

Introduction

Economists have long taught that **economics** is a science that studies how people allocate scarce resources to satisfy their most important wants. **Microeconomics** concentrates on choices within households and businesses and how those choices give rise to supply and demand. The goal of microeconomics is to understand how different market structures result in efficient or inefficient resource allocation. By contrast, **macroeconomics** deals with the aggregate economy – typically at the national level – and addresses economy-wide problems of economic growth, unemployment, or inflation. I believe that the greatest problem in understanding microeconomic theory is that students get so bogged down in detail that they fail to understand key concepts. This text is specifically aimed at concentrating on understanding microeconomic theory so that the successful student can move on to apply that theory to an interesting, and perhaps even prosperous, career.

What is Economics?

The great economist Frank Knight, credited as the father of the *Chicago School of Economics* stated:

“[I]t ought to be the highest objective in the study of economics to hasten the day when the study and the practice of economy will recede into the background of men’s thoughts, when food and shelter, and all provision for physical needs, can be taken for granted without serious thought, when “production” and “consumption” and “distribution” shall cease from troubling and pass below the threshold of consciousness and the effort and planning of the mass of mankind may be mainly devoted to problems of beauty, truth, right human relations, and cultural growth.”¹

An idealist might attribute these sentiments to any scholar. Physicians wish to eradicate all disease, and police officers dream of life without crime. Psychiatrists labor for a future in which all are sane. Lawyers yearn for a judicial system so fair and transparent that anyone can negotiate a contract or argue in court without legal assistance. Social workers dream of a world inhabited by functional families whose incomes exceed the poverty level. Accountants dream of a tax system so simple and logical that complex accounting rules will become obsolete.

Cynics may scoff, “If a person’s livelihood is derived from helping people cope with a persistent problem, doesn’t that person have an interest vested in perpetuating that problem?” Recall that usually left-leaning social workers voted overwhelming for Richard Nixon in 1972, after his opponent George McGovern proposed a negative income tax that would have eliminated the role of social workers in enforcing the rules of the Aid to Families with Dependent Children program.² Why should economists behave any

¹ Frank H. Knight, “Social Economic Organization” in *The Economic Organization* (New York: Harper & Row, 1951); quoted in Thomas M. Carroll, *Microeconomic Theory: Concepts and Applications*, (New York: St. Martin’s Press, 1983), p. 2.

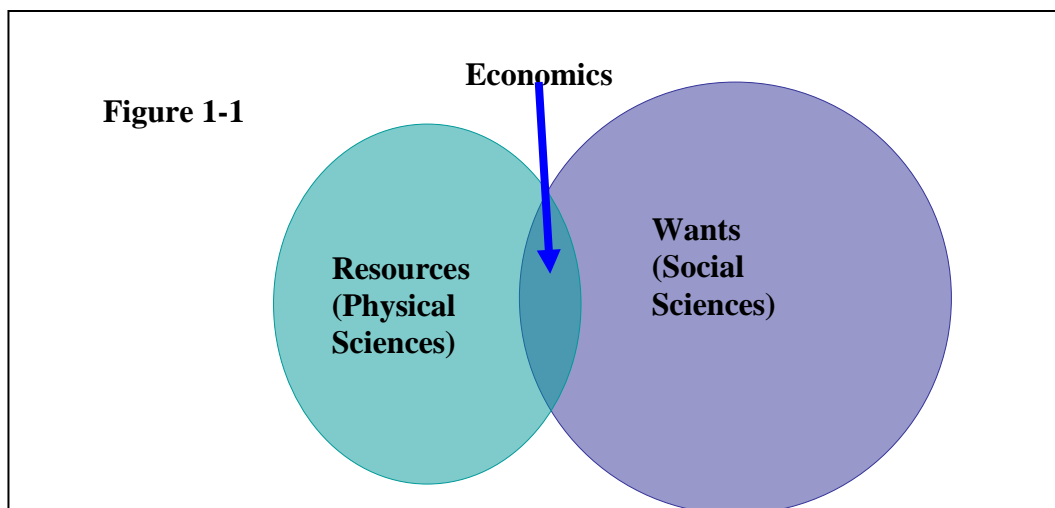
² Technically, this argument relies on a *post hoc ergo propter hoc* logical fallacy -- literally “after this, therefore because of this.” We know that McGovern proposed a welfare reform program many social

