

Robert L. Sexton

exploring  
macro **ECONOMICS**

**3**<sup>rd</sup> edition

Prepared by STEPHEN L. JACKSTADT AND LEE HUSKEY

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# Exploring Economics

THIRD EDITION

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**Student Workbook to accompany Exploring Macroeconomics, 3e**

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## CHAPTER 1

# THE ROLE AND METHOD OF ECONOMICS

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## SECTION 1.1

# ECONOMICS: A BRIEF INTRODUCTION

### KEY POINTS

---

- Economics is a unique way of analyzing human behavior over a broad range of topics.
- **Economics** is the study of the allocation of limited resources to satisfy our unlimited wants.
- **Resources** are inputs that are used to produce goods and services.
- Our wants exceed what our resources can produce. This is what we call **scarcity**. Scarcity forces us to make choices on how to best use our limited resources.
- **The economic problem:** Scarcity forces us to choose and choices are costly because we must give up other opportunities that we value. This economizing problem is evident in every aspect of our lives.
- Economics concerns anything that is considered worthwhile to some human being. Virtually everything we decide to do, then, has an economic dimension.
- Living in a world of scarcity means facing trade-offs. It is important that we know what these trade-offs are so we can make better choices about the options available to us.

## Chapter 1: The Role and Method of Economics

### I REVIEW

---

A student of economics learns that much of life involves making a \_\_\_\_\_ between conflicting wants in a world of scarcity. Students develop an economic way of \_\_\_\_\_ about their options, which is a valuable problem-solving tool.

\_\_\_\_\_ is defined as the study of the allocation of our \_\_\_\_\_ resources to satisfy our unlimited wants.

The factors like machinery, labor, water, and land that are used to make goods and services are called \_\_\_\_\_.

The problem of \_\_\_\_\_ results because our wants are greater than the goods and services our resources can produce.

We are forced to make \_\_\_\_\_ about the best use of our limited resources. The cost of choosing to use a resource one way is the lost \_\_\_\_\_ to use the resource in another way.

Making costly choices about the use of scarce resources is known as the \_\_\_\_\_ problem.

### II TRUE/FALSE

---

- \_\_\_\_\_ 1. The Mayor's Crime Commission has recommended increased spending on midnight basketball programs, which are intended to reduce the city's crime rate. The Crime Commission is making choices with regard to scarce resources.
- \_\_\_\_\_ 2. Economic resources are only those things produced by nature.
- \_\_\_\_\_ 3. We have to make choices about the use of resources because they are scarce.
- \_\_\_\_\_ 4. Since a steel company owns its trucks, there is no cost involved when they are used to ship steel.
- \_\_\_\_\_ 5. Economics is only useful for analyzing decisions about goods and services that are bought and sold in stores.
- \_\_\_\_\_ 6. When you stay up late to watch the *David Letterman Show*, you have made an economic decision.

### III MULTIPLE CHOICE

---

- 1. Which of the following is not an example of a resource?
  - A) rubber trees
  - B) paint sprayers
  - C) toys
  - D) hammers
- 2. What are the two parts of the economic problem?
  - A) Economics explains many things, but some things it doesn't.
  - B) Natural resources are scarce, but man-made resources aren't.
  - C) Scarcity makes us choose, and choices are costly.
  - D) We have unlimited wants and unlimited resources.

## Chapter 1: The Role and Method of Economics

3. Which answer best describes why the choice of how much time to sleep is an economic problem?
  - A) The amount of time you sleep determines the type of bed you buy and buying a bed is an economic decision.
  - B) Time is a scarce resource and an hour of sleep costs since you have to give up other uses of time.
  - C) If you sleep in a hotel, you must pay for the room.
  - D) Sleep helps you become a more productive worker.
4. Which of the following does not involve a trade-off?
  - A) deciding what to do on a Friday night
  - B) choosing the best way to get to your best friend's house
  - C) depositing your paycheck in the bank
  - D) winning the lottery after you have purchased your ticket

### IV APPLICATION AND DISCUSSION

---

1. In most countries the birth rate has fallen as incomes and the economic opportunities for women have increased. Use economics to explain this pattern.
2. Explain why each of the following is an economic problem.
  - A) going on a date
  - B) a basketball coach awards one of 10 available scholarships to a point guard
  - C) the university's admission policy
3. Write your own definition of economics. What are the main elements of the definition?

