

WHAT IS ECONOMICS?

E*conomics*. The word conjures up all sorts of images: manic stock traders on Wall Street, an economic summit meeting in a European capital, a somber television news anchor announcing good or bad news about the economy. . . . You probably hear about economics several times each day. What exactly is economics?

First, economics is a *social science*, so it seeks to explain something about *society*. In this sense, it has something in common with psychology, sociology, and political science. But economics is different from these other social sciences, because of *what* economists study and *how* they study it. Economists ask fundamentally different questions, and they answer them using tools that other social scientists find rather exotic.

ECONOMICS, SCARCITY, AND CHOICE

A good definition of economics, which stresses the difference between economics and other social sciences, is the following:

Economics is the study of choice under conditions of scarcity.

This definition may appear strange to you. Where are the familiar words we ordinarily associate with economics: “money,” “stocks and bonds,” “prices,” “budgets,” . . . ? As you will soon see, economics deals with all of these things and more. But first, let’s take a closer look at two important ideas in this definition: scarcity and choice.

SCARCITY AND INDIVIDUAL CHOICE

Think for a moment about your own life—your daily activities, the possessions you enjoy, the surroundings in which you live. Is there anything you don’t have right now that you’d *like* to have? Anything that you already have but that you would like *more* of? If your answer is “no,” congratulations! Either you are well advanced on the path of Zen self-denial, or else you are a close relative of Bill Gates. The rest of us, however, feel the pinch of limits to our material standard of living. This simple truth is at the very core of economics. It can be restated this way: We all face the problem of **scarcity**.

CHAPTER OUTLINE

Economics, Scarcity, and Choice

Scarcity and Individual Choice
Scarcity and Social Choice
Scarcity and Economics

The World of Economics

Microeconomics and
Macroeconomics
Positive and Normative
Economics

Why Study Economics?

To Understand the World Better
To Gain Self-Confidence
To Achieve Social Change
To Help Prepare for Other
Careers
To Become an Economist

The Methods of Economics

The Art of Building Economic
Models
Assumptions and Conclusions
The Four-Step Process

Math, Jargon, and Other Concerns . . .

How to Study Economics

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.



To make good use of the Internet, you will need the Adobe Acrobat Reader. It can be downloaded from <http://www.adobe.com/prodindex/acrobat/readstep.html>. An economic question is: Why does Adobe give the Reader away free?

At first glance, it may seem that you suffer from an infinite variety of scarcities. There are so many things you might like to have right now—a larger room or apartment, a new car, more clothes . . . the list is endless. But a little reflection suggests that your limited ability to satisfy these desires is based on two other, more basic limitations: scarce *time* and scarce *spending power*.

As individuals, we face a scarcity of time and spending power. Given more of either, we could each have more of the goods and services that we desire.

The scarcity of spending power is no doubt familiar to you. We've all wished for higher incomes so that we could afford to buy more of the things we want. But the scarcity of time is equally important. So many of the activities we enjoy—seeing a movie, taking a vacation, making a phone call—require time as well as money. Just as we have limited spending power, we also have a limited number of hours in each day to satisfy our desires.

Because of the scarcities of time and spending power, each of us is forced to make *choices*. We must allocate our scarce *time* to different activities: work, play, education, sleep, shopping, and more. We must allocate our scarce *spending power* among different goods and services: housing, food, furniture, travel, and many others. And each time we choose to buy something or do something, we are also choosing *not* to buy or do something else.

Economists study the choices we make as individuals and how those choices shape our economy. For example, over the next decade, we may each—as individuals—decide to make more of our purchases over the Internet. Collectively, this decision will determine which firms and industries will expand and hire new workers (such as Internet consulting firms and manufacturers of Internet technology) and which firms will contract and lay off workers (such as traditional “brick and mortar” retailers).

