

STUDY GUIDE TO ACCOMPANY

micro
economics

2nd **edition** ◀

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Chapter 2

Scarcity, Choice and Economic Interaction

CHAPTER OVERVIEW

Economic interactions involve scarcity and choice. Time and income are limited, and people choose between alternatives every day. In this chapter, we study the choices people make when faced with a scarcity of resources and the economic interactions between people when they make choices between alternatives. We begin by looking at scarcity, choice and the interaction of individuals in markets. We study consumer and producer decisions, learn about the gains from trade and see how the same principles that guide interactions between individuals can be used to study interactions between countries. We then look at scarcity and choice for the economy as a whole, and introduce the production possibilities curve. We conclude by comparing two alternative economic systems: the market economy and the command economy. We look at the key elements of a market economy and focus on the role of prices. This chapter completes our broad overview of economics. In the next chapter, we consider the most frequently used model in economics: the basic supply and demand model.

LEARNING OBJECTIVES

This is a very important chapter, explaining the nature of economic activity and introducing the basic tools of microeconomic analysis. It is largely definitive and fairly general in its scope, as one would expect at this introductory stage.

The chapter's eight **Learning Objectives** should be examined before you commence your study of the chapter. They provide you with pointers as to where the emphasis in the chapter lies.

The **Learning Objectives** are to:

1. give a broad definition of economics
2. explain how scarcity of resources requires individuals to make choices about what they consume and what they produce
3. demonstrate how individual consumers and producers can gain from economic interaction
4. explain how scarcity of resources requires the economy as a whole to make choices about what is produced
5. define and explain increasing opportunity costs
6. use the production possibilities curve to show which production choices are efficient, inefficient or impossible at a given time
7. describe the requirements for economic growth
8. identify the key elements of a market economy.

From the outset you must be aware of the importance of learning concept definitions. There is no scope for error here. Near enough is not good enough. Definitions must be **accurate** and **complete**. Often in economics, concepts mean something quite different from their normal usage so you should not refer to English dictionaries to clarify definitions. There are specialist economic dictionaries which you should be able to gain access to through university libraries.

On completion of your study of the chapter, re-visit the eight **Learning Objectives** to ensure that you have not overlooked key concepts or issues. You will need to establish the practice of drawing the diagrams presented in the textbook following the construction sequences indicated by the accompanying narrative.

Suggested Procedure

Work through the **Chapter Review** and **Zeroing In** sections in the *Study Guide* to ensure that you have a good grasp of the chapter's contents and can score distinctions in the various self-assessment tests under examination-type conditions. This progressive monitoring will help ensure that you do not proceed to the next chapter until you have mastered the content of this one. Each chapter builds on the previous chapters. If you do not get the foundations right, the superstructure will get a bit wobbly as the level of difficulty increases.

CHAPTER REVIEW

1. Scarcity means people must make choices.

Scarcity is a situation in which people's wants exceed their resources. Scarcity is a fact of life; wants are unlimited, but resources are not. Because of scarcity, people must make **choices** — to forgo, or give up, one thing in favour of another. Economics is the study of how people deal with scarcity. They make *purposeful choices* with *scarce resources* and *interact* with other people when they make choices.

2. Economic interactions occur in markets and organisations.

Economic interaction between people occurs when they trade or exchange goods and services with each other. Economic interactions occur in **markets**, arrangements where buyers and sellers can interact with each other, and within **organisations** such as families, firms, universities and governments.

3. Consumer decisions

Because resources are limited, individual consumers face budget constraints that force them to make choices between different items that they want. Budget constraints can involve money (you want to buy dinner and football tickets but cannot afford both) or time (you have both an economics test and a physics test tomorrow, and you need to allocate your remaining study time between them).

4. Every choice has an opportunity cost.

The **opportunity cost** of a choice is the value of the forgone alternative that was not chosen. In the above examples, the opportunity cost of football tickets is dinner, and the opportunity cost of studying economics is not doing as well in the physics test.

5. Trade reallocates goods in a way people prefer.

Economic interactions often involve **gains from trade**. Suppose that you can afford season tickets for either football or basketball, but not both, and that you would prefer attending half of the football games and half of the basketball games to attending all of either. If you could find someone with similar preferences to trade tickets with, you would both be better off. Gains from trade can occur in markets, such as a ticket agency, or in organisations, such as a family or university.

6. Producer decisions

Individual producers also face scarcity and choice; you cannot produce unlimited goods with limited time and resources. Gains from trade allow people to **specialise** in what they are good at. If a guitarist and a drummer form a rock group, **division of labour** allows each to concentrate on playing one instrument.

7. Defining comparative advantage

One person or group of people has a **comparative advantage** in producing one good relative to another good if they can produce that good with comparatively less time, effort or resources than

another person can produce it. In the previous example, production can be increased if the guitarist plays the guitar and the drummer plays the drums, rather than both trying to play both instruments. (There is one subtle aspect of the idea of comparative advantage: even if the guitarist plays both the guitar and the drums better than the drummer, the guitarist will be able to play one instrument, presumably the guitar, and the drummer will be able to play the other instrument, presumably the drums, **comparatively** better than the other musician.)

8. The gains from international trade

International trade occurs when individuals who live in different countries trade with each other. There are gains from international trade for the same reasons that there are gains from trade within a country: By trading, people can either better satisfy their preferences for goods or better utilise their comparative advantage.

9. Multilateral trade requires a medium of exchange.

Multilateral trade is trade in which more than two people participate. Multilateral trade requires a **medium of exchange**, a generally acceptable item that people can buy and sell goods for, such as money. Different countries use different forms of money. The **exchange rate** is the price of one country's currency in terms of another.

10. Scarcity and choice for the economy as a whole

Production possibilities represent the alternative choices of goods that the economy can produce. Consider an economy that produces two goods: steel and food. If it produces more of one, it must produce less of the other. The opportunity cost of producing more steel is the value of the forgone food. The idea of **increasing opportunity costs** is that as steel production rises, the value of the forgone food increases. The rate of decline in food production increases as more steel is produced.