## SECTION 1.2

# ECONOMICS AS A SCIENCE

### KEY POINTS

---

- Economics, like the other social sciences, is concerned with reaching generalizations about human behavior. It is the social science that studies the choices people make in a world of limited resources.
- Conventionally, we distinguish between two main branches of economics: macroeconomics and microeconomics.
- **Macroeconomics** is the study of the aggregate, or total, economy. It looks at economic problems as they influence the whole of society, including the topics of inflation, unemployment, business cycles, and economic growth.
- **Microeconomics** deals with the smaller units within the economy, attempting to understand the decision-making behavior of firms and households and their interaction in markets for particular goods or services.

## Chapter 1: The Role and Method of Economics

### I REVIEW

---

Like other social sciences, the central concern of economics is \_\_\_\_\_. It is the social science that studies people's \_\_\_\_\_.

Of the two main branches of economics, \_\_\_\_\_ examines the effects of human behavior on the total economy, while \_\_\_\_\_ deals with human behavior in smaller units like the household or the firm. Economic problems affecting the whole of society such as inflation and unemployment are topics of \_\_\_\_\_. Microeconomics examines the choice making behavior of firms and households and their interaction in \_\_\_\_\_.

### II TRUE/FALSE

---

- \_\_\_\_\_ 1. The various social sciences—psychology, sociology, anthropology, political science, and economics—examine special questions and very rarely overlap or complement each other.
- \_\_\_\_\_ 2. When economists study the economics of the avocado industry they are doing microeconomics.
- \_\_\_\_\_ 3. Since the two branches of economics, microeconomics and macroeconomics, deal with different levels of aggregation, they have nothing in common.
- \_\_\_\_\_ 4. An economist forecasting the change in the general price level is doing microeconomics.

### III MULTIPLE CHOICE

---

1. Which of the following is not a social science?
  - A) Psychology
  - B) Sociology
  - C) Economics
  - D) Biology
2. Which of the following is the best example of a microeconomics study?
  - A) a study of the determinants of the business cycle
  - B) a study of the relation between the price level and unemployment
  - C) a study of the factors that can lower a firm's production costs
  - D) a study of the factors that determine the rate of inflation
3. Which of the following is *not* an example of the use of the problem solving perspective provided by economics?
  - A) An investor looks at the tax consequences of selling stocks to buy bonds, which he believes offer a better return.
  - B) A rancher recognizes that raising more cattle this year will damage his pasture and limit next year's herd size.
  - C) The Archer family takes its vacation at Lake Arrowhead this year because they have done this for as long as anyone can remember.
  - D) An economic student thinks about the other subjects that she should be studying before she decides to study economics tonight.



## Chapter 1: The Role and Method of Economics

4. Economist Kenneth Boulding said that knowledge is always gained by the systematic loss of information and the elimination of the “great buzzing confusion of information” that the world provides. What did he mean?
- A) Economists can’t understand how things work by concentrating on the particulars so we must generalize about human behavior.
  - B) Economics can’t do everything so it must only concentrate on certain aspects of society, like making money.
  - C) Economics can’t begin to explain the complex world so economists must concentrate on creating theories and not worry about the real world.
  - D) Since there are so many countries in the world, economists must concentrate only on the particular country they know about, like the United States.
5. Which of the following is not a true statement?
- A) The study of unemployment is a topic of macroeconomics.
  - B) The study of the effects of unemployment on the demand for fig bars is a topic of microeconomics.
  - C) The study of health consequences of unemployment is a topic of social science.
  - D) The study of a community’s support of the unemployed is a topic of social science.

### IV APPLICATION AND DISCUSSION

---

1. Identify which of the following headlines represents a microeconomic topic and which represents a macroeconomic topic.

