CHAPTER 2   
(*Macro* chapter 2; *Micro* chapter 2)

Scarcity and Opportunity Costs

FUNDAMENTAL QUESTIONS

. What are opportunity costs?

. What is a production possibilities curve?

. What are the gains from trade?

. How do we determine who gets what?

OVERVIEW AND OBJECTIVES

*The unique features of this chapter include the illustration of opportunity costs with an example students can readily understand—college tuition and the tradeoff between attending college and working. The chapter also uses the idea of relative opportunity costs among countries to motivate the discussion of comparative advantage, specialization, and trade.*

After reading and reviewing this chapter, the student should be able to:

. Define opportunity costs.

. Construct and understand a productions possibilities curve (PPC).

. Discuss points inside and outside the PPC.

. Calculate marginal opportunity costs.

. Understand the concept of comparative advantage as it relates to specialization.

KEY TERM REVIEW

**capital**

**comparative advantage**

**financial capital**

**gains from trade**

**labor**

**land**

**marginal**

opportunity cost

production possibilities curve (PPC)

**resources**

**scarcity**

trade-off

LECTURE OUTLINE AND TEACHING STRATEGIES

**I. Scarcity, Opportunity Costs, and Voluntary Trade**

Scarcity means that there is not enough of an item to satisfy everyone who wants it.

**Teaching Strategy:** Try to show scarcity by starting the lecture with an example from everyday life, for example, buying food in a supermarket with limited funds or deciding whether to spend $15 on a DVD or on popcorn and a movie.

1. Opportunity cost: An opportunity cost is the highest-valued alternative that must be forgone when a choice is made. The opportunity cost of going to college is the money income forgone during four years of study.

**Teaching Strategy:** Try to start your lecture by asking the students to list all their costs of going to college on a sheet of paper. Then ask if anyone included the cost of not working for four years.

B. Trade-offs: A trade-off is the giving up of one good or activity in order to obtain some other good or activity. Economists believe that people make decisions by comparing marginal costs and benefits. The term marginal means additional or incremental.

**Teaching Strategy:** Ask your students to compare the costs and benefits of attending class. Point out to them that, since they are in class, the benefits of attending class must have outweighed the costs.

C. The production possibilities curve: The production possibilities curve describes the nature of social choices between alternatives. It shows the maximum quantity of goods and services that can be produced when the existing resources are used fully and efficiently.

**Teaching Strategy:** The production possibilities curve is usually the first model that is introduced in an economics course. Consequently, you should develop it carefully and be certain to explain the assumptions that underlie the model.

1. Points inside the production possibilities curve: These points represent underutilized resources and could represent a recession.

. Points outside the production possibilities curve: These points are unattainable given the current technology and resources of the economy.

. Shifts of the production possibilities curve: The PPCshifts if a nation obtains more resources or if the existing resources become more efficient.

**Teaching Strategy:** Point out that the PPCcan also shift when there is a technological improvement that allows for a more efficient use of the nation’s resources.

**II. Output and Resources**

Societies, like individuals, face scarcity and must make choices.

1. Resources and income: The ingredients of goods are called resources, or factors of production, or inputs. The three broad categories of resources are land, labor, and capital. Land includes all natural resources, such as minerals, timber, and water, as well as the land itself. Labor refers to the physical and intellectual services of people and includes the training, education, and abilities of the individuals in a society. Capital refers to physical products such as machinery and buildings that are used to produce other goods and services. The term capital often refers to financial items such as stocks and bonds rather than physical capital. The funds used to purchase physical capital are referred to as financial capital.
2. The value of resources: People earn income based on the value of the resources they own. Payment for land is called rent. Payment for labor is called wages. Payment for capital is called interest. The greater the value of resources, the more income the owners earn for those resources.

**III. Voluntary Trade and Exchange**

Specialization affects the shape of the PPC curve.

. Gains from trade: People engage in trade because they benefit from it. Comparative advantage is the ability of one person or nation to do something with a lower opportunity cost than another.

