

SEVENTH **E**DITION

STUDY GUIDE to accompany

MICRO **ECONOMICS**

Theory & Applications

EDGAR K. BROWNING MARK A. ZUPAN

prepared by **John Lunn**

STUDY GUIDE

TO ACCOMPANY

**MICROECONOMICS:
THEORY AND APPLICATIONS**

Seventh Edition

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CHAPTER 1 *An Introduction to Microeconomics*

CHAPTER ANALYSIS

1.1 Individuals make choices based on their own desires and the opportunities they face. **Microeconomics** is a body of theory that attempts to explain the choices individuals make given the opportunities and constraints in their environments.

1.2-1.4 Here the subject of microeconomics is discussed by focusing on the purpose of theory. On any given day, countless millions of economic decisions are made by millions of individuals, and it would be an impossible task to determine and understand every factor that influences each decision. A theory, then, enables an economist to distinguish facts that are important in explaining economic behavior from those that are trivial or irrelevant. The authors emphasize that a good theory is one that explains and predicts the phenomena that it is intended to explain and predict.

Economics is often used to evaluate public policy. Three steps are involved—(1) determine the effects of the policy, (2) determine the size of the effects, and (3) evaluate whether the effects are desirable or not. The first two steps are examples of **positive analysis** since they involve objective analysis. The third step involves a value judgment and is an example of **normative analysis**. (See illustration "Policy Evaluation" below.)

Markets play an important role in microeconomic theory. Markets include local farmers' markets where people come to a common location in a town a few days a week to buy and sell vegetables, the New York Stock Exchange where shares of stock of large corporations are bought and sold, and labor markets where people search for jobs and firms search for workers. Economists focus on the role of prices in affecting the behavior of buyers and sellers in a market. The absolute price of a good is the money price of the good, but this price is not very useful because the absolute price changes over time due to inflation. Economists concentrate on the **relative price** (or real price) of a good, which is the nominal (or absolute) price relative to the nominal prices of other goods. In this book, unless specifically told otherwise, the price of a good refers to its real price.

1.5-1.6 To develop theories, some common starting ground is needed. In microeconomics, we begin with three assumptions about participants in markets. First, market participants are assumed to be **goal-oriented**. That is, people set goals and try to achieve their goals. Noneconomists often take this assumption to mean that economists assume people are selfish. However, goal-oriented behavior does not imply selfishness, although certainly many people do behave selfishly. A parent who works long hours and refrains from buying many goods and services in order to save for the child's college education is engaging in goal-oriented behavior. Individuals determine their goals. The second assumption is that people pursue their goals **rationally**. That is, they make plans and deliberately seek to attain their goals. The third

assumption is that people confront **scarce resources**. We cannot have everything we want because of scarcity. In order to attain some of the goals a person sets, that person must rationally make choices that take into consideration the fact that resources are scarce. Microeconomics is concerned with the way people make choices subject to scarcity.

An implication of scarcity is that people must make choices. To make a choice is to choose one thing instead of something else. Suppose you and a friend go to a movie and each pays \$7 to see the movie. Suppose further that if you had not spent the seven dollars on the movie you would have bought a book, while your friend would have rented two videos. The **opportunity cost** of the movie for you is the book you didn't buy while the opportunity cost of the movie for your friend is the two videos that were not rented. There is a cost to any choice that a person makes, and the cost is the value of the next best alternative.

Costs can be classified as explicit and implicit costs. **Explicit costs** are the dollars spent on the goods and services we choose to have. **Implicit costs** are associated with the alternative uses of resources owned by the person, including the use of the person's time. For implicit costs, there is not an explicit payment made, but something of value is given up. People take into consideration both explicit and implicit costs when they rationally make choices in pursuit of the goals they have set.

Accountants and economists do not measure costs in the same way. Implicit costs are difficult to objectively measure and are usually ignored by accountants. Further, they generally rely on the price paid for something as a measure of its cost even when the value of the good has increased or decreased. The relevant cost for making rational decisions is the opportunity cost, which may or may not be related to the price paid for the good at some time in the past.