more nobly than other professionals? The answer lies in the nature of what economists study, and what economists do. Why it is necessary for people to earn their living is one of the central concerns of economic inquiry. Because resources – land, labor, and capital – are scarce, we must expend effort to shape them into things we desire, although we can never have all we want. If there were no scarcity, people would work only for recreation; imagine all those professional stair steppers and power lifters. So what would economists do if there was no economic problem? Why, anything they wanted, including economics, if they thought it was fun.³

The word *economics* is of both humble and practical origins: it is derived from the ancient Greek word *oikonomia*, which literally means “household management”; *home economics* is redundant. Greek philosophers, such as Plato and Aristotle, believed that issues such as balancing the household accounts, or whether to plant figs or dates, were too mundane to occupy a philosopher’s attention. After all, there were more important issues to be considered: beauty, truth, proper human relations, and cultural growth. Yet, with all its disease and starvation, not to mention the enslavement of most of humanity, classical Greece can hardly be characterized as a golden age of plenty.

In this book, we define economics in a way that reveals “what economists do” while allowing that different economists practice economics in different ways. **Economics** is the social science that investigates how people allocate scarce resources among competing wants. Something is **scarce** when there is not enough for everyone to have all they want. Scarcity implies **choice**. When people have more desires than they have means to satisfy, they must decide which desires to satisfy and which ones to leave unfulfilled.

Figure 1-1 relates economics inquiry to the physical and social sciences. The circle labeled *resources* is smaller than the circle labeled *wants*, reflecting *scarcity*.



workers complained would cost their jobs. We know that almost everybody voted for Nixon in 1972 (who carried 49 of 50 states). However, the one is not necessarily dependent on the other.

³ No doubt one of the things that make the *Star Trek* science fiction series so attractive is replicator technology which morphs garbage into food, clothing, and entertainment. The only scarce factors of production are di-lithium crystals, whose acquisition has injected economics into the plots of a few episodes.

The resources circle is also labeled **physical sciences**, disciplines such as physics, chemistry, biology, engineering, and mathematics explore properties of inanimate objects to find ways bending those properties to serve human goals. The “wants” circle is labeled **social sciences**; disciplines like sociology, anthropology, philosophy, not to mention marketing and education, explore what people desire and how to manipulate those desires, be it for good or ill.

The overlapping area of these circles is labeled **Economics**; economists try to reconcile means (resources) with ends (human wants). Economics does not lay claim to the entirety of either sphere. Physics, chemistry, and engineering study explore physical laws that are outside the purview of economics. Economists do not ask *why* two atoms of hydrogen and one atom of oxygen combine to form one molecule of water. Economists understand that hydrogen, oxygen, and energy are often scarce. Economists borrow important tools from the physical sciences; most significant, economics adapt **the scientific method** to investigate economic problems. Unlike most physical scientists (but like astronomers), economists cannot conduct **controlled experiments**, whereby scientists control for all (potential) causes of an event, save one, in order to test their theories. Economists rely on **natural experiments** – that is, they analyze actual events, using mathematics and statistical tools to isolate potential causes of that event to test their theories.

A similar restriction rests on how economists treat human wants. Economics typically take what people want as given and analyze whether resources are allocated efficiently in pursuit of those goals. This was not always the case. Originally economics was a branch of moral philosophy that preached why some desires are good and others are bad.⁴ Today the overwhelming majority of economists are more concerned with how to allocate resources efficiently than how to restrict choices.

