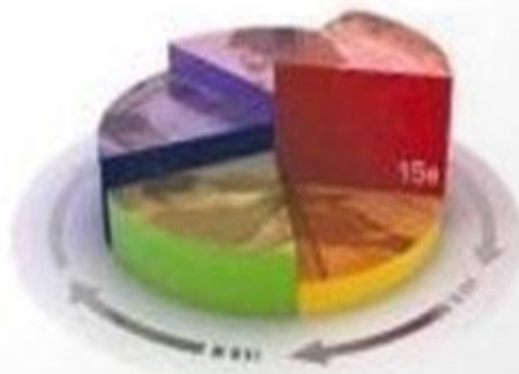


SOLUTIONS MANUAL



Basic Economics

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CHAPTER TWO

Scarcity and Choice

PURPOSE

This chapter shows that, because resources are scarce, both individuals and nations must make choices. An economy cannot always produce everything its citizens desire, and at times decisions must be made about how to apply labor and other productive resources. The production possibilities model is developed to demonstrate the relationship between scarcity, choice, and opportunity costs. Finally, the chapter demonstrates that a nation frequently can overcome a shortage of one resource by excelling in the use of others and by using the principle of comparative advantage.

CHAPTER LEARNING OBJECTIVES

After studying Chapter 2, your students should be able to:

1. Understand why scarcity forces individuals and societies to make choices.
2. Explain the relationship between scarcity and choice using the production possibilities curve.
3. Discuss how increased productivity can help offset a shortage of resources.
4. Explain the process of specialization and exchange.
5. Differentiate between absolute advantage and comparative advantage, and illustrate the importance of comparative advantage in production decisions.

NEW TERMS AND DEFINITIONS

Production possibilities curve A graphical view of the alternative combinations of different goods and services a society can produce given its available resources and technology.

Opportunity cost The value of the next-best alternative that must be sacrificed when a choice is made.

Law of increasing cost As more of a product is produced, the per unit opportunity cost of producing that product increases.

Economic growth An increase in an economy's total output of goods and services.

Specialization The process of limiting the scope of an economic unit's productive efforts instead of trying to produce everything it needs.

Exchange The process of trading surplus quantities of specialized products to others for other goods or services.

Absolute advantage The ability to produce a good or service using fewer resources than other producers use.

Comparative advantage The ability to produce a good or service at a lower opportunity cost than other producers face.

CHAPTER OUTLINE AND LECTURE NOTES

1. Scarcity and Choice

Productive resources, time, and income are limited. Therefore, the basic function of any economic system is to provide the framework for choice. You can help students realize that they must economize as individuals by showing them that their resources—in this case represented by their respective incomes—are insufficient to buy all the goods and services they desire.

2. Nations Must Make Choices

You can project a nation's productive resources: labor, land, capital, and enterprise. Each resource can be discussed, and various subdivisions can be entered under each resource as the discussion or lecture proceeds. When finished, you might ask individual members of the class how a shortage of one of these productive resources could be offset by improvement or better utilization of another.

3. Production Possibilities Curve

Because a nation cannot produce everything that everybody wants, economics is necessarily a matter of scarcity and choice. Use **Figures 2-1, 2-2, and 2-3** to explain the production possibilities curve (sometimes called the production possibilities frontier). Emphasize the role of increasing opportunity costs in determining the shape of the production possibilities curve.

4. Scarcity and Choice in the United States

Although the United States has an excellent combination of the four productive resources, it must still make choices. Point out that the problems of scarcity in the United States are not as critical as those faced by many developing countries.

5. Problems of Scarcity

The problem of scarcity exists throughout the world—especially in developing nations, where there is much hunger and poverty.

A. Nature and Scope of Problems. Many nations have problems because they lack one or more productive resources: natural resources, skilled labor, capital and technological development, or enterprise. Cite the example of the People's Republic of China or India.

B. A Solution: Increased Productivity. A shortage of resources or labor may be overcome by the discovery of new resources, the development of new and better techniques, or the use of better machinery. Point out how nations such as Japan and Taiwan have overcome shortages of resources to improve their standards of living.

C. Aid to Developing Nations. Many developing nations produce at the subsistence level and cannot forgo current consumption in order to invest in additional capital. Such nations need outside help. Not only do they need food in the short term, but they need long-term assistance in the form of investment and technical assistance.

6. Specialization and Exchange

Emphasize that an economy that allows specialization and exchange generates higher individual and total incomes than does an economy characterized by self-sufficiency. Specialization is the process by which an economic unit limits the scope of its productive efforts in order to become especially proficient at producing a few goods or services. Exchange is the process of trading the specialized products of one economic unit for goods and services produced by other economic units. The extent of specialization and exchange is limited by the size of the market to be served. In turn, the size of the

market depends on population and purchasing power.