**Teaching Strategy:** Ask your students why a professor who is good at fixing cars might still prefer to take his automobile to a garage for a tune-up.

B. Specialize where opportunity costs are lowest: Scarce resources must be allocated where they can best perform the job. Trade occurs because everyone will find that it is mutually beneficial to specialize in goods in which they have a comparative advantage and trade for the other goods. A gain from trade is the difference between what can be produced and consumed without specialization and trade versus that which can be produced and consumed with specialization and trade.

**Teaching Strategy:** Students usually have trouble with comparative advantage and trade, not because the ideas are inherently hard to understand but because there is a lot to keep track of. Work through an example and give them one to do on their own.

**IV. Allocation Systems**

An allocation system is a process of determining who gets the goods and services and who does not. Examples are government-determined, first-come, first served, lottery, and market systems.

A. Fairness: None of the systems is fair in the sense that no one gets left out.

B. Incentives: The incentives each allocation system creates is a fundamental reason that markets are selected to do the allocation. Only a market system creates the incentives that lead to increasing standards of living.

**Teaching Strategy:** Use the Allocation Quiz as a discussion point for fairness and incentives.

C. The market process: Arbitrage: In a market system, buyers and sellers determine what is produced, how much is produced and sold, and how the goods and services are allocated. As long as the market is free to change, it will ensure that resources are allocated to where they have the highest value and people get what they want at the lowest price.

# OPPORTUNITIES FOR DISCUSSION

. Discuss the opportunity cost of Tiger Woods, George Clooney, or another major sports or entertainment figure. Why do you think these people are paid more than school teachers or daycare workers?

. Discuss ways that a country could shift its production possibilities curve to the right through improved technology.

3. List the major goods your state produces. Does your state have a comparative advantage in these goods? Can you describe the reasons for this comparative advantage?

ANSWERS TO EXERCISES

. The concept ignored is opportunity costs. If the society is operating along a *PPC*, then it is impossible to have increases in all goods and services. It is impossible to have more and better health, education, infrastructure, and other things without giving up something else.

. There is an opportunity cost to everything. The time spent at lunch has a cost; you could be doing something else.

3. a. Economics is the study of the relationship between people’s unlimited wants and their scarce resources.

4. c. If we assume that Janine’s and Robert’s opportunity costs can be measured by their salaries, then Robert’s opportunity cost of standing in line is less than Janine’s.

5. a. is not an opportunity cost since it is the same in either case

6. a. everyone involved believes they will gain

7. c. you have a lower opportunity cost than someone else

8. c.

9. b.

10.

11.

12. lowest

13. the lowest

14. a. 5 hours

b. 2 hours

c. gains from trade

15. People object due to the fairness issue.

16. Neither system is fair. Someone is always left out.

# ACTIVE LEARNING EXERCISE

*This exercise offers students the opportunity to explore the concept of comparative advantage as well as the chance to review the construction of a production possibilities curve.*

Materials Needed

Graph paper or prepared graphs for each student

Worksheet

Have students pair up, letting one choose to be Mexico and the other the United States. Give them the following Production Possibilities Schedules for trucks and computers.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Percentage of Resources Devoted to: | | Number Produced: | | | |
| United States | | Mexico | |
| Trucks | Computers | Trucks | Computers | Trucks | Computers |
| 100 | 0 | 5 | 0 | 4 | 0 |
| 0 | 100 | 0 | 10 | 0 | 2 |

Have the students draw their PPCs. Then ask each student to pick a point along his or her curve that he or she likes. Having chosen these points, have the students find a way to trade trucks and computers so that each is better off—each gets more of something without getting less of something else.

*While individual student results will differ, the instructor should reinforce the basic meaning of the production possibilities curve and the concept of opportunity cost. Once the various combinations are plotted, students should be encouraged to discuss why they chose a particular point on the PPC for production and how they determined that trade should take place. They should be able to quantify the advantages of trade among the two nations.*