Two important intellectual documents were created in 1776: the American *Declaration of Independence* and Scottish economist Adam Smith’s *An Inquiry into the Nature and Causes of the Wealth of Nations*. In the *Declaration of Independence*, Thomas Jefferson declared that “all men are endowed by their creator with certain inalienable rights, among them life, liberty, and the pursuit of happiness.” To an economist that means that: (1) human beings are the focus of economic analysis, (2) that people should have the liberty to choose, and (3) that they will pursue their own self interest. In his *Wealth of Nations* Smith argued that the nature of wealth is the standard of living of the population, and that wealth is created through the pursuit of self interest.

Economics span the social and the physical sciences. Like the other social sciences, economics studies the causes and effects of human behavior, through the special lens of *scarcity*. Like the other social sciences, economists try to understand “what is” and contrast it with “what ought to be.” Like most people, I have strongly held opinions about what works and what is broken, and some ideas of how to fix broken things. I strive to separate my opinions (what *ought to be*) from my objective side (what *is*). Like other humans, what I believe filters what I (think) I see. I try, however imperfectly, to confirm or refute my beliefs by perusing evidence and listening to those whose world views differ from mine. Like any other scientist, I strive for the truth; each time I uncover an error, whether my own or someone else’s, I revel in the discovery.

⁴ Most economists still do this, but now in our role of parents.

Like the other physical sciences, economists rely on the *scientific method* in its pursuit of the truth. Economists use well-tested **theories** to predict how people respond to incentives. Economists test their theories by contrasting real world events with the predictions of their theories. Unlike the physical sciences, and like the social sciences, economists rarely conduct controlled experiments.⁵ Instead, we rely on *statistical analysis* of actual events. Instead of controlling the experiment, we take into account the diverse influences on behavior through large samples drawn randomly from a population of interest. In this text, I will make extensive use of *The Current Population Survey*, a data base collected by the U. S. Department of Commerce containing approximately 58,000 households, spanning the period 1962 – 2010.

Scarcity and Economic Behavior

Scarcity exists because people want more than they can have. Anyone who has escorted a five-year-old child down a candy aisle appreciates the fact that “what I want” is substantially greater than “what I can have.” Mothers, confronted by a crying child, face a **dilemma**⁶ of buying candy for the child, temporarily securing quiet at the cost of encouraging future tantrums, or saying “no” and prolonging the current tantrum.

Any time we use scarce resources to satisfy one desire, we necessarily sacrifice something else of value.⁷ Reducing the number of undocumented migrants means not catching as many child molesters. Studying economics for two hours means sacrificing leisure, income, or studying another subject, whichever alternative activity has the greater value. Actions always have consequences, and those consequences are not always the ones that we expect. The decision to execute convicted murderers may reduce the number of people who commit murder (because the potential price of the first murder is infinite), only to increase the number of murders per offender (since after incurring the liability of execution, subsequent murders are free). Whether capital punishment actually reduces the number of murder victims is uncertain. If an employer offers on- site childcare for working parents, she may have to reduce the wage offer to continue to earn a profit. One good, on site daycare, requires the sacrifice of another good, the wage rate. Workers will find they face a trade-off. Those who prefer higher wages will sacrifice on- site child care. Those who value childcare will take the job, placing a greater burden on the employer’s resources.

Economic activity can be *organized* in three ways. The oldest system is **tradition**, whereby people inherit their jobs and social status from their parents, with everyone’s standard of living socially (or divinely) ordained. There is little social mobility in a traditional system; traditional societies tend to stagnate. The unequal distribution of wealth, authoritarian political and social structure, and repressive theocracy create many

⁵ An exception is the field of *poverty economics*, wherein researchers have begun to test the efficacy of anti-poverty programs much the way pharmacologists conduct drug trials, with a treatment group and a control group. I present one example in chapter 4.

⁶ Many people use the words “dilemma” and “problem” interchangeably. This is a mistake; a dilemma is a problem where all available options have undesirable aspects. How to rescue children from a burning building is a problem; deciding which of two children to save when there is only time enough to save one is a dilemma.