11. Representing production possibilities

The **production possibilities curve** is a graphical representation of the idea of production possibilities. Figure 2.1 below depicts the production possibilities curve for steel and food. Steel is on the vertical axis, and food is on the horizontal axis. Both are measured in tonnes. If the economy devotes all of its resources to either steel or food production, it can produce the maximum amount of one and none of the other. The production possibilities curve slopes downward and is bowed out from the origin. The curve is bowed out because the opportunity cost of producing food increases as more food is produced. As more resources are shifted from steel to food production, each additional tonne of food means a greater loss of steel produced.

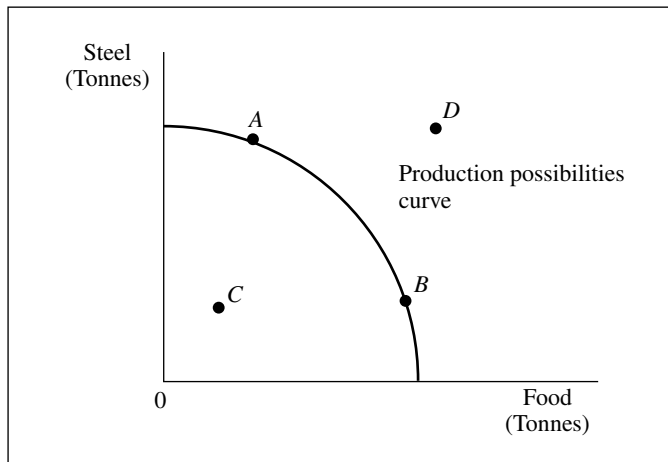


Figure 2.1

12. Inefficient, efficient or impossible?

The production possibilities curve shows three situations. Points on the curve are **efficient** because they represent the maximum amount that can be produced with available resources. Production of food can be raised only by lowering production of steel, such as by moving from point *A* to point *B*. Points inside the production possibilities curve, such as point *C*, are **inefficient**. Using the same resources, the economy could produce more steel, more food or both. Points outside the production possibilities curve, such as point *D*, are **impossible**. The economy does not have the resources to produce those quantities of steel and food.

13. Economic growth: shifts in the production possibilities curve

We discussed the distinction between movements **along** a curve and **shifts** of the curve in the Appendix to Chapter 1. In this context, a change in the production of one of the variables on the axes is a movement along the curve. For example, an increase in steel production is a movement from point *B* to point *A* in Figure 2.1. **Economic growth** causes an outward shift in the production possibilities curve. When there is economic growth, more resources are available, and more goods and services can be produced. The effects of economic growth are illustrated in Figure 2.2. The production possibilities curve shifts out from the curve labelled 'Original' to the curve labelled 'Growth'.

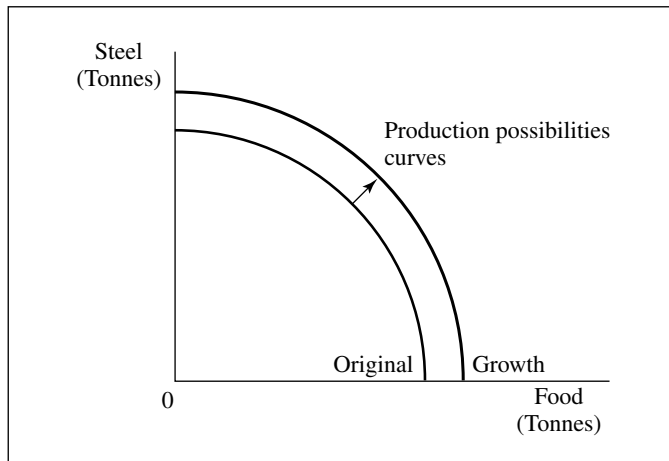


Figure 2.2

14. Three key questions facing the economy

Every economy focuses on three essential questions: **what** are the goods and services to be produced, **how** are these goods and services to be produced, and **for whom** are the goods and services to be produced? In a **market economy**, these decisions are made by consumers, firms, governments and other organisations interacting in markets. In a command economy, these decisions are made through a central plan by those who control the government. A command economy is also called a centrally planned economy. One of the most important economic phenomena of recent years has been the attempt by the countries of Eastern Europe, the former Soviet Union and the People's Republic of China to make the transition from command economies to market economies.

15. Key features of a market economy

There are a number of important characteristics common to market economies. **Freely determined prices**, set by individuals and firms, are an essential characteristic of a market

economy. In a command economy, most prices are set by the government. **Property rights**, the legal authority to keep or sell property, provide **incentives** for invention and specialisation and are another key element of a market economy. Competitive markets and freedom to trade at home and abroad also characterise market, but not command, economies.

16. A role for government

The role of government in a market economy is a subject of much debate among economists. It is generally agreed that the government should provide for defence, help establish property rights and keep the overall price level stable, but modern governments do much more. **Market failure** is a situation in which the market economy does not provide good enough answers to the three key questions posed on page 20 — what, how and for whom — and in which there is a role for government in improving the market outcome. However, when the government, even in the case of market failure, does worse than the market would have done if left on its own, there is **government failure**.

17. The role of non-government organisations

Many of the economic interactions in market economies take place within organisations, such as firms, households and universities, instead of in markets. A **transfer price** is a price that one department of an organisation must pay to receive goods or services from another department in the same organisation. One important reason why organisations are created is that they reduce market **transaction costs**, the costs of buying and selling. These costs include the cost of finding a buyer or a seller and the cost of reaching agreement on a price.

18. The importance of freely determined prices

Prices play three important roles in a market economy. They serve as **signals** about what should be produced and consumed when there are changes in tastes or technology; they provide **incentives** to people to alter their production or consumption; and they affect the **distribution of income**.