Topic	Microeconomics	Macroeconomics
A. “U.S. Unemployment Rate Reaches Historic Lows”	_____	_____
B. “General Motors Closes Auto Plant in St. Louis”	_____	_____
C. “OPEC Action Result in a General Increase in Prices”	_____	_____
D. “Companies Cut the Cost of Health Care for Employees”	_____	_____
E. “Lawmakers Worry about the Possibility of a US Recession”	_____	_____
F. “Colorado Rockies Make Outfielder Highest Paid Ballplayer”	_____	_____

SECTION 1.3

## ECONOMIC BEHAVIOR

### KEY POINTS

---

- Economists assume that individuals act as if they are motivated by self-interest and respond in predictable ways to changing circumstances.
- Most economists believe that it is rational for people to try and anticipate the possible consequences of their behavior before making a decision.
- Actions have consequences. Even inaction, which is a choice not to do something or not to make changes, has consequences.

### I REVIEW

---

Economists assume that people act \_\_\_\_\_ they were motivated by self-interest. Since people are also assumed to respond to changes in \_\_\_\_\_ ways, self-interest is a good predictor of behavior.

Self-interest \_\_\_\_\_ people to produce more and may also encourage \_\_\_\_\_. Pursuing self-interest is not the same as being \_\_\_\_\_.

Choices will have both positive and negative \_\_\_\_\_. Economists believe that it is rational for people to \_\_\_\_\_ consequences of their actions before they make a decision.

### II TRUE/FALSE

---

- \_\_\_\_\_ 1. Economists believe that people who commit crimes are not considering the consequences.
- \_\_\_\_\_ 2. Economists assume that we are motivated primarily by our concern for others.
- \_\_\_\_\_ 3. Economists assume that a person who has decided to take up smoking after the reading the warning label is wrong.
- \_\_\_\_\_ 4. Economists believe that not much of human behavior can be predicted by assuming that people pursue their own self-interest.
- \_\_\_\_\_ 5. Economics cannot explain the actions of people who donate their time and money to helping others.
- \_\_\_\_\_ 6. Friends describe Chandler as “clueless.” Even Chandler recognizes that he always seems to do things without the slightest thought about the consequences. Economists would consider Chandler’s behavior irrational.

### III MULTIPLE CHOICE

---

1. Which one of the following scientists observes how people will respond in predictable ways to changing incentives, especially changes in price and costs?
  - A) psychiatrist
  - B) journalist
  - C) biologist
  - D) economist
2. Which of the following is not consistent with economists' assumption that individuals generally consider the consequences of their actions?
  - A) Robert, the father of two, smokes but takes out extra life insurance.
  - B) Marlene, a middle-aged accountant, saves regularly each month toward her retirement.
  - C) Mr. Haviland invites Tony and his bull, "Tornado" into his china shop.
  - D) Claudia decides to forego studying and settle for a "D" on her physics exam in order to see the Dave Matthews Band in concert the night before her midterm.
3. Most economists assume that peoples' actions are
  - A) motivated by submerged emotional needs.
  - B) driven by magnetic forces generated by planetary movements.
  - C) undertaken in an attempt to improve the well-being of others.
  - D) motivated by self-interest.
4. Suppose the general manager of the Kansas City Chiefs football team has negotiated a new contract with star quarterback, Bobby Thompson. The contract pays Bobby a bonus of \$1,000 for every pass he completes during the season. Which of the following is most likely to describe Bobby's actions?
  - A) Bobby trains less in the off-season since he already has a contract.
  - B) Bobby will take risks during the season, throwing long passes that are less likely to be caught but more likely to result in touchdowns.
  - C) Bobby will run the ball more than last year.
  - D) Bobby will throw mostly short passes, which are most likely to be caught but less likely to result in touchdowns.

### IV APPLICATION AND DISCUSSION

---

1. Psychologist Kenneth Lux says that economists are wrong in assuming that people are motivated primarily by self-interest. Furthermore, he laments economists' success at selling this view of human behavior to politicians, business leaders, journalists, and people in general, since he believes that self-interest leads to social strife, pollution, and other ills. Lux says that the pursuit of self-interest encourages cheating. According to Lux, "from the standpoint of self-interest it would be irrational for someone not to cheat if they could be reasonably sure of getting away with it." (Kenneth Lux, *Adam Smith's Mistake*, Shambala Publications, 1990, p. 83.)

What do you think? Are economists wrong to assume that self-interest is the motivation behind economic behavior? Do people other than economists agree with this view? Does self-interest lead to cheating?

