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Introduction

Economists study the *economic problem*. The nature of the economic problem, however, has changed over time. For the *classical school* of economists (including Adam Smith (1723–1790), David Ricardo (1772–1823), Karl Marx (1818–1883), and John Stuart Mill (1806–1873)), the economic problem was to discover the laws which governed the production of goods and the distribution of goods among the different social classes: land owners, capitalists, workers. These laws were thought to be like the natural laws or physical laws, similar to Newton’s law of gravitational attraction. Forces of history, and phenomena such as the industrial revolution, produce “universal constants,” which govern the production of goods and the distribution of wealth.

Towards the end of the nineteenth century, however, there was a major shift in the orientation of economics, brought about by the *neoclassical school* of economists. This group includes William Stanley Jevons (1835–1882), Leon Walras (1834–1910), Francis Ysidro Edgeworth (1845–1926), Vilfredo Pareto (1848–1923), and Alfred Marshall (1842–1924). The neoclassical revolution was a shift in the emphasis of the discipline, away from a search for natural laws of production and distribution, and toward the analysis of decision making by individuals and firms.

In this book, we will describe *modern microeconomics*, which mostly follows the neoclassical path. For us, and for the majority of contemporary microeconomists, the economic problem is the problem of the “economic agent.” He lives in a world of scarcity. Economists focus on the fact that resources are limited or *constrained*. These constraints apply to men, women, households, firms, governments, and even humanity. On the other hand, our wants and needs are unlimited. We want more and better material things, for ourselves, our families, our children, our friends. Even if we are not personally greedy, we want better education for our children, better culture, better health for people in our country, and longer lives for everyone. Economics is about how decision makers choose among all the things that they want, given that they cannot have everything. The economic world is the world of limited resources and unlimited needs, and the economic problem is how to best meet those needs given those limited resources.

The key assumption in microeconomics, which could be taken as our slogan, our credo, is this: economic agents are rational. This means that they will choose the best alternatives, given what’s available, given the constraints. Of course, we know that (to paraphrase Abraham Lincoln) some of the people behave irrationally all the time, and all of the people behave irrationally some of the time. But we will take rationality as our basic assumption, especially when important goods and services, and money, are at stake.

Economics applies the scientific method to the investigation and understanding of the economic problem. As with the natural sciences, like biology, chemistry or physics, economics has theory, and it has empirical analysis. Modern economic theory usually involves the construction of abstract, often mathematical models, which are intended to help us understand some aspect of the economic world. A useful model makes simplifying assumptions about the world. (A completely realistic economic model would usually be too complicated to be useful.) The assumptions incorporated in a useful model should be plausible or reasonable, and not absurd on their face. For instance, it is reasonable to assume that firms want to maximize profits, even though some firms may not be concerned with profits in some circumstances. It is reasonable to assume that a typical consumer wants to eat some food, wear some clothing, and live in a house or an apartment. It would be unreasonable to assume that a typical consumer wants to spend all her income on housing, and eat no food. Once a model has assumptions, the economic analyst applies deductive reasoning and logic to it, in order to derive conclusions. This is where the use of mathematics is important.

Correct logical and mathematical arguments clarify the structure of a model and help us avoid mistaken conclusions. The aim is to have a model which sheds some light on the economic world. For example, we might have a logical result like this: if we assume A, B, and C, then D holds, where D = “when the price of ice cream rises, the consumer will eat less of it.” If A, B, and C are very reasonable assumptions, then we feel confident that D will be true. On the other hand, if we do some empirical work and see that D is in fact false, then we are led to the conclusion that either A, B, or C must also be false. Either way, the logical proposition “A, B, and C together imply D” gives us insight into the way the economic world works.

Economics is divided between *microeconomics* and *macroeconomics*. Macroeconomics studies the economy from above, as if seen from space. It studies aggregate magnitudes, the big things like booms and busts, gross domestic product, rates of employment and unemployment, money supply, and inflation. In contrast, microeconomics takes the close-up approach to understand the workings of the economy. It begins by looking at how individuals, households, and firms make decisions, and how those decisions interact in markets. The individual decisions result in market variables, quantities demanded by buyers and supplied by sellers, and market prices.

When people, households, firms, and other economic agents make economic decisions, they alter the allocation of resources. For example, if many people suddenly want to buy some goods in large quantities, they may drive up the prices of those goods, they may drive up employment and wages of the workers who make those goods, they may drive up the profits of the firms that sell them, and they may drive down the wages of people making other goods and the profits of firms that supply the competing goods. When a microeconomist analyzes a market in isolation, assuming that no effects are taking place in other markets, he is doing what is called *partial equilibrium analysis*. Partial equilibrium analysis focuses on the market for one good, and assumes prices and quantities of other goods are fixed. *General equilibrium analysis* assumes that what goes on in one market does affect prices and quantities in other markets. All markets in the economy interact, and all prices and quantities are determined more-or-less simultaneously. Obviously, general equilibrium analysis is more difficult and complex than partial equilibrium analysis. Both types of analysis,

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however, are part of microeconomics, and we will do both in this book. Doing general equilibrium analysis allows the people who do microeconomics to connect to the aggregates of the economy, to see the “big picture.” This creates a link between microeconomics and macroeconomics.

We will now move on to begin our study, and we do so by considering how individual households make consumption decisions. This is called the *theory of the consumer*.