ZEROING IN

1. Learning to think like an economist requires a thorough grasp of the key concepts that underlie economics. When you reinforce your understanding of concepts such as scarcity, choice, opportunity cost and economic interaction, it is helpful to keep in mind how these relate logically to each other.
 - a. A central concern of the subject of economics is the way people respond to **scarcity**. Scarcity exists when people's wants exceed their resources. Another way of saying this is that people's wants are unlimited, while the resources needed to satisfy those wants — raw materials, machinery, labour, technical know-how — are limited. This does not mean people are infinitely greedy despite limited resources, but rather that when they are given a choice, people will always choose to make themselves better off.
 - b. **Choice** and scarcity are closely linked. Scarcity requires people to choose between different goods, services or actions. Limited time, for example, means people cannot do everything they want to do — a student working in a part-time job must give up valuable studying time. He or she cannot do both, and must therefore make a choice. Similarly, the budget constraint (limited income) means people cannot buy everything they wish to buy. Spending \$20 more at the supermarket means there will be \$20 less to spend on other things such as transport or entertainment. Once again a choice must be made.
 - c. Scarcity means people have to choose between alternatives, and choosing the best alternative means having to forgo — or give up — the next-best alternative. In this sense, making a choice has an **opportunity cost** equal to the value of the next-best alternative. The opportunity cost of

the student working part-time is extra studying time. The opportunity cost of spending \$20 on a product is the next-best alternative purchase.

- d. The concept of opportunity cost is one of the most powerful and pervasive in economics because of its role in guiding economic decision making. In essence, making the best economic choice is the same thing as minimising opportunity cost.
2. Another response to the problem of scarcity is **economic interaction**, which is the trade or exchange of goods and services between people. These interactions occur in a structured way within **organisations** in order to make the most effective use of limited resources. Outside of organisations, buyers and sellers interact in **markets** because doing so makes the participants better off than they would be without trade.
 - a. But how does trade make people better off? One reason there are **gains from trade** is that the act of voluntary exchange of goods between people reallocates those goods in a way people prefer — otherwise the exchange would not take place. Individuals have different tastes and preferences and therefore receive different degrees of satisfaction from the same good. A voluntary trade in which a quantity of good X is exchanged for a quantity of good Y makes both participants in the trade better off because they are each left with a combination of X and Y that they prefer.
 - b. Trade also improves economic wellbeing by enabling the economy to produce more. Trade allows producers to increase production by becoming more proficient through **specialisation** and the **division of labour**. Production in the economy is also increased when individuals, firms or countries focus on producing goods for which they have a **comparative advantage**. In a hypothetical economy with only two firms, A and B, and two products, X and Y, one firm should specialise in the production of X, and the other in the production of Y. But which firm should specialise in which product? The answer is that each firm should produce the good that it is more efficient at producing *compared* with the other firm. The concept of opportunity cost is relevant here. If firm A is relatively more efficient at producing good X, then the opportunity cost of it specialising in the production of good X (in terms of lost production of good Y) is less. Similarly, if firm B is relatively more efficient at producing good Y, then the opportunity cost of it producing good Y (in terms of lost production of good X) is less.
 3. The problem of scarcity also applies to the economy as a whole. Even the largest economies have a limited amount of resources with which to produce goods and services. Once again a choice must be made. This time it is about what goods and services should be produced by the economy given its resources. This choice, like other economic choices, involves opportunity costs.
 - a. The **production possibilities curve** (Figures 2.1 and 2.2) incorporates the key concepts of scarcity, choice and opportunity cost for the whole economy. Scarce resources (labour, capital and other inputs to production) mean that the amount that can be produced is limited. The production possibilities curve maps a range of maximum combinations of two goods (or two types of goods) that it is possible to produce.
 - b. An economy can choose to produce at any point on, or within, the production possibilities curve. A consequence of scarcity is that it is impossible to produce combinations of goods outside the curve. Alternatively, it is always possible to produce more than points inside the curve because these represent inefficient levels of production.
 - c. Choosing to produce any possible combination of goods involves opportunity costs in the form of forgone production. When the economy is producing efficiently (that is, at a point on the production possibilities curve), it is impossible to increase the quantity produced of good X without reducing the quantity produced of good Y. These opportunity costs increase as

production of good X increases because more and more resources best used to produce good Y are diverted to the production of good X. The bowed-out shape of the production possibilities curve illustrates the idea of **increasing opportunity costs**.

- d. The production possibilities curve is not fixed over time. Resources available to the economy — capital, labour and technology — can change over time, thereby changing what it is possible to produce. Economic growth, where the production possibilities curve shifts outward, can be thought of as the conversion of some impossible production combinations into possible production combinations.
- e. The market system is one way of determining where the economy operates on (or within) the production possibilities curve. It does this via a multitude of economic decisions by individual consumers and firms, government and other organisations. Freely determined prices play a central role in economic decision making by providing signals and incentives to both producers and consumers.

WORKED PROBLEMS

We have studied the idea of production possibilities and the production possibilities curve by using graphs. We will first consider the same two concepts using numerical examples, and then see how we can combine graphs and numbers.

- a. Suppose that the production possibilities for steel and food are given by:

Choice	Steel	Food
<i>A</i>	0	100
<i>B</i>	25	95
<i>C</i>	50	85
<i>D</i>	75	50
<i>E</i>	100	0

Both steel and food are measured in tonnes. Increasing opportunity costs are illustrated by moving down the table. As we move from row to row, steel production increases by the same amount, 25 tonnes. The decline in food production, in contrast, gets larger, going from 5 tonnes between the first and second rows to 50 tonnes between the fourth and fifth rows. Each extra 25 tonnes of steel requires a loss of more and more food.