Economists also study the more subtle and indirect effects of individual choice on our society. Will most Americans continue to live in houses, or—like Europeans—will most of us end up in apartments? Will we have an educated and well-informed citizenry? Will traffic congestion in our cities continue to worsen, or is there relief in sight? Will the Internet create faster economic growth and more rapidly rising living standards for years to come or just a short burst of economic activity that will soon subside? These questions hinge, in large part, on the separate decisions of millions of people. To answer them requires an understanding of how individuals make choices under conditions of scarcity.

SCARCITY AND SOCIAL CHOICE

Now let's think about scarcity and choice from *society's* point of view. What are the goals of our society? We want a high standard of living for our citizens, clean air, safe streets, good schools, and more. What is holding us back from accomplishing all of these goals in a way that would satisfy everyone? You already know the answer: scarcity.

In society's case, the problem is a scarcity of **resources**—the things we use to make goods and services that help us achieve our goals. Economists classify resources into three categories:

1. **Labor** is the time human beings spend producing goods and services.
2. **Capital** consists of the long-lasting tools people use to produce goods and services. This includes *physical capital*, such as buildings, machinery, and equipment, as well as *human capital*—the *skills and training* that workers possess.

Resources The land, labor, and capital that are used to produce goods and services.

Labor The time human beings spend producing goods and services.

Capital Long-lasting tools used in producing goods and services.

Human capital The skills and training of the labor force.

3. **Land** refers to the physical space on which production takes place, as well as the natural resources found under it or on it, such as oil, iron, coal, and lumber.

Land The physical space on which production occurs, and the natural resources that come with it.

Anything *produced* in the economy comes, ultimately, from some combination of these resources. Think about the last lecture you attended at your college. You were consuming a service—a college lecture. What went into producing that service? Your instructor was supplying labor. Many types of capital were used as well. The physical capital included desks, chairs, a chalkboard or transparency projector, and the classroom building itself. It also included the computer your instructor may have used to compose lecture notes. In addition, there was human capital—your instructor’s specialized knowledge and lecturing skills. Finally, there was land—the property on which your classroom building sits.

Besides the three resources, other things were used to produce your college lecture. Chalk, for example, is a tool used by your instructor, so you might think it should be considered capital, but it is not. Why not? Because it is not *long lasting*. Typically, economists consider a tool to be capital only if it lasts for a few years or longer. Chalk is used up as the lecture is produced, so it is considered a *raw material* rather than capital.

But a little reflection should convince you that a piece of chalk is itself produced from some combination of the three resources (labor, capital, and land). In fact, all of the raw materials needed to produce the lecture—the energy used to heat or cool your building, the computer paper used for your instructor’s lecture notes, and so on—come, ultimately, from society’s three resources. And the scarcity of these resources, in turn, causes the scarcity of all goods and services produced from them.

As a society, our resources—land, labor, and capital—are insufficient to produce all the goods and services we might desire. In other words, society faces a scarcity of resources.

This stark fact about the world helps us understand the choices a society must make. Do we want a more educated citizenry? Of course. But that will require more labor—construction workers to build more classrooms and teachers to teach in them. It will require more natural resources—land for classrooms and lumber to build them. And it will require more capital—cement mixers, trucks, and more. These very same resources, however, could instead be used to produce *other* things that we find desirable—things such as new homes, hospitals, automobiles, or feature films. As a result, every society must have some method of *allocating* its scarce resources—choosing which of our many competing desires will be fulfilled and which will not be.

Many of the big questions of our time center on the different ways in which resources can be allocated. The cataclysmic changes that rocked Eastern Europe and the former Soviet Union during the early 1990s arose from a very simple fact: The method these countries used for decades to allocate resources was not working. Closer to home, the never-ending debates between Democrats and Republicans in the United States reflect subtle but important differences of opinion about how to allocate resources. Often, these are disputes about whether the private sector can handle the allocation of resources on its own or whether the government should be involved.

