CHAPTER 1

WHAT IS ECONOMICS?



*The objectives of this chapter are to:*

1. Define economics and describe the link between scarcity, opportunity cost and the need to make choices.
2. Define opportunity cost including the difference between explicit and implicit costs.
3. Describe the categories that economists use for classifying resources.
4. Distinguish between microeconomics and macroeconomics.
5. Explain why economists don’t always agree.
6. Identify what can be gained from the study of economics.
7. Explain why economists build models.
8. Explain why economists express their ideas using mathematical concepts and a special vocabulary*.*



Economics is the study of choice under conditions of scarcity.

There is a strong link between the concept of scarcity and the need to make choices among alternatives. The opportunity cost of any choice is what we must forego when we make that choice. It must include both implicit and explicit costs. Even when no explicit cost is involved, an implicit cost is always involved because of the value of the lost time when making a choice.

Chapter 1 introduces the four categories of resources: labor, capital (including physical capital and human capital), land, and entrepreneurship.

The field of economics is divided into two major parts. *Microeconomics* is concerned with the behavior of individual households, business firms, and governments. *Macroeconomics* concentrates on the behavior of the economy as a whole. Another useful way to look at economics is to distinguish between positive and normative economics. *Positive economics* deals with how the economy works, while *normative economics* uses value judgments to decide what should be. The distinction between positive and normative economics is useful in explaining *why* economists disagree.

Economics relies heavily on models. The chapter explains why it is reasonable and valuable to make simplifying assumptions when building economic models, and introduces the idea of a three-step procedure to analyze almost any economic problem.

Economists often express their ideas using mathematical concepts and a special vocabulary, because these tools enable them to express themselves more precisely than with ordinary language. All of the new terms will be defined and explained as they are introduced.

Finally, it is important to study economics *actively* rather than passively; active studying means understanding and being able to reproduce arguments, rather than just reading the text.



*In order presented in chapter.*

Economics: The study of choice under conditions of scarcity.

Scarcity: A situation in which the amount of something available is insufficient to satisfy the desire for it.

Opportunity cost: What is given up when taking an action or making a choice.

Resources: The labor, capital, land (including natural resources), and entrepreneurship that are used to produce goods and services.

Labor: The time human beings spend producing goods and services.

Capital: A long-lasting tool that is used to produce other goods.

Physical Capital: The part of the capital stock consisting of physical goods, such as machinery, equipment, and factories.

Human Capital: The skills and training of the labor force.

Capital Stock: The total amount of capital in a nation that is productively useful at a particular point in time.

Land: The physical space on which production takes place, as well as the natural resources that come with it.

Entrepreneurship: The ability and willingness to combine the other resources—labor, capital, and land—into a productive enterprise.

Input: Anything (including a resource) used to produce a good or service.

Microeconomics: The study of the behavior of individual households, firms, and governments, the choices they make, and their interaction in specific markets.

Macroeconomics: The study of the behavior of the overall economy.

Positive economics: The stud of how the economy works.

Normative economics: The practice of recommending policies to solve economic problems.

Model: An abstract representation of reality.

Simplifying Assumption: Any assumption that makes a model simpler without affecting any of its important conclusions.

Critical Assumption: Any assumption that affects the conclusions of a model in an important way.



1. Bill Goffe’s Web site at <http://rfe.org/> is a valuable resource for both students and instructors. A useful assignment is to have students spend twenty minutes or so browsing through this site.

Students should concentrate on “Data” and “Teaching Resources.” You can ask them to find updated figures for things like GDP, the population, labor force participation rates for various groups, and average hourly pay rates, or ask them to browse around until they find something interesting to share with the class—perhaps something that surprised them or they were surprised to find. (Some may even stumble upon JOE and find salary ranges for Ph.D. or ABD economists.)

2. Career information for economists can be found at the Bureau of Labor Statistics Occupational Outlook Handbook Web site (<http://stats.bls.gov/oco/ocos055.htm> ). Students will be interested to learn that the median annual earnings of economists were $83,590 in May 2008. They will also find descriptions of other occupations that economics majors enter.