- b. The production possibilities curve for these numbers is depicted in Figure 2.3, with steel on the vertical axis and food on the horizontal axis. Both axes are measured in tonnes. The production possibilities curve is constructed by plotting pairs of points, labelled points *A* through *E*, for steel and food, and then connecting the dots. Since we do not know exactly how much food can be produced in between the 25-tonne intervals for steel, we use straight lines to connect the dots.

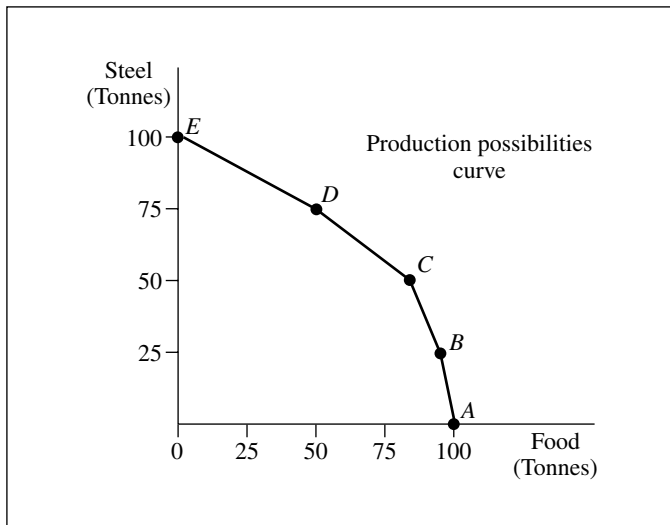


Figure 2.3

We have learned that economic growth shifts out the production possibilities curve. We will illustrate this with a numerical example. Suppose that economic growth allows us to produce more goods, so that the new production possibilities for steel and food are given by:

Choice	Steel	Food
<i>A</i>	0	125
<i>B</i>	25	120
<i>C</i>	50	110
<i>D</i>	75	90
<i>E</i>	100	50
<i>F</i>	125	0

The new production possibilities curve, labelled 'Growth', is drawn with the original production possibilities curve in Figure 2.4 opposite. The new curve is farther away from the origin than the original curve at all points, indicating that more can be produced. For example, food production of 90 tonnes and steel production of 75 tonnes was impossible with the original production possibilities curve. After growth, that point is on the new production possibilities curve, and is therefore efficient.

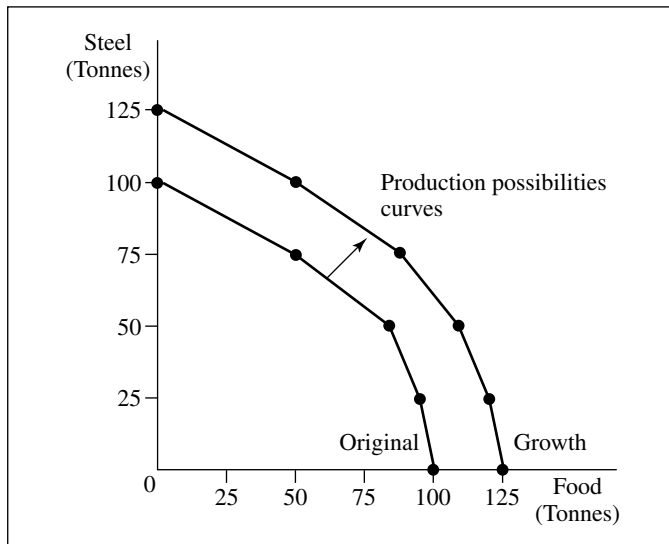


Figure 2.4

1. Suppose that you must allocate your time between studying economics and studying physics. The percentage of time you spend studying economics and the grades you will get on the two exams are as follows:

Percentage of Time Studying Economics	Economics Grade	Physics Grade
100	80	0
80	75	30
60	65	50
40	50	65
20	30	75
0	0	80

Draw the production possibilities curve. How does this example illustrate increasing opportunity costs?

Answer

The production possibilities curve is drawn in Figure 2.5. The example illustrates increasing opportunity costs because, as you move down the table or the curve, each additional point on your physics grade comes at a cost of more and more points on your economics grade.

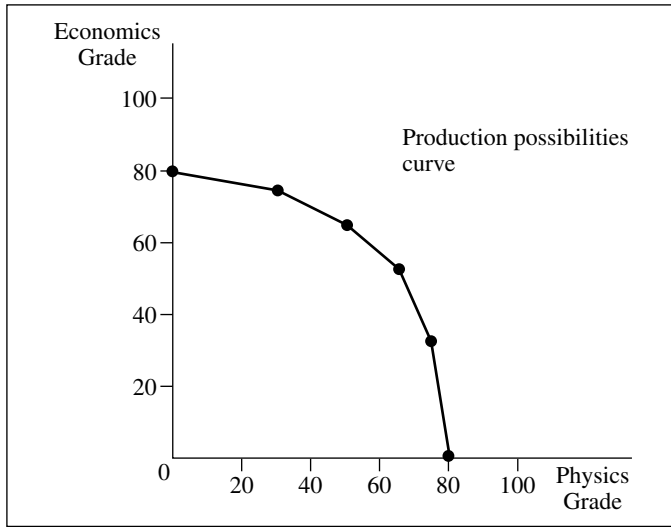


Figure 2.5

2. Now suppose that, by using this *Study Guide* for economics, you are able to improve your choices as follows:

Percentage of Time Studying Economics	Economics Grade	Physics Grade
100	100	0
80	95	30
60	85	50
40	70	65
20	40	75
0	0	80

- Draw the new production possibilities curve, and describe how the new curve is related to the old curve.
- Characterise an economics grade of 70 and a physics grade of 65 under the original and the new production possibilities curves.

Answers

- The new production possibilities curve, labelled 'Study Guide', and the original curve are depicted in Figure 2.6 opposite. Using this Study Guide raises your economics grade at each percentage of time, above zero, spent studying economics, but it does not help your physics grade. Although the new curve is above the original curve, it tilts out rather than shifts out.