⁷ Choices are not dilemmas when one option is efficient and the other is inefficient; choosing the efficient option creates more for all!

of the problems of poor countries resulting from a traditional system. A second method of social organization is **command**, where people are rewarded for their submission to authority and where the social climate is also one of repression. Many of the current and former communist regimes are command economies, as were the economies of Nazi Germany, Fascist Italy and Imperial Japan change incentives and society quickly, albeit more often for the worse than for the better. The third approach to economic organization is the most successful. In a **market** economy, people (usually through families or **households**) own the factors of production whose services they *exchange* for money (income). Households, in turn, spend their money to buy the goods and services businesses provide at a profit. In a market economy, one's standard of living depends on (1) one's endowment -- what (s)he inherits from one's relatives, and (2) one's effort. This text emphasizes how the market process causes three related but distinct outcomes: economic inequality, poverty, and discrimination.

Economics explores how people choose to satisfy some of their wants with resources available to them. But economists go further. We have developed theories that are based on *efficient* or optimizing behavior, whereby people attempt (not always successfully) to satisfy the desires *they* consider most important. People respond to incentives, shying away from activities whose *prices* (in money, time, or self-esteem) increase, and towards activities whose prices decrease. The incentives people face may not always be obvious to the outside observer (such as the social worker). Economics teaches us to pay much more attention to what people do than to what they say, ; people are more likely to lie in what they say than in what they do.

Economics and the Scientific Method

One of the most important aspects of economics is that it is a *social science*. As scientists, economists develop theories that are abstract generalizations of reality. Typically, economic theories begin with a hypothesis – that people seek to increase pleasure and avoid pain, that firms attempt to maximize profits, that people own scarce resources and trade their rights to those resources in competitive markets. These hypotheses in turn lead to testable predictions: that the increase in the price of a commodity will reduce its consumption, that increases in the supply of money will cause inflation, or that decreases in tax rates will stimulate economic growth.

Scientists admit their fallibility and entertain evidence contrary to their beliefs. But they wish to discriminate between their beliefs that are supported by the evidence and beliefs that are contradicted by the evidence. For instance, the theory of evolution predicts that random mutations will tend to persist if and only if those mutations improve the ability of a species to survive. If one found that a random mutation decreased the ability of a species to survive, yet that trait persisted, then the theory of evolution would be compromised. Formally, the evidence would **disverify** (contradict) the theory. Once the evidence was verified, the theory should be modified, or, in the extreme, abandoned.

By contrast, consider the so-called theory of intelligent design (aka, creationism). This argument purports to explain that which evolution allegedly cannot; the complexity of nature. According to the argument, the world (or the universe) is too complex to have arisen by accident. Therefore, an alternative explanation is called for; the world must have been created or designed by an intelligent being. Presumably, this intelligent being

was/is also complex, and so, by this argument, must have been created. And the creator of the creator must have been created, and so forth back into infinity. There is no way to prove the statement wrong, because each step backwards invokes another creator. But, if the creator is God, who was not created, then the infinite regression is short circuited. But none of this is science; this is religion. There is much debate about the compatibility of science and religion. Both begin with the question: how did human beings come to inhabit the earth?. Religion typically answers the question by invoking a supernatural being and threatens believers with dire consequences if they question that “truth.” Science poses hypotheses and theories whose truth will be judged by comparing the predictions of the theories with actual events (the outcome of controlled or natural experiments).

Faith is a set of the beliefs we maintain in the absence of clear evidence; sometimes faith goes so far as to deny evidence that contradicts beliefs. As we shall see, there are many people who treat economics as a type of faith. Marxists believe that since labor creates all value, labor should receive all value. There is no way to test this theory, so Marxists continue to believe that their way is the only way.⁸ Conservatives believe that tax cuts always stimulate economic growth, and support that belief by attributing all economic growth to tax cuts, and the lack of economic growth to other causes. Liberals believe that minimum wage laws help the working poor. Neither group seems ready to change those beliefs when confronted with contrary logic or evidence.