SECTION 1.4

# ECONOMIC THEORY

## KEY POINTS

---

- A **theory** is an established explanation that accounts for known facts or phenomena. Economic theories are statements or propositions about patterns of human behavior that are expected to take place under certain circumstances.
- Economic theories help us to sort out and understand the complexities of economic behavior. We expect a good theory to explain and predict well. A good economic theory, then, should help explain and predict human economic behavior.
- Economic theories must abstract from many of the particular details of situations to better focus on the behavior to be explained (like a road map). An economic theory provides a broad view, not a detailed examination, of human economic behavior.
- The beginning of any theory is a **hypothesis**, a testable proposition that makes some type of prediction about behavior in response to certain changed conditions. A hypothesis in economic theory is a testable prediction about how people will behave or react to a change in economic circumstances.
- **Empirical analysis**, the use of data to test hypotheses, is applied to determine whether or not a hypothesis fits well with the facts.
- Determining whether an economic hypothesis is acceptable is more difficult than is the case in the natural or physical sciences. The laboratory of economists is usually the real world, and economists cannot control all the variables that might influence human behavior.
- If an economic hypothesis is supported by the data, it can then be tentatively accepted as an economic theory.

## I REVIEW

---

A \_\_\_\_\_ is an explanation that is supported by the facts of the real world. Economic theories are propositions used to \_\_\_\_\_ and \_\_\_\_\_ human behavior in different circumstances.

Economic theories cannot account for every event; to be useful theories must \_\_\_\_\_ or focus on only the essential factors.

A \_\_\_\_\_ is a prediction about how people will behave in certain economic circumstances and can be tested to see how well the prediction fits the \_\_\_\_\_.

Economists engage in \_\_\_\_\_ analysis to test hypotheses by seeing if they are consistent with the real world observations.

## II TRUE/FALSE

---

\_\_\_\_ 1. We expect a good theory will describe everything about a particular economic behavior.

\_\_\_\_ 2. The statement “incentives matter” is an example of an economic theory.

## Chapter 1: The Role and Method of Economics

- \_\_\_\_\_ 3. A good hypothesis is “Living on Mars would increase the amount of coffee people drink.”
- \_\_\_\_\_ 4. A hypothesis is not the same as a theory.
- \_\_\_\_\_ 5. Lee McKenzie has an idea that the natural tendency for stock prices is to rise. He promotes this hypothesis as “the Helium Market Strategy to Riches.” As a hypothesis, this strategy offers a good way to make money in the stock market.

### III MULTIPLE CHOICE

---

1. What is the difference between a hypothesis and a theory?  
A) A hypothesis is the prediction made using a theory.  
B) A hypothesis has not been tested, but empirical analysis has shown that a theory is supported by the facts.  
C) A hypothesis makes a prediction about human behavior but a theory does not makes a prediction.  
D) A hypothesis abstracts from reality while a theory describes reality.
2. In her new book “Women Play the Infield but Men are from Leftfield,” Marion Knott presents the proposition that women and men react in different but predictable ways in sports and recreation. How can we decide whether her proposition is a good theory?  
A) The theory is a good one if Marion sells a lot of books.  
B) The theory is a good one if many scientists agree with the proposition.  
C) The theory is a good one if it explains and predicts well human behavior.  
D) The theory is a good one since the publisher agreed to print it.
3. William Hanks owns country music station, KQED, in Boise. He would like to predict how changes in the community and in his radio format would affect KQED’s share of the Boise radio market. Which of the following do you think is important for a theory that would help Hanks predict his share of the radio audience?  
A) The theory includes a log of every song the station has played for the last ten years.  
B) The theory describes the number and type of cars and car radios everyone in Boise owns.  
C) The theory includes predictions by the fortuneteller, Madam Ouzinke.  
D) The theory isolates only the most important factors Hanks thinks affect his audience share.
4. An economist has been asked to explain why coffee bean production has declined in Brazil during the 1990s. Which of the following would not be an important step in the development of a theory of coffee bean production?  
A) Develop a hypothesis, such as producers reduce coffee production when the price falls.  
B) Do empirical analysis and see whether coffee production has fallen when prices have fallen in the past.  
C) Go “back to the drawing board” and develop a new hypothesis if this one does not fit the facts.  
D) Drink only three cups of coffee a day when he conducts the study.