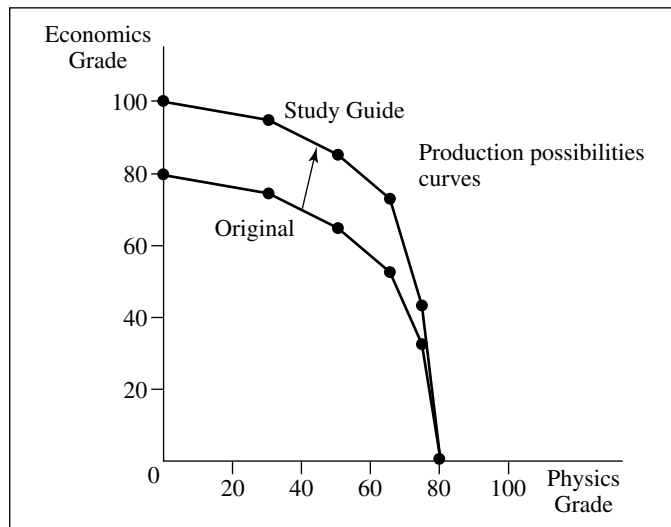


Figure 2.6

- b. An economics grade of 70 and a physics grade of 65 was impossible to attain with the original production possibilities curve, but is now efficient.

SELF-ASSESSMENT TESTS

Fill-in Questions

- _____ is a situation in which people's wants exceed their resources.
- _____ is the study of how people deal with scarcity.
- People make _____ with scarce resources.
- Economic interactions occur in _____ and within _____.
- The _____ of a choice is the value of the forgone alternative that was not chosen.
- When both participants are made better off by an economic interaction, there are _____.
- Specialisation in production results in _____.
- One person or group of people has a(n) _____ in producing one good relative to another good when they can produce that good with comparatively less time, effort or resources than another person can produce that good.
- _____ occurs when individuals who live in different countries trade with each other.
- _____ represent the alternative choices of goods that the economy can produce.
- The graphical depiction of production possibilities is called the _____.
- _____ causes an outward shift in the production possibilities curve.
- The two major types of economies are _____ economies and _____ economies.
- _____ are the legal authority to keep or sell property.
- In a market economy, prices serve as _____, provide _____ and affect the _____.

True–False Questions

- T F** 1. Economics is the study of how people can get anything they want.
- T F** 2. Scarcity is a characteristic of a command economy, but not of a market economy.
- T F** 3. An opportunity cost occurs every time there is a choice.
- T F** 4. Gains from trade occur only in markets.
- T F** 5. If Australia produces two goods with less resources than New Zealand, there can be no comparative advantage in those two goods.
- T F** 6. Trade takes place both within and between countries.
- T F** 7. Production possibilities represent the best choice of goods for the economy to produce.
- T F** 8. The production possibilities curve slopes downward.
- T F** 9. The production possibilities curve is linear.
- T F** 10. Points on the production possibilities curve are efficient.
- T F** 11. Points inside the production possibilities curve are inefficient.
- T F** 12. A market economy is also called a centrally planned economy.
- T F** 13. In recent years, Eastern Europe, the former Soviet Union and China have moved away from central planning.
- T F** 14. Freely determined prices and property rights are characteristics of centrally planned economies.
- T F** 15. One reason why organisations are created is that they eliminate market failure.

Short Answer Questions

1. What must people do because of scarcity?
2. When do economic interactions between people occur?
3. Where do economic interactions occur?
4. What are opportunity costs?
5. What is comparative advantage?
6. Why are there gains from international trade?
7. Why are there increasing opportunity costs?
8. Why is the production possibilities curve bowed out?
9. What are the three situations defined by the production possibilities curve?
10. Why are points outside the production possibilities curve characterised as impossible?
11. How does economic growth affect the production possibilities curve?
12. What are the three essential questions faced by every economy?
13. Name four characteristics of market, but not command, economies.
14. What is the difference between market failure and government failure?
15. What are the three roles of prices in a market economy?

Practice Problems

1. Suppose that the production possibilities for steel and food are as follows:

Choice	Steel	Food
<i>A</i>	0	100
<i>B</i>	25	90
<i>C</i>	50	70
<i>D</i>	75	40
<i>E</i>	100	0

Both steel and food are measured in tonnes. Draw the production possibilities curve. How does this example illustrate increasing opportunity costs?

2. Suppose that economic growth allows us to produce more goods, so that the new production possibilities for steel and food are as follows:

Choice	Steel	Food
<i>A</i>	0	120
<i>B</i>	25	115
<i>C</i>	50	105
<i>D</i>	75	90
<i>E</i>	100	60
<i>F</i>	125	0

- Draw the new production possibilities curve, and describe how the new curve is related to the old curve.
 - Characterise the production of 75 tonnes of steel and 40 tonnes of food under the original and the new production possibilities curves.
3. Suppose that you must allocate your time between studying economics and studying physics. The percentage of time you spend studying economics and the grades you will get on the two exams are set out in the following table.

Percentage of Time Studying Economics	Economics Grade	Physics Grade
100	90	0
80	88	40
60	80	70
40	70	80
20	40	88
0	0	90

Draw the production possibilities curve. How does this example illustrate increasing opportunity costs?

4. Now suppose that, by using the study guide for economics, you are able to improve your choices as follows:

Percentage of Time Studying Economics	Economics Grade	Physics Grade
100	100	0
80	96	40
60	90	70
40	80	80
20	50	88
0	0	90

- Draw the new production possibilities curve, and describe how the new curve is related to the old curve.
- Characterise an economics grade of 80 and a physics grade of 70 under the original and the new production possibilities curves.

Multiple Choice Test

- A situation in which people's wants exceed their resources is called
 - abundance.
 - choice.
 - scarcity.
 - allocation.