There is a difference between opportunity costs and **sunk costs** that must be noted. Sunk costs are costs that have already been incurred and cannot be recovered. In making economic decisions, sunk costs should be ignored. If you go to a restaurant, order a large meal, and then are full before the food is gone, should you continue eating the food because you're paying for it? The economic answer is no, since you must pay for the food whether you eat it or not. The price of the meal is a sunk cost since you can't alter it by either eating or not eating the rest of the food. If you will make yourself uncomfortable by finishing the meal, you would be better off not doing so. The sunk cost is irrelevant in making the decision.

1.7 A **production possibility frontier (PPF)** illustrates the basic assumptions we have made about market participants, as well as the idea of opportunity cost. A production possibility frontier shows the different combinations of two goods that a person can attain with a given amount of resources. For example, suppose a rancher with a certain amount of land, workers, and other resources can raise cattle or sheep on the ranch. The rancher can either raise only cattle, or only sheep, or different combinations of cattle and sheep.

Figure 1-1 illustrates the rancher's situation. By devoting all the resources to raising cattle, the

rancher can raise 10,000 cattle (Point A); by devoting all the resources to raising sheep, the rancher can raise 15,000 sheep (Point F). The curve shows all the possible combinations of cattle and sheep that the rancher can choose from, assuming that the rancher is using all the resources as efficiently as possible.

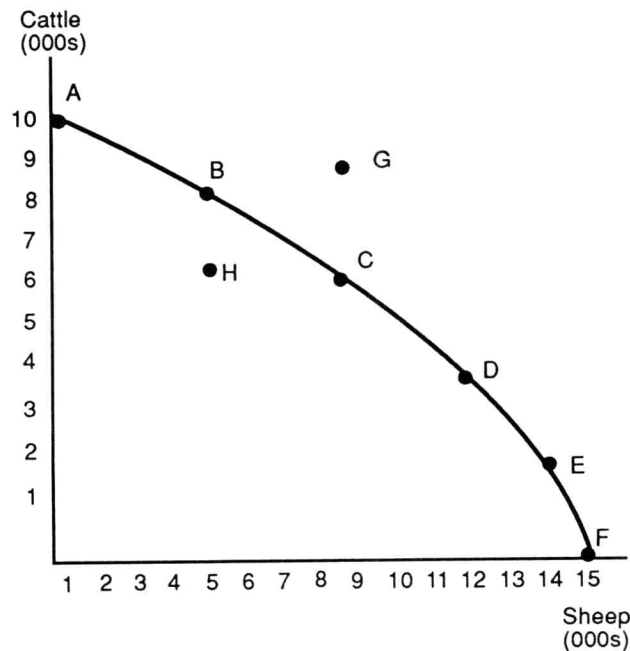


Figure 1-1

Point G shows a combination of cattle and sheep that the rancher cannot attain, given the resources owned by the rancher. The rancher would prefer to be at Point G rather than many of the points on the PPF but cannot. The goal of the goal-oriented rancher is to have as many cattle and sheep as possible. But scarcity impinges on these goals. Scarcity is shown by the curve. Rational behavior presumes the rancher will be on the curve rather than inside it. At Point H, the rancher can get more cattle by moving to B, or can get more sheep by moving to C, or more of both by moving to the PPF between Points B and C. A rational, goal-oriented person will be on the PPF. Finally, the curve illustrates the idea of opportunity cost, since the only way the rancher can raise more cattle is by raising fewer sheep. The opportunity cost of more cattle is less sheep, and vice-versa.

ILLUSTRATIONS

Policy Evaluation

Capital punishment is a controversial subject that can be used to illustrate the evaluation of policy. Although there are many things to consider in evaluating the desirability or undesirability of capital punishment, we will focus on one question: Is capital punishment a deterrent to crime?