SCARCITY AND ECONOMICS

The scarcity of resources—and the choices it forces us to make—is the source of all of the problems you will study in economics. Households have limited incomes for satisfying their desires, so they must choose carefully how they allocate their spending

among different goods and services. Business firms want to make the highest possible profit, but they must pay for their resources, so they carefully choose *what* to produce, *how much* to produce, and *how* to produce it. Federal, state, and local government agencies work with limited budgets, so they must carefully choose which goals to pursue. Economists study these decisions made by households, firms, and governments to explain how our economic system operates, to forecast the future of our economy, and to suggest ways to make that future even better.

THE WORLD OF ECONOMICS

The field of economics is surprisingly broad. It extends from the mundane—why does a pound of steak cost more than a pound of chicken?—to the personal and profound—how do couples decide how many children to have? With a field this broad, it is useful to have some way of classifying the different types of problems economists study and the different methods they use to analyze them.

MICROECONOMICS AND MACROECONOMICS

The field of economics is divided into two major parts: microeconomics and macroeconomics. **Microeconomics** comes from the Greek word *mikros*, meaning “small.” It takes a close-up view of the economy, as if looking through a microscope. Microeconomics is concerned with the behavior of *individual* actors on the economic scene—households, business firms, and governments. It looks at the choices they make, and how they interact with each other when they come together to trade *specific* goods and services. What will happen to the cost of movie tickets over the next five years? How many jobs will open up in the fast-food industry? How would U.S. phone companies be affected by a tax on imported cell phones? These are all microeconomic questions because they analyze individual *parts* of an economy, rather than the *whole*.

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

Macroeconomics—from the Greek word *makros*, meaning “large”—takes an *overall* view of the economy. Instead of focusing on the production of carrots or computers, macroeconomics lumps all goods and services together and looks at the economy’s *total output*. Instead of focusing on employment in the fast-food industry or the manufacturing sector, it considers *total employment* in the economy. Instead of asking why credit card loans carry higher interest rates than home mortgage loans, it asks what makes interest rates *in general* rise or fall. In all of these cases, macroeconomics focuses on the big picture and ignores the fine details.

Macroeconomics The study of the economy as a whole.

POSITIVE AND NORMATIVE ECONOMICS

The micro versus macro distinction is based on the level of detail we want to consider. Another useful distinction has to do with the *purpose* in analyzing a problem. **Positive economics** deals with what *is*—with *how* the economy works, plain and simple. If we lower income tax rates in the United States next year, will the economy grow faster? If so, by how much? And what effect will this have on total employment? These are all positive economic questions. We may disagree about the answers, but we can all agree that the correct answers to these questions do *exist*—we just have to find them.

Positive economics The study of what *is*, of how the economy works.

Normative economics concerns itself with what *should be*. It is used to make judgments about the economy, identify problems, and prescribe solutions. While positive economics is concerned with just the facts, normative economics requires

Normative economics The study of what *should be*; it is used to make value judgments, identify problems, and prescribe solutions.

us to make value judgments. When an economist advises that we cut government spending—an action that will benefit some citizens and harm others—the economist is engaging in normative analysis.

Positive and normative economics are intimately related in practice. For one thing, we cannot properly argue about what we should or should not do unless we know certain facts about the world. Every normative analysis is therefore based on an underlying positive analysis. But while a positive analysis can, at least in principle, be conducted without value judgments, a normative analysis is always based, at least in part, on the values of the person conducting it.

Why Economists Disagree. The distinction between positive and normative economics can help us understand why economists sometimes disagree. Suppose you are watching a television interview in which two economists are asked whether the United States should eliminate all government-imposed barriers to trading with the rest of the world. The first economist says, “Yes, absolutely,” but the other says, “No, definitely not.” Why the sharp disagreement?

The difference of opinion may be *positive* in nature: The two economists may have different views about what would actually happen if trade barriers were eliminated. Differences like this sometimes arise because our knowledge of the economy is imperfect, or because certain facts are in dispute.

More likely, however, the disagreement will be *normative*. Economists, like everyone else, have different values. In this case, both economists might agree that opening up international trade would benefit *most* Americans, but harm *some* of them. Yet they may still disagree about the policy move because they have different values. The first economist might put more emphasis on benefits to the overall economy, while the second might put more emphasis on preventing harm to a particular group. Here, the two economists have come to the same *positive* conclusion, but their *different values* lead them to different *normative* conclusions.