### IV APPLICATION AND DISCUSSION

---

1. In the United States, the average woman’s annual earnings is less than 75 percent of the average man’s earnings. Develop a hypothesis that would help to explain this fact.
2. The Environmental Protection Agency asks you to help them understand the causes of urban pollution. Air pollution problems are worse the higher the Air Quality Index. You develop the following two hypotheses.

Hypothesis I: Air pollution will be a greater problem the higher the average temperature in the urban area.

## Chapter 1: The Role and Method of Economics

Hypothesis II: Air pollution will be a greater problem, the greater the population of the urban area.

Test each hypothesis with the facts given below. Which hypothesis fits the facts better? Have you developed a theory?

Metropolitan Statistical Area	Days with Polluted Air*	Average Maximum Temperature	Population (thousands)
Cincinnati, OH	30	64	1,979
El Paso, TX	13	77.1	680
Milwaukee, WI	12	55.9	1,690
Atlanta, GA	24	72.0	4,112
Philadelphia, PA	33	63.2	5,101
Albany, NY	8	57.6	876
San Diego, CA	20	70.8	2,814
Los Angeles, CA	80	70.6	9,519

\*Air Quality Index greater than 100 (2002)

Source: U.S. Dept. of Commerce, Bureau of Census, 2002 Statistical Abstract of the United States, Tables Nos. 30, and 363; U.S. EPA, Airtrends Report, 2002, EPA.Gov/airtrends/Factbook.

### SECTION 1.5

## PROBLEMS TO AVOID IN SCIENTIFIC THINKING

### KEY POINTS

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- Virtually all theories in economics are expressed using a *ceteris paribus* (“let everything else be equal” or “holding everything else constant”) assumption. In trying to assess the effect of one variable on another, we must isolate their relationship from other events that might also influence the situation that the theory is trying to explain or predict.
- Without a theory of causation, no scientist could sort out and understand the enormous complexity that occurs in the real world. But one must always be careful not to confuse **correlation** with **causation**. The fact that two sets of phenomena are related does not necessarily mean that one caused the other to occur.
- One must be careful with problems associated with aggregation, particularly the **fallacy of composition**. That is, even if something is true for an individual, it is not necessarily true for many individuals as a group.

### I REVIEW

---

The Latin expression for “let everything else be equal” is \_\_\_\_\_.

Without a theory of \_\_\_\_\_, scientists cannot understand the complexity that occurs in the real world.

## Chapter 1: The Role and Method of Economics

In seeking to find causes for events, people sometimes mistake \_\_\_\_\_ for causation.

If someone observes that new car sales and auto accidents rise at the same time and concludes that new car sales cause auto accidents, they are mistaking \_\_\_\_\_ for causation.

When someone assumes that what is true of an individual is also true of a group, they are committing the fallacy of \_\_\_\_\_.

### II TRUE/FALSE

---

- \_\_\_\_\_ 1. The Latin term *ceteris paribus* means “the bus stops here.”
- \_\_\_\_\_ 2. Scientists studying the relationship between two variables try to hold other variables constant.
- \_\_\_\_\_ 3. If two phenomena occur together one must be the cause of the other.
- \_\_\_\_\_ 4. The fallacy of composition is committed when someone believes that what is true for an individual is also true of the individuals in a group.

### III MULTIPLE CHOICE

---

- 1. A scientist trying to test a theory about the relationship between peoples' consumption of alcohol and their longevity would want to hold all of the following variables constant except
  - A) the number of cigarettes that people in the experimental group smoke.
  - B) the amount of alcohol that people in the experimental group consume.
  - C) past histories of heart and lung disease among people in the experimental group.
  - D) the amount of animal fat that people in the experimental group consume each day.
- 2. Five-year-old Dimitri observes that people who play basketball are taller than normal and tells his mom that he's going to play basketball because it will make him tall. Dimitri is
  - A) committing the fallacy of composition.
  - B) violating the *ceteris paribus* assumption.
  - C) mistaking correlation for causation.
  - D) confusing the direction of causation.
- 3. Many people have heard that the stock market rises when a team from the National Football Conference (NFC) wins the Super Bowl and falls when a team from the American Football Conference (AFC) is victorious. If Veronica concludes that there is a causal relationship between which team wins the Super Bowl and the direction of stock prices, she is probably
  - A) confusing correlation with causation.
  - B) violating the *ceteris paribus* assumption.
  - C) committing the fallacy of composition.
  - D) confusing the direction of causality, since everyone knows that stock market prices determine which team wins the Super Bowl.