The first step is to determine the effect of capital punishment on the crime rate. Proponents of capital punishment believe that it will reduce the crime rate. This can be tested by comparing crime rates in areas with capital punishment with crime rates in areas that do not allow capital punishment (Note that other factors could affect crime rates—gun control laws, poverty, number of police, and the like—and these factors must be accounted for too.) The second step is to determine the magnitude of the deterrent effect of capital punishment. Is the reduction in the crime rate large or small? These two steps are in the realm of positive analysis because they deal with propositions that can be tested objectively.

Suppose we perform these tests and determine that capital punishment will cause a 10 percent reduction in the crime rate. Should capital punishment be used in our society? To answer this question requires a value judgment; some people will answer affirmatively and others negatively, depending on their values. Thus, this last question is in the realm of normative economics.

Goal-Oriented Behavior

The assumption that people are goal-oriented is controversial to many noneconomists. It is often presumed that economists are saying that everyone is selfish. As noted above, goal-orientation is not equivalent to selfishness. People also counter that people behave on whim or don't know what they really want.

Psychologists have tried to determine whether people engage in self-interested behavior or sometimes behave altruistically. There is disagreement among psychologists—some think all altruistic behavior is actually a disguised form of self-interest, while others think genuine altruism occurs. Does a person give blood in a blood drive to feel good about themselves or out of concern for others? It is difficult to distinguish since even if one is acting out of concern for others, he or she is likely to feel good about him- or herself afterwards.

[For further discussion, see David Myers, Social Psychology (New York: McGraw Hill, 1993).]

KEY CONCEPTS

microeconomics
macroeconomics
price theory
positive analysis
normative analysis
markets
nominal or absolute price
real price
relative price
goal-oriented behavior

rational behavior
scarce resources
explicit costs
implicit costs
economic cost
opportunity cost
accounting cost
sunk costs
production possibility frontier (PPF)

REVIEW QUESTIONS

True/False

T

1. A theory must simplify and abstract from reality.

F

2. An economist is a better judge than a noneconomist of whether the effects of minimum wage are desirable. (normative)

F

3. The term *price* as used in microeconomics refers to the nominal price of a good.

F

4. The behavior of buyers and sellers depends on the nominal price of a good.

F

5. Market participants engage in goal-oriented, which is the same thing as selfish behavior.

T

6. A person who gives money to a charity that supplies food to the poor in other parts of the world is engaging in goal-oriented behavior.

T

7. Because of scarcity, an individual must decide which goals to pursue and to what extent.

F

8. Explicit costs are opportunity costs but implicit costs are not.

F

9. Sunk costs are opportunity costs.

T

10. If the production possibility curve is a straight line, then costs are constant per unit.

Multiple Choice/Short Answer

1. A good theory is one that
 - a. has assumptions that mirror reality.
 - b. describes the real world as closely as possible.
 - c. incorporates as many facts as possible.
 - ☒ d. explains or predicts what it is designed to explain or predict.
2. Policy analysis involves
 - a. positive economics alone.
 - b. normative economics alone.
 - c. scientific criteria alone.
 - ☒ d. both positive and normative analysis.
3. Identify the following statements as positive (P) or normative (N).
 - a. Monopolies are more innovative than other firms. ☒ P ☐ N
 - b. Monopolies charge higher prices than competitive firms. ☒ P ☐ N
 - c. Monopolies should be controlled by the government. ☐ P ☒ N
 - d. High interest rates discourage investment spending. ☒ P ☐ N
 - e. The tax burden in the U.S. is too great. ☐ P ☒ N
 - f. If tariffs on imported steel are raised, sales of U.S. automakers will fall. ☒ P ☐ N
 - g. Government should subsidize the arts because the arts benefit everybody. ☐ P ☒ N
4. In microeconomics, markets refer to
 - ☒ a. the interaction of buyers and sellers of a particular good.
 - b. formal markets only, such as the New York Stock Exchange.
 - c. grocery stores and farmers' markets.
 - d. the coming together of buyers and sellers at a specific location.
5. The term *price*, as used in microeconomics, always refers to
 - a. the absolute price of the good.
 - b. the nominal price of the good.
 - ☒ c. the real price of the good.
 - d. any of the above.
6. If the price of a gallon of gasoline was 28 cents in 1965 and 32 cents in 1969, then the
 - ☒ a. nominal price increased but we can't tell the real price unless we know what happened to the prices of other goods.
 - b. nominal price increased but the real price decreased.
 - c. absolute price increased but the real price decreased.
 - d. absolute and relative price increased.