In the media, economists are rarely given enough time to express the basis for their opinions, so the public hears only the disagreement. People may then conclude—wrongly—that economists cannot agree about how the economy works when the *real* disagreement is over which goals are most important for our society.

WHY STUDY ECONOMICS?

Students take economics courses for all kinds of reasons.

TO UNDERSTAND THE WORLD BETTER

Applying the tools of economics can help you understand global and cataclysmic events such as wars, famines, epidemics, and depressions. But it can also help you understand much of what happens to you locally and personally—the worsening traffic conditions in your city, the raise you can expect at your job this year, or the long line of people waiting to buy tickets for a popular concert. Economics has the power to help us understand these phenomena because they result, in large part, from the choices we make under conditions of scarcity.

Economics has its limitations, of course. But it is hard to find any aspect of life about which economics does not have *something* important to say. Economics cannot explain why so many Americans like to watch television, but it *can* explain how TV networks decide which programs to offer. Economics cannot protect you from a



The Federal Reserve Bank of Minneapolis asked some Nobel Prize winners how they became interested in economics. Their stories can be found at <http://woodrow.mpls.frb.fed.us/pubs/region/98-12/quotes.html>.

robbery, but it *can* explain why some people choose to become thieves and why no society has chosen to eradicate crime completely. Economics will not improve your love life, resolve unconscious conflicts from your childhood, or help you overcome a fear of flying, but it *can* tell us how many skilled therapists, ministers, and counselors are available to help us solve these problems.

TO GAIN SELF-CONFIDENCE

Those who have never studied economics often feel that mysterious, inexplicable forces are shaping their lives, buffeting them like the bumpers in a pinball machine, determining whether or not they'll be able to find a job, what their salary will be, whether they'll be able to afford a home, and in what kind of neighborhood. If you've been one of those people, all that is about to change. After you learn economics, you may be surprised to find that you no longer toss out the business page of your local newspaper because it appears to be written in a foreign language. You may no longer lunge for the remote and change the channel the instant you hear "And now for news about the economy. . . ." You may find yourself listening to economic reports with a critical ear, catching mistakes in logic, misleading statements, or out-and-out lies. When you master economics, you gain a sense of mastery over the world, and thus over your own life as well.

TO ACHIEVE SOCIAL CHANGE

If you are interested in making the world a better place, economics is indispensable. There is no shortage of serious social problems worthy of our attention—unemployment, hunger, poverty, disease, child abuse, drug addiction, violent crime. Economics can help us understand the origins of these problems, explain why previous efforts to solve them have failed, and enable us to design new, more effective solutions.

TO HELP PREPARE FOR OTHER CAREERS

Economics has long been the most popular college major for individuals intending to work in business. But in the last two decades it has also become popular among those planning careers in politics, international relations, law, medicine, engineering, psychology, and other professions. This is for good reason: Practitioners in each of these fields often find themselves confronting economic issues. For example, lawyers increasingly face judicial rulings based on the principles of economic efficiency. Doctors will need to understand how new laser technologies or changes in the structure of HMOs will affect their practices. Industrial psychologists need to understand the economic implications of workplace changes they may advocate, such as flexible scheduling or on-site child care.

TO BECOME AN ECONOMIST

Only a tiny minority of this book's readers will decide to become economists. This is welcome news to the authors, and after you have studied labor markets in your *microeconomics* course, you will understand why. But if you do decide to become an economist—obtaining a master's degree or even a Ph.D.—you will find many possibilities for employment. Of 16,780 members of the American Economic Association who responded to a recent survey,¹ 66 percent were employed at colleges or universities. The rest were engaged in a variety of activities in the private sector (21 percent), government (10 percent), and international organizations (3 percent).

¹ *American Economic Review*, December 1997, p. 674.