## Chapter 1: The Role and Method of Economics

4. "When one major league baseball team spends more money acquiring better players it is better off, but if all other teams do the same thing in order to compete, none of them is better off." This statement demonstrates
- A) the confusion of association with causation.
  - B) the *ceteris paribus* assumption.
  - C) the problem associated with the misspecification of the direction of causality.
  - D) the fallacy of composition.

### IV APPLICATION AND DISCUSSION

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1. In the 1940s, Dr. Melvin Page, a Florida dentist and head of the Biochemical Research Foundation, conducted a national campaign to stop people other than infants from drinking milk. According to Page, milk was a dangerous food and a leading cause of cancer. He pointed to the fact that more people died of cancer in Wisconsin, the nation's leading milk producer, than any other state as proof of his claim. (Cited in Martin Gardner, *Fads & Fallacies in the Name of Science*, Dover Publications, 1957, pp. 222–223.)

From what you know about scientific thinking, the importance of *ceteris paribus*, and the danger of mistaking association for causation, how would you evaluate Dr. Page's claim?

### SECTION 1.6

## POSITIVE AND NORMATIVE ANALYSIS

### KEY POINTS

---

- In the role of scientist, an economist tries to objectively observe patterns of behavior without reference to the appropriateness or inappropriateness of that behavior. This objective, value-free approach utilizing the scientific method is called **positive analysis**.
- In positive analysis, we want to know the impact of Variable A on Variable B. A positive statement does not have to be a true statement, but it does have to be a testable statement.
- A good economist/scientist strives to be as fair and objective as possible in evaluating evidence and in stating conclusions based on the evidence.
- Opinions expressed about the desirability of various actions are called **normative analysis**. Normative statements, such as incomes should be more equally distributed, involve judgments about what should be or what ought to happen. Normative statements are subjective, non-testable statements.
- It is important to distinguish between positive and normative analysis because many controversies in economics revolve around policy considerations that contain both.
- Disagreement is common in most disciplines. The majority of disagreements in economics stem from normative issues as differences in values or policy beliefs result in conflict.
- Economists may disagree as to the validity of a given economic theory for the policy in question because the empirical evidence appears somewhat conflicting.



## Chapter 1: The Role and Method of Economics

- Most economists agree on a wide range of issues, including the effects of rent control, import tariffs, export restrictions, the use of wage and price controls to curb inflation, and the minimum wage. Often, economists argue that if market forces are allowed to work freely, economic analysis can predict certain phenomena with a high degree of success.

### I REVIEW

---

When economists study human behavior, they emphasize how people behave, not how they should behave. This objective approach is called \_\_\_\_\_ analysis.

When economists comment on the desirability of particular actions they are making \_\_\_\_\_ statements. Normative statements involve judgements about what \_\_\_\_\_ to happen.

It is especially important to be able to \_\_\_\_\_ between normative and positive analysis when policy considerations contain both. The majority of \_\_\_\_\_ among economists involve normative issues.

A second important reason economists disagree is disagreement on the \_\_\_\_\_ of the economic \_\_\_\_\_ in a particular policy application.

### II TRUE/FALSE

---

\_\_\_\_ 1. The following statement is a normative statement: If the tax on cigarettes is increased, people will smoke fewer cigarettes.

\_\_\_\_ 2. When economists make normative statements they are stating their opinions.

\_\_\_\_ 3. Since economics is a science, economists never disagree.

\_\_\_\_ 4. We would expect more agreement among economists with the statement, "Raising the fine the library charges for overdue books will reduce the number of overdue books" than we would expect to find with the statement, "We don't want to discourage the use of the library with fines on overdue books because people ought to read more."

\_\_\_\_ 5. If an economics professor presents her opinions about policy issues in class, she is still teaching economics.