 - d. Perfect competition is an assumption of the neoclassical model.
 - e. Market power can lead to positive profits.
5. The “new utility theory” view of well-being holds that
- a. Utility can be compared across individuals.
 - b. Utility cannot be compared across individuals.
 - c. A poor person cannot be happier than a rich person.
 - d. Creating an egalitarian society is the primary goal of economic development.
 - e. Poverty and capabilities are the main focus of economic analysis.
6. The table below shows all possible options for allocating resources in a hypothetical two-person economy inhabited by Mary and Jodie. Based on the information given here, which scenario is Pareto efficient?

Scenario	Utility Level	
	Mary	Jodie
A	10	15
B	10	10
C	20	10
D	20	15
E	15	5

- a. A
- b. B
- c. C
- d. D
- e. E

7. Once again, assume that the information shown below shows all the possible options for resource allocation in a two-person economy. Which of the scenarios shown below is *not* Pareto efficient?

Scenario	Utility Level	
	Sam	Noah
A	50	40
B	30	40
C	40	45

- a. A
- b. B
- c. C
- d. A and C
- e. B and C

8. The idea that a perfectly competitive free market economy will be Pareto efficient is known as

- a. General equilibrium theory
- b. Macroeconomic equilibrium theory
- c. The first fundamental theorem of welfare economics
- d. The perfect information theorem
- e. The second-best theorem

9. In the traditional model, under conditions of perfect competition,

- a. Goods will be sold at precisely their marginal cost of production.
- b. Wages will equal prices.
- c. Market power plays a role in determining resource allocation.

- d. Consumers will receive variable utility from the last unit of each good consumed.
 - e. All of the above are true.
10. Which of the following statements is *not* part of the intellectual foundation for the idea that “free market economics” is the best way for a society to maximize welfare?
- a. Independent, decentralized, voluntary decisions can give rise to spontaneous social order.
 - b. Markets lead people to make individual decisions that jointly result in an orderly and efficient allocation of resources.
 - c. In a general equilibrium model, prices and quantities are simultaneously determined in all markets.
 - d. Under perfect competition, consumers get exactly the same marginal utility from the last unit of each good consumed.
 - e. Under conditions of perfect competition, goods are sold at the point where marginal revenue is equal to marginal utility.
11. Which of the following ideas is *not* part of free market ideology?
- a. Market forces may fail to counteract the forces of racism and sexism.
 - b. Labor market discrimination is expected to disappear over time.
 - c. Protection for “infant industries” should not be necessary.
 - d. Economic actors are assumed to have no market power.
 - e. Both a and d are correct.
12. Modifications and extensions of the neoclassical model have been developed to account, at least partially, for
- a. externalities
 - b. public goods
 - c. imperfect information
 - d. the lack of markets for some goods and services
 - e. all of the above
13. Which of the following statements is *true*?
- a. The free market model is clearly accurate, but not necessarily precise.
 - b. The free market model is precise.
 - c. The free market model is considered to be accurate by virtually all social scientists.
 - d. Accuracy and precision do not always coexist.
 - e. Both b and d are true.

14. Institutional economics
- a. Was particularly influential in the Soviet Union.
 - b. Emphasizes the influence of habit on individual behavior.
 - c. Is also known as Marxist economics.
 - d. Was the basis for “Reaganomics” in the 1980s.
 - e. Both a and c are true.
15. The regulatory and social welfare policies of the Progressive Era and the New Deal in the United States were strongly influenced by
- a. institutional economics
 - b. marginal thinking
 - c. Marxist economics
 - d. post-Keynesian economics
 - e. feminist economics
16. Contextual economics draws upon
- a. Ecological economics primarily.
 - b. Ecological and feminist economics only.
 - c. Neoclassical economics only.
 - d. Many economic schools but not neoclassical economics.
 - e. Many economic schools, including neoclassical economics.
17. Which school of economics would be most likely to be associated with the following statement? “The study of caring labor (e.g. caring for the elderly) deserves a more central place in economic analysis.”
- a. ecological economics
 - b. feminist economics
 - c. Austrian economics
 - d. post-Keynesian economics
 - e. neoclassical economics
18. Which school of economics would be most likely to be associated with the following statement? “The entrepreneur plays a particularly important role in the economy, and thus should be a major focus of economic analysis.”
- a. ecological economics
 - b. feminist economics
 - c. Austrian economics
 - d. post-Keynesian economics
 - e. neoclassical economics

19. Which of the following statements is *true*?
- a. Market mechanisms are designed to ensure intergenerational equity.
 - b. A single person may have different preferences depending on whether he or she is thinking as a consumer or as a citizen.
 - c. Markets exist for all goods that people value.
 - d. The individualist ethic justifies all voluntary actions, including selling other people into slavery.
 - e. All of the above.
20. Neoclassical and Austrian economics are associated with
- a. the individualist ethic
 - b. ecological economic outcomes
 - c. intergenerational equity
 - d. the recognition that consumers are also workers and citizens
 - e. all of the above

Answers to Active Review Questions

- 1. neoclassical
- 2. Pareto
- 3. perfectly competitive; Pareto
- 4. general equilibrium
- 5. institutionalist
- 6. individualist
- 7. Marxist
- 8. second-best
- 9. normative
- 10. intergenerational
- 11. True
- 12. True
- 13. False
- 14. False
- 15. False
- 16. True
- 17. False
- 18. False
- 19. False
- 20. The neoliberal position holds that societies should be organized with almost exclusive reliance on markets and private ownership.
- 21. Future generations have no way to make their preferences known in the market. Therefore, market outcomes are likely to favor the interests of people alive today over the interests of future generations. Thus, the balance between present and future generations is likely to be inequitable, with future generations getting the worse end of the deal, when decision making occurs primarily through markets.

22. Precision refers to information that is exact, although it may or may not be correct. Accuracy refers to information that is correct, although it may not be precise. For example, suppose two people, Robert and John, are estimating the cost of a meal at a local restaurant. Robert guesses that dinner will cost \$9.26. John guesses that dinner will cost “between \$15 and \$20.” Suppose the true cost of a meal at the restaurant is \$16.95. Robert’s guess was more precise, but John’s guess was more accurate. Similarly, the free market general equilibrium model may yield predictions that are very exact, but may have little relation to real world economies.
23. Institutional economics emphasizes the complex and changing nature of economic and social organizations and the importance of habit in guiding human behavior. Institutional economics often focuses on the ways in which social policy can help to solve problems such as poverty and unemployment.

Answers to Problems

1. a. Yes, this change would satisfy the Pareto efficiency standard because both people’s utility levels would rise as a result.
- b. No, this change would not satisfy the Pareto efficiency standard because although Antoine’s utility would rise dramatically, Joe’s utility would fall slightly.
- c. One possible reason for Joe to agree to the change could be altruism: he might care about Antoine and want him to enjoy a higher utility level even if it involves some sacrifice on his part. He might also prefer to live in an economy that is relatively egalitarian, and thus might be willing to give up some of his own utility in order to help bring another person’s utility level closer to his own.

Answers to Self Test Questions

- | | |
|-------|-------|
| 1. d | 11. a |
| 2. c | 12. e |
| 3. c | 13. e |
| 4. a | 14. b |
| 5. b | 15. a |
| 6. d | 16. e |
| 7. b | 17. b |
| 8. c | 18. c |
| 9. a | 19. b |
| 10. e | 20. a |