2. When one person or group of people can produce one good relative to another good with comparatively less time, effort or resources than another person can produce that good, this is called
 - a. comparative advantage.
 - b. specialisation.
 - c. opportunity cost.
 - d. division of labour.
3. Because resources are limited, individual consumers face
 - a. transaction costs.
 - b. budget constraints.
 - c. production possibilities.
 - d. economic interactions.
4. Which of the following represents the alternative choices of goods that the economy can produce?
 - a. Opportunity costs
 - b. Economic interactions
 - c. Budget constraints
 - d. Production possibilities
5. The value of the alternative that was not chosen is called
 - a. the marginal cost of the choice.
 - b. the average cost of the choice.
 - c. the opportunity cost of the choice.
 - d. the gain from the choice.
6. When more than two people engage in trade, it is called
 - a. international trade.
 - b. multilateral trade.
 - c. gains from trade.
 - d. comparative advantage.
7. The price of one money in terms of another is called the
 - a. opportunity cost.
 - b. exchange rate.
 - c. interest rate.
 - d. inflation rate.
8. The production possibilities curve
 - a. slopes downward and is bowed out from the origin.
 - b. slopes upward and is bowed out from the origin.
 - c. slopes downward and is bowed in toward the origin.
 - d. slopes upward and is bowed in toward the origin.
9. Points outside the production possibilities curve are
 - a. efficient.
 - b. inefficient.
 - c. impossible.
 - d. possible.
10. Economic growth causes
 - a. an inward shift in the production possibilities curve.
 - b. an outward shift in the production possibilities curve.
 - c. an upward movement on the production possibilities curve.
 - d. a downward movement on the production possibilities curve.
11. Which of the following is **not** one of the essential questions that an economy focuses on?
 - a. What are the goods and services to be produced?
 - b. When are the goods and services to be produced?

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- c. How are the goods and services to be produced?
- d. For whom are the goods and services to be produced?
- 12. Which of the following is **not** one of the characteristics of a market economy?
 - a. Freely determined prices
 - b. Property rights
 - c. Competitive markets
 - d. Centrally planned production
- 13. The price that one department of an organisation must pay to receive goods or services from another department in the same organisation is called a(n)
 - a. transfer price.
 - b. transaction cost.
 - c. opportunity cost.
 - d. transaction price.
- 14. Which of the following is **not** one of the important roles of prices in a market economy?
 - a. They serve as signals.
 - b. They provide incentives.
 - c. They form preferences.
 - d. They affect the distribution of income.

Use the following table for questions 15 and 16.

Suppose the production possibilities for guns and flowers are given by:

Choice	Guns	Flowers
<i>A</i>	0	100
<i>B</i>	25	90
<i>C</i>	50	70
<i>D</i>	75	40
<i>E</i>	100	0

- 15. If all of the economy's resources were devoted to the production of flowers, the number of guns that would be produced is
 - a. 100.
 - b. 75.
 - c. 0.
 - d. 50.
- 16. If the economy is currently producing 50 guns and 60 flowers, then
 - a. it is at an efficient level of production.
 - b. an efficient level of production can be achieved by producing 20 more flowers.
 - c. an efficient level of production can be achieved by producing fewer flowers and more guns.
 - d. an efficient level of production can be achieved by producing 10 more flowers.

Use Figure 2.7 for questions 17, 18 and 19.

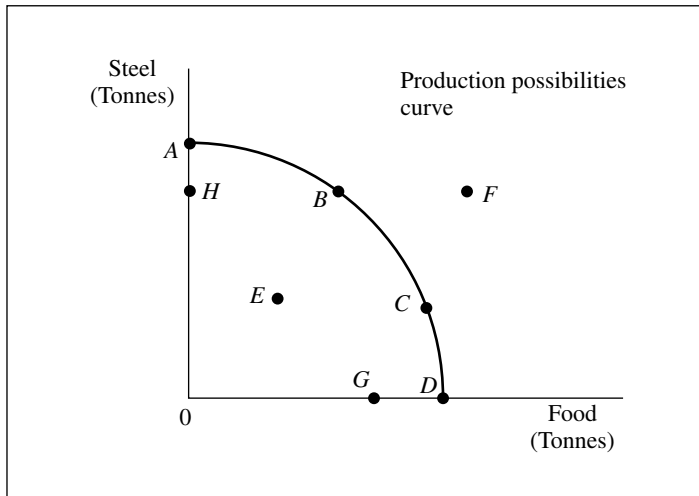


Figure 2.7

17. If the economy devotes all of its resources to steel production, it will be producing at point
 - a. A.
 - b. B.
 - c. H.
 - d. G.
18. Point F in Figure 2.7 represents
 - a. an efficient production level.
 - b. an inefficient production level.
 - c. an impossible production level.
 - d. a possible production level.
19. If the economy is currently producing at point E, then
 - a. it is utilising its resources efficiently.
 - b. it is utilising its resources inefficiently.
 - c. it is on its production possibilities curve.
 - d. it is beyond its production possibilities curve.

Use Figure 2.8 for question 20.

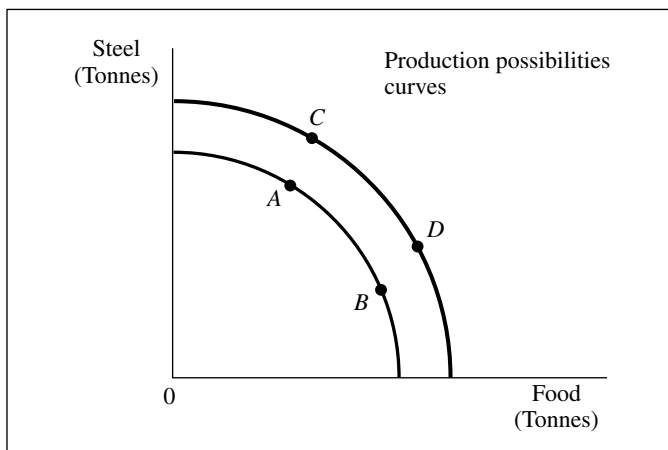


Figure 2.8

20. An economy experiences economic growth when it moves
 - a. from point *A* to point *B*.
 - b. from point *A* to point *C*.
 - c. from point *D* to point *C*.
 - d. from point *D* to point *B*.

