



Ten Principles of Economics

Goals

In this chapter you will

- Learn that economics is about the allocation of scarce resources
- Examine some of the trade-offs that people face
- Learn the meaning of opportunity cost
- See how to use marginal reasoning when making decisions
- Discuss how incentives affect people's behavior
- Consider why trade among people or nations can be good for everyone
- Discuss why markets are a good, but not perfect, way to allocate resources
- Learn what determines some trends in the overall economy

Outcomes

After accomplishing these goals, you should be able to

- Define scarcity
- Explain the classic trade-off between "guns and butter"
- Add up your particular opportunity cost of attending college
- Compare the marginal costs and marginal benefits of saving for retirement
- Explain why specialization and trade improve people's choices
- Give an example of an externality
- Explain the source of large and persistent inflation

Strive for a Five

The principles discussed in this chapter are basic economic concepts. These principles are an introduction to the book; Mankiw goes into these principles in more depth later in the text. Basic concepts, such as these ten principles, have been asked on both the micro- and macroeconomics exams.

- Scarcity
- Trade-offs
- Thinking at the margin
- Marginal cost versus Marginal Benefit

Key Terms

- *Scarcity*—Limited resources and unlimited wants
- *Economics*—Study of how society manages its scarce resources
- *Efficiency*—The property of society getting the most from its scarce resources
- *Equality*—The property of distributing economic prosperity uniformly among society's members
- *Rational*—Systematically and purposefully doing the best you can to achieve your objectives
- *Opportunity cost*—Whatever is given up to get something else
- *Marginal changes*—Incremental adjustments to an existing plan
- *Incentive*—Something that induces a person to act
- *Market economy*—An economic system where interaction of households and firms in markets determines the allocation of resources
- *Property rights*—The ability of an individual to own and exercise control over scarce resources
- *"Invisible hand"*—The principle that self-interested market participants may unknowingly maximize the welfare of society as a whole
- *Market failure*—A situation in which the market fails to allocate resources efficiently
- *Externality*—When one person's actions have an impact on a bystander
- *Market power*—The ability of an individual or group to substantially influence market prices
- *Monopoly*—The case in which there is only one seller in the market
- *Productivity*—The amount of goods and services produced from each unit of labor input
- *Inflation*—An increase in the overall level of prices
- *Business cycle*—Fluctuations in economic activity

Chapter Overview

Context and Purpose

Chapter 1 is the first chapter in a three-chapter section that serves as the introduction to the text. Chapter 1 introduces ten fundamental principles on which the study of economics is based. In a broad sense, the rest of the text is an elaboration on these ten principles. Chapter 2 will develop how economists approach problems, while Chapter 3 will explain how individuals and countries gain from trade.

The purpose of Chapter 1 is to lay out ten economic principles that will serve as building blocks for the rest of the text. The ten principles can be grouped into three categories: how people make decisions, how people interact, and how the economy works as a whole. Throughout the text, references will be made repeatedly to these ten principles.

Chapter Review

Introduction Households and society face decisions about how to allocate scarce resources. Resources are scarce in that we have fewer resources than we wish. Economics is the study of how society manages its scarce resources. Economists study how people make decisions about buying and selling, and saving and investing. We study how people interact with one another in markets where prices are determined and quantities are exchanged. We also study the economy as a whole when we concern ourselves with total income, unemployment, and inflation.

This chapter addresses ten principles of economics. The text will refer to these principles throughout. The ten principles are grouped into three categories: how people make decisions, how people interact, and how the economy works as a whole.

How People Make Decisions

- **People face trade-offs** Economists often say, “There ain’t no such thing as a free lunch.” This means that there are always trade-offs—to get more of something we like, we have to give up something else that we like. For example, if you spend money on dinner and a movie, you won’t be able to spend it on new clothes. Socially, we face trade-offs as a group. For example, there is the classic trade-off between “guns and butter.” That is, if society spends more on national defense (guns), then it will have less to spend on social programs (butter). There is also a social trade-off between efficiency (getting the most from our scarce resources) and equality (benefits being distributed uniformly across society). Policies such as taxes and welfare make incomes more equal, but these policies reduce returns to hard work, and thus, the economy doesn’t produce as much. As a result, when the government tries to cut the pie into more equal pieces, the pie gets smaller.
- **The cost of something is what you give up to get it** The opportunity cost of an item is what you give up to get that item. It is the true cost of the item. The opportunity cost of going to college obviously includes your tuition payment. It also includes the value of your time that you could have spent working, valued at your potential earnings. It would exclude your room and board payment because you have to eat and sleep whether you are in school or not.
- **Rational people think at the margin** Rational people systematically do the best they can to achieve their objectives. Marginal changes are incremental changes to an existing plan. Rational decision makers only proceed with an action if the marginal benefit exceeds the marginal cost. For example, you should only attend school for another year if the benefits from that year of schooling exceed the cost of attending that year. A farmer should produce another bushel of corn only if the benefit (price received) exceeds the cost of producing it.
- **People respond to incentives** An incentive is something that induces a person to act. Because rational people weigh marginal costs and marginal benefits of activities, they will respond when these costs or benefits change. For example, when the price of automobiles rises, buyers have an incentive to buy fewer cars while automobile producers have an incentive to hire more workers and produce more autos. Public policy can alter the costs or benefits of activities. For example, a luxury tax on expensive boats raises the price and discourages purchases. Some policies have unintended consequences because they alter behavior in a manner that was not predicted.