7. Absolute and Comparative Advantage

A producer has an absolute advantage if it is able to produce a good or service using fewer resources than other producers use. A comparative advantage exists when the producer can produce the good or service at a lower opportunity cost. Use a simple two-producer, two-goods example to show that a given economic unit can have an absolute advantage in both goods, but a comparative advantage in only one good.

A. Comparative Advantage Between Nations. Show that, according to the data in **Table 2-1**, Shetland has the comparative advantage in cotton: the opportunity cost of cotton is 3 bushels of wheat in Shetland and 4 bushels of wheat in North Mocha. North Mocha has the lower opportunity cost of wheat—1/4 bale of

cotton versus 1/3 bale of cotton in Shetland. Further, show that if each country specializes in the “wrong” product (wheat in Shetland and cotton in North Mocha), total cotton production will drop to 25 bales. Use variations on **Tables 2-1, 2-2, and 2-3** as additional examples— you may change the figures by multiplying or dividing each by 2.

B. Comparative Advantage in Practice. Military and political reasons may limit specialization. For example, although Japanese-grown rice costs about three times more to produce than U.S.-grown rice, Japan limits the importation of U.S. rice to protect Japanese rice farmers. Other countries, including the United States, do the same thing with other products. Diversification in production may also be beneficial by protecting the nation from widespread economic problems if demand for one or a few products fluctuates widely.

ANSWERS TO DISCUSSION QUESTIONS AT END OF CHAPTER 2

1. *To what extent do you engage in the process of economizing in your everyday activities?*

Here the student may confirm that the items bought are those that yield the greatest satisfaction, while other items are done without because of limited income. Similarly, students must economize time, since it is also limited. Students may have to limit their social life to provide time for studies. Students with jobs face further limitations on the time they can apply to social life and/or studies.

2. *Will an increase in the population of a given nation necessarily result in a decrease in the standard of living? Why or why not?*

No. If the increase in population is accompanied by a greater-than-proportional increase in the production of goods and services, the standard of living may actually increase. However, if the output of goods and services does not increase in proportion to the increase in population, the net

result will be a decrease in the per capita standard of living.

3. *How will increased use of nuclear energy or other new sources of power affect the problem of scarcity?*

Due to a lack of coal, oil, natural gas, and other conventional sources of heat energy, many developing countries are unable to provide sufficient productive power to operate machines, provide transportation, and the like. Nuclear (or alternative new) energy provides a source of industrial power for these nations, permitting them to increase their production of goods and services. This in turn will help alleviate the problem of scarcity that they face.

4. *How could nations that have an abundance of resources most effectively share them with nations that have inadequate resources?*

Many developing nations need both short-term and long-term aid. Nations producing at a subsistence level cannot forgo current consumption in order to invest in additional capital. Effective sharing, therefore, requires food, clothing, and medical assistance in the short term and technical assistance and capital in the long term.

5. *What is meant by the following statement: "Goods and services are scarce because productive resources are scarce."*

No country has all the resources necessary to produce all the goods and services desired at zero cost. Since there are insufficient resources to satisfy all the wants of its people, the nation must somehow allocate the available resources to produce the maximum amount of goods and services.

6. *If productive resources in the United States doubled in the next five years, would the problem of scarcity be eliminated?*

No, because human wants are unlimited. No matter how many goods and services we obtain, there is generally something else we would like to have. The U.S. will still be unable to have an unlimited quantity of all goods and services at no cost.

7. *In reference to the production possibilities curve, how might a nation increase its total output if it is already fully employing its resources?*

A nation can still increase its total output through the use of new technology, innovations, and better-trained workers. Such action will move the production possibilities curve outward.

8. *Distinguish between absolute advantage and comparative advantage.*

An economic unit has an absolute advantage if it can produce one unit of a good using fewer resources than others require to produce one unit. Comparative advantage refers to the ability to produce one unit of a good at a lower opportunity cost. A producer can have an absolute advantage in all goods and services, but it cannot have a comparative advantage in all goods and services.

9. *Indicate some ways in which you or your friends practice the law of comparative advantage.*

Here a student might point out that one of the star backfield players on the football team is also a better lineman than some of those on the first-string team. If he has a greater comparative advantage over opposing defenses as a backfield player, however, the coach will play him there instead of on the line. Similarly, the soloist in the music department's vocal ensemble may be a better saxophone player than any of the sax players in the band. If she has a greater comparative advantage in singing, however, the director may prefer to use her as a vocalist.

10. *Should a nation try to become as economically independent as possible? Why or why not?*

Students should consider several factors in favor of economic independence: the desire of many nations to protect infant industries, their need to sustain production of strategic military goods and services, and their need to lessen dependency on foreign nations for critical supplies, such as oil and natural gas. On the other hand, specialization and exchange can increase productivity and improve the standard of living. Therefore, it is economically wise to specialize to some extent.

SUGGESTED READINGS

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