Fundamentals

1. Explain what the study of economics entails, how scarcity influences individual choices, and the relevance of the opportunity cost concept.
2. Explain how firms, through specialisation and the division of labour, can establish a comparative advantage, thus ensuring gains from trade.
3. Using a production possibilities curve, explain the concept of increasing opportunity costs. Use the same diagram to explain the meaning of economic growth.

ANSWERS TO THE SELF-ASSESSMENT TESTS

Answers to Fill-in Questions

1. Scarcity
2. Economics
3. purposeful choices
4. markets; organisations
5. opportunity cost
6. gains from trade
7. division of labour
8. comparative advantage
9. International trade
10. Production possibilities
11. production possibilities curve
12. Economic growth
13. market; command
14. Property rights
15. signals; incentives; distribution of income

Answers to True–False Questions

1. **False.** Economics is the study of how people deal with scarcity.
2. **False.** Because wants are unlimited but resources are not, scarcity is a characteristic of all economies.
3. **True.** The opportunity cost of a choice is the value of the forgone alternative that was not chosen.
4. **False.** Gains from trade can also occur within organisations.
5. **False.** Australia will still produce one of the goods with *relatively* less resources than New Zealand, leading to a *comparative* advantage in that good.
6. **True.** International trade occurs when individuals who live in different countries trade with each other.
7. **False.** Production possibilities represent the alternative choices of goods that the economy can produce.
8. **True.** As more of one good is produced, less of the other can be produced.
9. **False.** The production possibilities curve is bowed out.
10. **True.** They represent the maximum amount that can be produced with available resources.
11. **True.** Using the same resources, the economy could produce more of both goods.
12. **False.** A command economy is also called a centrally planned economy.
13. **True.** They are making the transition from command economies to market economies.
14. **False.** Freely determined prices and property rights are characteristics of market, not centrally planned, economies.
15. **False.** One reason why organisations are created is to reduce market transaction costs.

Answers to Short Answer Questions

1. Because of scarcity, people must make choices to forgo one thing in favour of another.
2. Economic interactions between people occur when they trade or exchange goods or services with each other.
3. Economic interactions occur in markets and within organisations.
4. The opportunity cost of a choice is the value of the forgone alternative that was not chosen.
5. One person or group of people has a comparative advantage in producing one good relative to another good if they can produce that good with comparatively less time, effort or resources than another person can produce that good.
6. There are gains from international trade because by trading, people can either better satisfy their preferences for goods or better utilise their comparative advantage.
7. There are increasing opportunity costs because as the production of one good increases, the value of the forgone good increases.
8. The production possibilities curve is bowed out because of increasing opportunity costs.
9. Points on the production possibility curve are efficient, those inside the curve are inefficient, and those outside the curve are impossible.
10. They are called impossible because the economy does not have the resources to produce outside the production possibilities curve.
11. Economic growth shifts out the production possibilities curve.
12. Every economy must determine what goods and services are to be produced, how these goods and services are to be produced, and for whom they are to be produced.
13. Freely determined prices, property rights, competitive markets, and freedom to trade at home and abroad characterise market, but not command, economies.
14. Market failure is a situation in which there is a role for the government in improving the market outcome. Government failure occurs when the government, even in the case of market failure, does worse than the market would have done if left on its own.
15. Prices serve as signals about what should be produced and consumed when there are changes in tastes or technology, provide incentives to people to alter their production or consumption, and affect the distribution of income.

Answers to Practice Problems

1. The production possibilities curve is drawn in Figure 2.9. The example illustrates increasing opportunity costs because, as you move down the table or up the curve, each additional 25 tonnes of steel comes at a higher cost in food production.

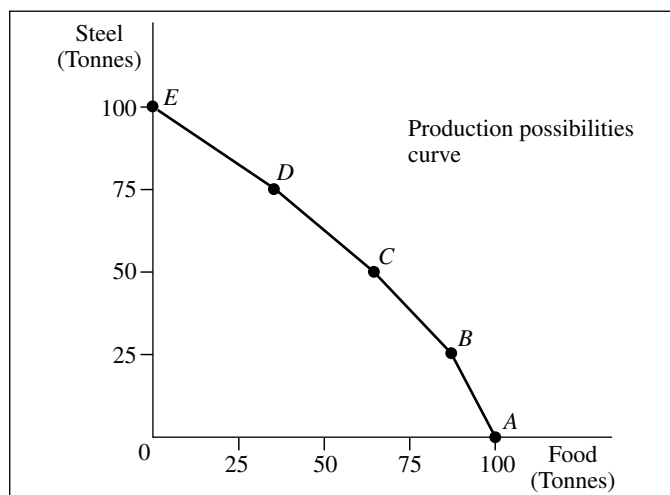


Figure 2.9

2. a. The new production possibilities curve, labelled 'Growth', is drawn with the original production possibilities curve in Figure 2.10. The new curve shifts out from the old curve.