Scientific economics is ultimately an ethical standard. A good economist is self-critical. A good economist, like any good scientist, should be willing to specify: “Here is what I predict, and this is the kind of evidence that would prove me wrong.” This is an ethical standard I will try to maintain in this text as I do in my professional life. I will often express my opinion; but when I do, I will also provide a basis for proving myself wrong. If you will do me the same courtesy, we can learn much from each other.

Summary

1. Economics is a social science that investigates the impact of scarcity on human behavior.
2. Modern economics concentrates on assisting people in attaining their goals by using scarce resources efficiently, instead of making judgments about what those goals should be.
3. Economics straddles both the social sciences and the physical sciences. It is similar to the social sciences because it seeks to understand human behavior. It is similar to the physical sciences because it employs the scientific method to produce and test theories. However, like the other social sciences, economists rely on statistical analysis, rather than controlled experiments, to test their theories.
4. Economists seek not just to understand problems, but also, by concentrating on efficiency, to solve those problems as well.

⁸ Ultimately the unworkability of Marxism was its undoing. People in Marxist countries observed that, even if they were all equal, they had much lower standards of living that people in capitalist countries did. This, in a way, was a kind of scientific outcome.

5. As scientists, economists attempt to develop objective, testable theories. What separates science from religion is the willingness to admit error.

Discussion Questions

1. How do you define your own major course of study? Compare and contrast that definition with the definition of economics. Do they contradict or complement each other?
2. Does your discipline emphasize means or ends? That is, do you tend to study what people *ought* to do, or *why* people do what they do?
3. Which outcome do you value more: (a) the potential knowledge from this course, or (b) the credit you hope to receive from this course? Based on what you have read and heard so far, do you think these goals are substitutes (you can have one or the other, but not both), or complements (you can't have one without the other)? Is there a middle ground here?
4. How do your religious convictions (or lack thereof) influence your *opinion* about economic inequality? What might an economist conclude about this relationship?
5. From what you know so far, do you think economists are more likely to be liberals or conservatives? How is this opinion influenced by your inference about the political philosophy of the author of this manuscript?
6. Generally speaking, do you tend to learn more from people you agree with or from people you disagree with? Why do you think that is so? What might an economist conclude from your answer?

Glossary

Economics: The **social science** that studies how people make decisions in the face of scarcity.

Physical sciences: Disciplines that focus on the discovery of natural laws, including economics, physics, chemistry, biology, geology, and mathematics. Physical sciences tend to focus on physical, as opposed to human or social phenomena.

Social Sciences: Disciplines which focus on human behavior, including economics, psychology, sociology, political science, history, and anthropology.

Scientific Method: A method of inquiry that strives for objectivity, with the ultimate goal of learning truth. The scientific method relies on observation and logic to develop **theories**, typically expressed in mathematical form. **Theories** generate **testable hypotheses**, which are compared to actual events (controlled experiments or statistical analysis) to determine if the theory accurately predicts or ex-

plains reality. A theory that is refuted by real events is discarded or modified in such a way to take account of the contradictory evidence.

Scarcity: A condition encountered when people want more than they can have. Scarcity implies choice – people make priorities and (ideally) use scarce resources to satisfy their most important wants first, understanding that at some point they must “do without.”

Resources: In economics, labor (human time), capital (commodities that produce other commodities, land (and other natural resources) and risk taking are combined to achieve desired goals (or products).

Tradition: The oldest form of economic organization where one’s standard of living depends on family and conformity to social norms.

Command: The form of economic organization whereby success depends on conformity to authority.

Market: The form of economic organization based on exchange and mutual advantage; bakers make bread and butchers slaughter animals so that together they can have baloney sandwiches.

Monopoly: a market with only one seller.

Monopsony: a market with only one buyer.