3. One way to bring economics to life is to spend some time talking about the people who have won the Nobel prize in economics. Information on Nobel Prize winners can be found at http://www.almaz.com/nobel. For instance, William Vickrey, a 1996 co-winner, proposed, back in 1959, a solution to traffic gridlock: Electronically assessed user fees that discouraged congestion by gradually raising fees, which peaked at times of highest demand.

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1. Economics is exciting to teach because there are always so many major news stories to explain to students in economic terms. Ask students to list some recent news stories and briefly describe for them how an understanding of economics can help them analyze what they have read. If you’re stuck, almost *any* news story can be linked to the problem of scarcity.

2. Economics can be scary and overwhelming to beginning students. Use the following common examples to show students that they already apply economic principles every day.

a. When they choose a short line at the campus bookstore checkout counter, they are behaving rationally as they attempt to economize on the scarce resource of time.

b. Ask students who have jobs how they schedule their work hours over the course of a given week, or over the course of the year. Very few will choose to work during class hours, and many will not work at all until summer or holiday breaks. This is an example of allocating scarce time.

c. Usually, attendance on the first day of class and on exam days is higher than on other days. This is because the opportunity cost of missing class on these days is higher than on other days. What methods do their professors use to induce attendance? Do these methods alter students’ choices of how to allocate their scarce time?

d. Why are they attending college? Many will answer that they attend in order to get a good job in the future. Explain that economists describe this behavior as “human capital investment.” (Human capital is discussed briefly in Chapter 1.)



**PROBLEM SET**

1. a. This is a statement of how the economy works, and does not involve value judgments about how the economy should work. Hence, it is an example of positive economics.

b. The appearance of the word “should” signals that this is a normative statement. It involves a value judgment about how economic policy ought to be formulated.

c. This is a normative statement. If this statement were to rank different poverty reduction strategies based on some objective criteria, it would be a positive statement. However, the statement only expresses a belief that increasing the federal minimum wage is universally the best strategy, thus giving a value judgment.

d. The second sentence in the statement is clearly *positive*; it deals with *what is,* or, more accurately, *what was*. But whether increasing income inequality is inherently bad, let alone disastrous, is inevitably a *normative* question. Hence, like the statement in part (c), this statement is a hybrid of *both* positive and normative.

2. a. Yes; capital

b. Yes; capital

c. Yes; labor

d. Yes; capital

e. Yes; capital (human capital)

f. Yes; land

g. No

h. Yes, capital (human capital)

i. Yes, entrepreneurship

j. No

3. a. Critical assumption. Finding the fastest route depends upon being able to avoid as many traffic lights as possible.

b. Simplifying assumption. No city is completely flat, but minor hills and valleys would not significantly affect the speed of traffic across Boston.

c. Critical assumption. If you cannot easily transfer from one highway to another, what seems to be the shortest route could end up being quite long.

d. Critical assumption. Other things equal, the shorter the route, the faster the travel time. It is important to be able to roughly determine the length of a route by using map distances.

4. The opportunity cost of playing the computer game all weekend is the sacrifice of the Colorado ski trip, since that is the alternative that is the *next most attractive* to you.

5. a. The average opportunity cost = explicit costs + implicit costs = [($27,293 (tuition and fees) + $1,181 (books and supplies)] + $18,000 (foregone income for 9 months( = $46,474

b. The average opportunity cost = explicit costs + implicit costs = $1,181 (books and supplies) + $18,000 (foregone income) = $19,181.

c. The average opportunity cost = explicit costs + implicit costs = ($27,293 + $1,181) + $9,000 = $37,474.

Note that we get $9,000 by assuming that the student can still work full time over the summer as well as half-time during the 9 months of the school year, thereby foregoing only $18,000/2.

6. a. The average opportunity cost of attending a year of college at a 2-year public college = explicit costs + implicit costs = ($2,713 + $1,133) + $18,000 = $21,846.

b. The average opportunity cost of attending a year of college at a 2-year public college = explicit costs + implicit costs = $1,133 + $18,000 = $19,133.

c. The average opportunity cost of attending a year of college at a 2-year public college = explicit costs + implicit costs = ($2,713 + $1,133) + $9,000 = $12,846.

Note that we get $9,000 by assuming that the student can still work full time over the summer as well as half-time during the 9 months of the school year, thereby foregoing only $18,000/2.