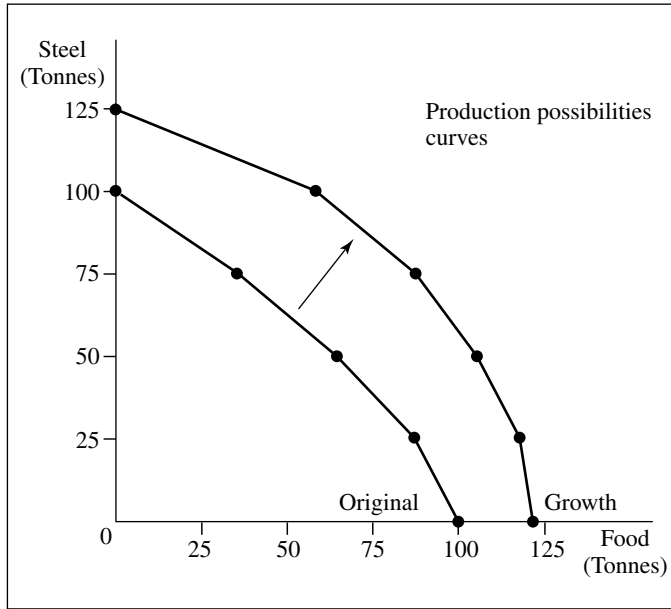


Figure 2.10

- b. Production of 75 tonnes of steel and 40 tonnes of food was efficient under the original production possibilities curve. It is inefficient under the new curve.
3. The production possibilities curve is drawn in Figure 2.11. Each additional point on your physics grade comes at a cost of more and more points on your economics grade.

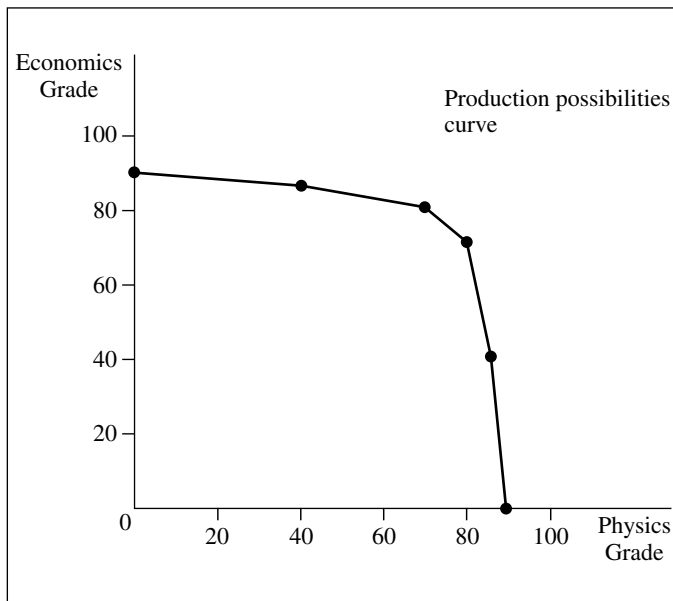


Figure 2.11

4. a. The new production possibilities curve, labelled 'Study guide', and the original curve are depicted in Figure 2.12. The new curve is above the original curve, but it tilts out rather than shifting out.

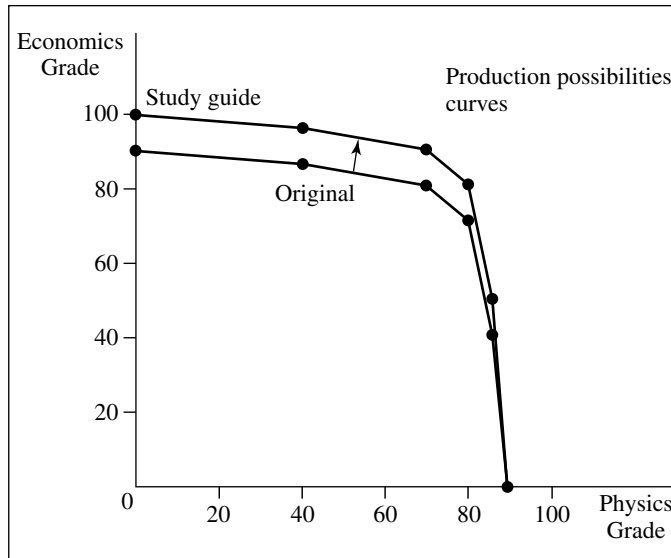


Figure 2.12

- b. An economics grade of 80 and a physics grade of 70 were efficient with the original production possibilities curve, but this combination is now inefficient.

Answers to Multiple Choice Test

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

Answer Outlines for Fundamentals

Note: A detailed answer is provided for the first question. Outline answers only are provided for the other two questions.

- Economics is the study of the allocation or rationing of scarce resources between unlimited, and therefore competing, wants. It addresses the problem of relative scarcity. In a market system, people (consumers) make **choices** as to which wants are to be satisfied and which should go unsatisfied. Likewise, firms (producers) make choices as to what resources should be used in producing goods and services.

As we saw in Chapter 1, economics involves the study of the economic behaviour of households and firms (microeconomics) and the study of the operation of the economy as a whole (macroeconomics).

Opportunity cost is a concept that is unique to economics. It is defined in the textbook as ‘the value of the next-best forgone alternative that was not chosen because something else was chosen’ (p. 8 and p. 30).

Opportunity cost applies to both consumption and production activities. A consumption example of opportunity cost would be: You have a limited budget of \$35 to spend and are trying to decide between a best-selling novel, which you would like to read, and a popular CD, which you would like to possess, both costing \$35. You decide on the novel. The opportunity cost is the forgone CD. A production example would be: a market gardener, intensively tilling 5 hectares, has specialised in growing strawberries and rhubarb, devoting 2.5 hectares to each, which yield roughly the same return. Anticipating a better price for strawberries next season he devotes an extra half-hectare to strawberries. The opportunity cost is what would have been earned by the half-hectare of rhubarb forgone.

2. At the outset you need to define a firm, specialisation, division of labour, comparative advantage and gains from trade. Follow the example provided in the textbook under the subheading **Producer decisions** (pp. 31–3), where Henry and Johann confront these decisions.
3. The concepts to be defined at the outset are the production possibilities curve, increasing opportunity costs and economic growth.

The answer requires a diagram. The relevant explanations are to be found in the textbook under the subheadings **Production possibilities** (p. 34) and **Increasing opportunity costs** (p. 35), and the relevant diagrams are Figures 2.2, 2.3 and 2.4 (pp. 36–7).