How People Interact

- **Trade can make everyone better off** Trade is not a contest in which one wins and one loses. Trade can make each trader better off. Trade allows each trader to specialize in what he or she does best, whether it be farming, building, or manufacturing, and trade their output for the output of other efficient producers. This is as true for countries as it is for individuals.
- **Markets are usually a good way to organize economic activity** In a market economy, the decisions about what goods and services to produce, how much to produce, and who gets to consume them are made by millions of firms and households. Firms and households, guided by self-interest, interact in the marketplace where prices and quantities are determined. Although this may appear to be chaos, Adam Smith made the famous observation in the *Wealth of Nations* in 1776 that self-interested households and firms interact in markets and generate desirable social outcomes as if guided by an “invisible hand.” These optimal social outcomes were not their original intent. The prices generated by their competitive activity signal the value of costs and benefits to producers and consumers, whose activities usually maximize the well-being of society. Alternatively, the prices dictated by central planners contain no information on costs and benefits, and therefore, these prices fail to guide economic activity efficiently. Prices also fail to guide economic activity efficiently when governments distort prices with taxes or restrict price movements with price controls.
- **Governments can sometimes improve market outcomes** Government must first protect property rights in order for markets to work. In addition, government can sometimes intervene in the market to improve efficiency or equality. When markets fail to allocate resources efficiently, there has been market failure. There are many different sources of market failure. An externality is when the actions of one person affect the well-being of a bystander. Pollution is a standard example. Market power is when a single person or group can influence the price. In these cases, the government may be able to intervene and improve economic efficiency. The government may also intervene to improve equality with income taxes and welfare. Sometimes well-intentioned policy intervention has unintended consequences.

How the Economy as a Whole Works

- **A country’s standard of living depends on its ability to produce goods and services** There is great variation in average incomes across countries at a point in time and within the same country over time. These differences in incomes and standards of living are largely attributable to differences in productivity. Productivity is the amount of goods and services produced from each unit of labor input. As a result, public policy intended to improve standards of living should improve education, generate more and better tools, and improve access to current technology.
- **Prices rise when the government prints too much money** Inflation is an increase in the overall level of prices in the economy. High inflation is costly to the economy. Large and persistent inflation is caused by rapid growth in the quantity of money. Policymakers wishing to keep inflation low should maintain slow growth in the quantity of money.
- **Society faces a short-run trade-off between inflation and unemployment** In the short run, an increase in the quantity of money stimulates spending, which raises both prices and production. The increase in production requires more hiring, which reduces unemployment. Thus, in the short run, an increase in inflation tends to reduce unemployment, causing a trade-off between

inflation and unemployment. The trade-off is temporary but can last for a year or two. Understanding this trade-off is important for understanding the fluctuations in economic activity known as the business cycle. In the short run, policymakers may be able to affect the mix of inflation and unemployment by changing government spending, taxes, and the quantity of money.

Helpful Hints

1. Place yourself in the story. Throughout the text, most economic situations will be composed of economic actors—buyers and sellers, borrowers and lenders, firms and workers, and so on. When you are asked to address how any economic actor would respond to economic incentives, place yourself in the story as the buyer or the seller, the borrower or the lender, the producer or the consumer. Don't think of yourself always as the buyer (a natural tendency) or always as the seller. You will find that your role-playing will usually produce the right response once you learn to think like an economist—which is the topic of the next chapter.
2. Trade is not a zero-sum game. Some people see an exchange in terms of winners and losers. Their reaction to trade is that, after the sale, if the seller is happy, the buyer must be sad because the seller must have taken something from the buyer. That is, they view trade as a zero-sum game where what one gains the other must have lost. They fail to see that both parties to a voluntary transaction gain because each party is allowed to specialize in what it can produce most efficiently and then trade for items that are produced more efficiently by others. Nobody loses, because trade is voluntary. Therefore, a government policy that limits trade reduces the potential gains from trade.
3. An externality can be positive. Because the classic example of an externality is pollution, it is easy to think of an externality as a cost that lands on a bystander. However, an externality can be positive in that it can be a benefit that lands on a bystander. For example, education is often cited as a product that emits a positive externality because when your neighbor educates herself, she is likely to be more reasonable, responsible, productive, and politically astute. In short, she is a better neighbor. Positive externalities, just as much as negative externalities, may be a reason for the government to intervene to promote efficiency.