7. ^{All} Which of the following is an example of goal-oriented behavior? (More than one answer may be correct.)
- a. A new Ph.D. in accounting accepts a job teaching in a college that pays \$50,000 a year instead of a job with a firm paying \$75,000 a year.
 - b. A family gives ten percent of its income to its place of worship.
 - c. A physician leaves her practice in New York City to practice medicine in Rwanda.
 - d. A student turns down an opportunity to attend a rock concert in order to study for his math test.
 - e. A person gambles in Las Vegas even though the odds are in favor of the casino. *wants to win more money*
8. Which of the following is an example of a resource that is not scarce?
- a. Air.
 - b. Fresh water.
 - c. Unskilled labor.
 - d. Friends.
9. Explicit costs differ from implicit costs in that explicit costs
- a. are greater than implicit costs.
 - b. involve actual expenditures and implicit costs don't.
 - c. are opportunity costs and implicit costs are not.
 - d. involve materials and equipment and implicit costs involve labor.
10. ^{Opportunity cost} The economic cost of a resource equals
- a. explicit costs minus implicit costs.
 - b. implicit costs minus explicit costs.
 - c. explicit costs plus implicit costs. — *Think!*
 - d. explicit costs.
11. Given the difference between accounting costs and economic costs, it is generally true that
- a. accounting profits understate the real profitability of a firm.
 - b. accounting costs are greater than economic costs.
 - c. accounting profits overstate the real profitability of a firm.
 - d. better decision making is achieved by ignoring implicit costs.
- ✓ 12. In constructing a production possibility frontier, ^{Fixed Amounts of Resources}
- a. resources are assumed to be fixed.
 - b. the endpoints of the frontier are determined by the goals set by the rational actor.
 - c. sunk costs are measured along the frontier.
 - d. the frontier reflects an ideal that is actually unattainable. *rational*

13. Which of the three assumptions about market actors determines the best position on the PPF?
- a. Individuals are goal-oriented.
 - b. Individuals are rational.
 - c. Market actors are confronted by scarcity.
 - ☒ d. None of these since the three assumptions only place an actor on the PPF boundary.

Questions 14 and 15 use Figure 1-2.

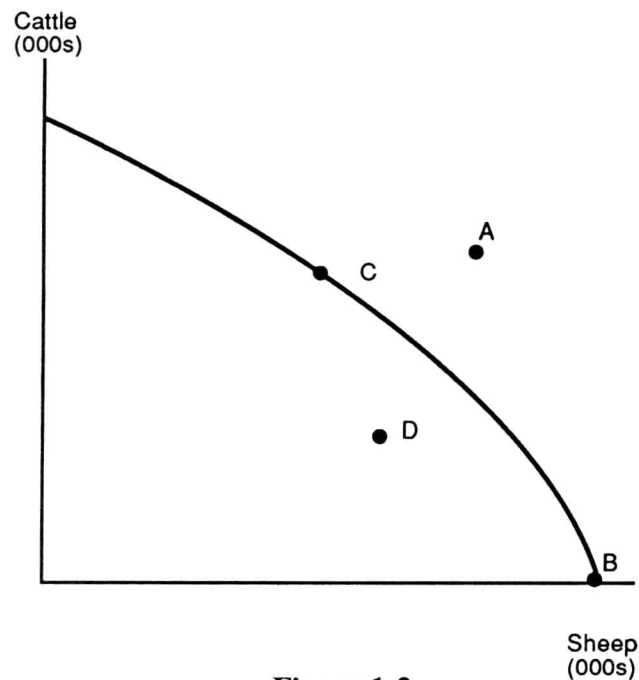


Figure 1-2

14. An irrational person would be at Point
- a. A.
 - b. B.
 - c. C.
 - ☒ d. D.
15. The curved shape of the PPF indicates that
- a. people are not rational.
 - b. opportunity costs are constant as fewer sheep and more cattle are raised.
 - ☒ c. some of the resources are better suited for raising cattle than for raising sheep.
 - d. cattle are scarcer than sheep.