Self-Test

Multiple-Choice Questions

1. Economics is the study of
 - a. production methods.
 - b. how society manages its scarce resources.
 - c. how households decide who performs which tasks.
 - d. the interaction of business and government.
 - e. the earning and spending of money.
2. In economics, the cost of something is
 - a. the dollar amount of obtaining it.
 - b. always measured in units of time given up to get it.
 - c. what you give up to get it.
 - d. often impossible to quantify, even in principle.
 - e. the dollar cost of producing it.

3. High school athletes who skip college to become highly paid professional athletes
 - a. obviously do not understand the value of a college education.
 - b. usually do so because they cannot get into college.
 - c. understand that the opportunity cost of attending college is very high.
 - d. are not making a rational decision because the marginal benefits of college outweigh the marginal costs of college for high school athletes.
 - e. understand that the opportunity cost of becoming a professional athlete is very high.
4. A rational decision maker takes an action only if the
 - a. marginal benefit is less than the marginal cost.
 - b. marginal benefit is greater than the marginal cost.
 - c. total benefit is maximized.
 - d. total cost is minimized.
 - e. the opportunity cost is less than the marginal cost.
5. Mike has spent \$500 purchasing and repairing an old fishing boat, which he expects to sell for \$800 once the repairs are complete. Mike discovers that, in addition to the \$500 he has already spent, he needs to make one more repair, which will cost another \$400, in order to make the boat worth \$800 to potential buyers. He can sell the boat as it is now for \$300. What should he do?
 - a. He should sell the boat as it is now for \$300.
 - b. He should sell the boat for no less than the \$900 he has spent on it.
 - c. He should complete the repairs and sell the boat for \$800.
 - d. It does not matter which action he takes; the outcome is the same either way.
 - e. He should sell the boat for the \$500 he has already spent.
6. Which is the most accurate statement about trade?
 - a. Trade can make every nation better off.
 - b. Trade makes some nations better off and others worse off.
 - c. Trading for a good can make a nation better off only if the nation cannot produce that good itself.
 - d. Trade helps rich nations and hurts poor nations.
 - e. Trade helps poor nations and hurts rich nations.
7. One advantage market economies have over centrally planned economies is that market economies
 - a. provide an equal distribution of goods and services to households.
 - b. establish a significant role for government in the allocation of resources.
 - c. solve the problem of scarcity.
 - d. are more efficient.
 - e. are better at directing resources toward achieving national goals.
8. Which of the following questions is not answered by the decisions that every society must make?
 - a. What determines consumer preferences?
 - b. What goods will be produced?
 - c. How will goods be produced?
 - d. Who will consume the goods produced?
 - e. Who will produce the goods being consumed?
9. The term used to describe a situation in which markets do not allocate resources efficiently is
 - a. economic meltdown.
 - b. market failure.
 - c. government failure.
 - d. equilibrium.
 - e. disequilibrium.

10. Laws that restrict smoking cigarettes in public places are examples of government intervention that is intended to reduce
 - a. efficiency.
 - b. equality.
 - c. externalities.
 - d. productivity.
 - e. equity.
11. In the United States, incomes historically have grown about 2 percent per year. At this rate, average income doubles every
 - a. fifteen years.
 - b. twenty-five years.
 - c. thirty-five years.
 - d. forty-five years.
 - e. fifty years.
12. Which of the following is the most correct statement about the relationship between inflation and unemployment?
 - a. In the short run, falling inflation is associated with falling unemployment.
 - b. In the short run, falling inflation is associated with rising unemployment.
 - c. In the short run, falling inflation is unrelated to unemployment.
 - d. In the long run, falling inflation is associated with falling unemployment.
 - e. In the long run, falling inflation is associated with rising unemployment.

Free Response Questions

1. Greg is trying to make a decision about going on vacation. The following are costs he is considering: transportation expenses (\$750); lodging expenses (\$600); recreation expenses (\$250); food expenses while on vacation (\$500); and food expenses while at home (\$300). Greg also knows that while on vacation, he will not earn \$1,500 from work. Complete the following.
 - a. Calculate the total cost of Greg going on vacation.
 - b. List the name of each of the expenses you included and their dollar amount.
2. Define scarcity. Two ways that societies have used to deal with the economic problem of scarcity are markets and government. List one economic advantage of each of those systems of dealing with the problem of scarcity.

Solutions

Multiple-Choice Questions

1. b TOP: Economics/Scarcity
2. c TOP: Opportunity cost
3. c TOP: Opportunity cost
4. b TOP: Marginal changes
5. c TOP: Marginal cost
6. a TOP: Trade
7. d TOP: Market economy
8. a TOP: Market economy
9. b TOP: Market failure
10. c TOP: Externalities/Government
11. c TOP: Income
12. b TOP: Inflation/Unemployment/Trade-offs

Free Response Questions

1.

Transportation	\$750
lodging	\$600
recreation	\$250
food	\$200
	(food on vacation [\$500]
	minus food at home [\$300])
forgone wages	\$1,500
Total Cost	\$3,300

TOP: Market economy/Government
2. Definition: Unlimited wants with limited resources.
One advantage of market is economic efficiency
One advantage of government is the ability to deal with market failure (positive or negative externalities).
TOP: Economics/Scarcity