Page 14 -

Discussion Questions and Problems

1. What is the difference between microeconomics and macroeconomics? Why is microeconomics also called price theory?

2. Economists generally assume that firms attempt to maximize profits. Business people often protest that they do not just seek profits but also have other goals for their firms.

- a. Is the assumption of profit maximization realistic?

Probably not - other goals may influence Business people

- b. What might be the goals of managers of firms?

Better use of resources - maximizing sales

- c. Assume for now that not all business people seek to maximize profits. Does this mean the assumption of profit maximization should be discarded? Why or why not?

No because not all Business seek to maximize profits

3. How is microeconomic theory an example of positive analysis?

4. Explain why True/False question #2 is false.

Normative judgement

5. Suppose we have the following price information:

	<u>Gasoline</u>	<u>Dozen donuts</u>
January 1, 2000	\$1.00	\$4.00
January 1, 2001	\$1.50	\$4.50

- a. What is the real price of gasoline in 2000? $\frac{1}{4} \times 12 = 3$
- $$\frac{P_g}{P_D} = \frac{1.00}{4.00} = \frac{1}{4} \quad \text{so 1 gallon of gas} = 3 \text{ donuts}$$
- b. Did the real price of gasoline increase or decrease from 2000 to 2001? By how much?

2001 $\frac{P_g}{P_D} = \frac{1.50}{4.50} = \frac{1}{3}$ so 1 gallon of gas = 4 donuts
 since up 4 donuts for 1 gallon of gas
increased

- c. What could have caused the change?

increase in demand for gas
 increase in supply of donuts

- d. What happened to the real price of donuts between 2000 and 2001?

2001 $\frac{P_D}{P_g} = \frac{4.50}{1.50} = 3$ 3 donuts = 1 Doz (2001)
 $\frac{4}{1} = 4$ 4 donuts = 1 Doz (2000)

6. Explain how each of the choices in Multiple Choice question #7 can be examples of goal-oriented behavior.

7. The authors state that the most important assumption economists make about market participants is that they face scarce resources. Can you give a reason for the claim that this is the most important assumption?
8. Explain how a martyr could be acting in a goal-oriented manner.
9. Distinguish between an explicit cost and an implicit cost. *Both are opportunity costs*
10. Suppose a friend of yours paid \$20,000 a year tuition to attend a private college. A few years after graduation, your friend quits a \$50,000 a year job to go to graduate school at a public university. The friend comments that the tuition of \$5000 a year meant it was cheaper to go to graduate school than to go to college. What economic advice can you give your friend?
11. Shopping carts are about 50 percent larger today than they were 30 years ago. Give an economic explanation for this.
12. What are sunk costs? Are sunk costs opportunity costs? Explain.

13. Explain why the three basic assumptions about the behavior of market participants imply that a person will be on the boundary of their PPF.

Goal oriented
Rational behavior
Scarce resources

14. What is the difference between a PPF that characterizes constant costs and a PPF that characterizes increasing costs?



one good given up for another is constant

15. Suppose you have a farm that has two types of land—Type A land is great for growing rice and Type B land is great for growing soybeans. What will the PPF look like? Why?

ANSWERS

Review Questions

True/False

1. True
2. False
3. False. Real prices.
4. False. Real prices.
5. False
6. True
7. True
8. False
9. False
10. True

Multiple Choice/Short Answer

1. d
2. d
3. a. P
b. P
c. N
d. P
e. N
f. P
g. N
4. a
5. c
6. a
7. All are examples of goal-oriented behavior.
8. a. Note—clean air may be scarce though.
9. b
10. c
11. c
12. a
13. d
14. d
15. c