

Essential Principles of Economics

Chapter 1 What is Economics?

What is economics? Why should anyone study economics? Economics is a conversation that has been going on for over two hundred years,¹ and the conversation is continuing today. There are issues that are not resolved, but there are also some very important things we have learned. The conversation is not limited to professional economists, of course, but involves responsible citizens in our democratic republics, businesspeople, administrators, and many who are simply curious. The main objective of this text is to introduce the student to that conversation, as professional economists have participated in it, and thus enable the student to participate more effectively (as a citizen and at work) in the discussion as it goes on.

In some fields, the introductory material is presented as a historical survey -- the basic ideas presented as they came along in the history of the subject, and put in context that way. Philosophy is an example of this. In other fields, the basic texts are written as if

¹ My understanding of economics as a conversation owes a lot to the work of Deirdre (formerly Donald) McCloskey and Arjo Klammer. See especially McCloskey, Donald (1985), *The Rhetoric of Economics* (University of Wisconsin Press) and Klammer, Arjo (1984), *Conversations With Economists* (Rowman and Allanheld).

the field had no history at all. Mathematics is an example of this. Economics texts are usually somewhere in the middle, but a little closer to the mathematics end of the spectrum. I have come to think that we need to come a little closer to the philosophy end of the spectrum, and this text will try to put economics in the context of that ongoing conversation.

Another reason to approach economics this way is that economics is a field full of controversy. There is a joke that economists can never agree with one another. That's not quite fair -- there is much that economists do agree on, and much of that is important -- but there are also issues that remain open in economics, issues on which well-informed, intelligent people can disagree. And that should not be a surprise. These issues are even more controversial among the general public. I believe we can understand these issues in a more even-handed way by seeing economics clearly as a conversation -- usually with two or more sides.

In most studies the first step is to answer the questions: what and how? That is, what is the subject matter to be studied? What is economics? And then: how is economics studied? What methods do economists use?

In both of those things, this text will be a bit old-fashioned. I will define economics very much as the classical economists of the eighteenth and nineteenth century defined it. Old-fashioned as this is, we shall try to make it as up to date as the best recent research.

As to the "how," "what methods do economists use?" the big question is the role of scientific method. Is economics a science? Certainly economics has a scientific aspect, but I believe it has other aspects as well. The scientific aspect of economics has developed enormously during the twentieth century. All the same, there are other aspects that go beyond science, and we must deal with those aspects too. Thus, we will need an approach that can deal with the nonscientific aspects. In this, again, we find ourselves closer to the classical economists of previous century, though we are also up to date with current researchers who say that economics is a conversation in which all aspects, scientific and otherwise, can and must be discussed.

Of course, we do not want to turn the clock back. Economists have learned many very important things in the twentieth century. But -- as we begin the twenty-first -- one objective of this text is to put this learning in the context of the longer and broader conversation.

This chapter will enlarge on the what and how. First: what is economics? Then: how do economists reason?

What is economics?

What is Economics? We might take our definition from the father of modern economics, Adam Smith. He entitled his famous book *An Inquiry Into the Nature and Causes of the Wealth of Nations*. That is not a bad description of the subject matter of economics, but many modern economists have tried to find a more logical or scientific definition.

Smith was, in many ways, the founder of modern economics. He wrote at a time when the industrial revolution was just beginning to transform European society. He observed that, in his own society, economic development could bring about a widespread

Adam Smith (1723-90) is generally regarded as the founder of economics as a separate discipline; he has been called both the Adam and the Smith of modern economics. According to Joseph Schumpeter's *History of Economic Analysis*, Smith's life was uneventful and sheltered and (p. 182) "no woman, excepting his mother, ever played a role in his existence." Smith was Professor of Moral Philosophy at Edinburgh (1748-51) and Glasgow (1751-63). His two major books were *The Theory of Moral Sentiments* (1759) and *The Wealth of Nations* (1776), which Schumpeter (p. 181) claims is "the most successful not only of all books on economics but, with the possible exception of Darwin's *Origin of Species*, of all scientific books that have appeared to this day."

prosperity, and yet other countries, and even some districts of an advanced country such as Britain, could lag behind in poverty. It was never difficult to account for poverty -- poverty had been the condition of most people since time immemorial -- but what could account for this prosperity? This was the question Smith put to himself, and in his time it was the central question of economics.

This book will follow Smith's example. We will be inquiring into the nature and causes of the wealth of nations, and that inquiry will be our definition and our answer to the question, "what is economics?"

Yet economics is a field full of controversy, and even the definition of the field has been a subject of controversy. We will take a look at the controversy before the end of this chapter. For now, however, let us follow the line of thought in the definition. What does it mean to study the nature and causes of the wealth?

What Causes Production to Increase?

In his great book, *An Inquiry into the Nature and Causes of the Wealth of Nations*, Adam Smith took this question as his first subject: what is it that causes production of goods and services to increase with time, so that nations become wealthy rather than poor? According to Smith, "It is the great multiplication of the productions of all the different arts, ... which occasions, in a well-governed society, that universal opulence which extends itself to the lowest ranks of the people." (*Wealth of Nations*, Modern Library edition, p. 11) Smith's objective was to learn more about the "multiplication of productions." For him this was the point of economics.

When the production of goods and services for the market grows bigger, this is what we call "economic growth." If production grows fast enough, then we will have more production per person; and this is called a "rise in the standard of living." When Adam Smith talked about "the wealth of nations," modern economists would talk about a high and rising standard of living.

We will spend a few pages on this. What can lead to growing production?

Here are some of the things that may help a nation to become more productive and thus "wealthier." The list may not cover the whole story (we don't know everything) and the different items on the list may overlap and certainly are interdependent. But the list will serve to organize our "inquiry. "

- increase in quantities of resources available
- discovery of new technologies

- increases in the division of labor and specialization
- improvements in the allocation of existing resources
- increases in the rate of use of existing resources

The last two causes will be the subjects of most of the chapters in this book; accordingly, we will leave them for later. The first three were also the ones Adam Smith stressed, but not in the order of importance that Smith gave them. Smith put the division of labor first. In this chapter, we will follow the more modern approach, and put resources first.

Generally, the market economy can grow larger if any of the resources available to it becomes more plentiful. In other words, we can produce more outputs if we use more inputs. Traditionally, economists speak of three major kinds of resources, or, in other (and more traditional) words, three factors of production. The three "factors of production" are

- land
- labor
- and capital

LAND. By convention, economists include in the category "land" both

- the "original and indestructible powers of the soil"² and
- natural resources, such as coal, oil, and metallic ores.

² This phrase is due to David Ricardo.

There are, of course, some important differences. Coal and oil, once they are dug out or the ground and burned, are gone for ever. In other words, they are "wasting resources." On the other hand, the fertility of the soil does not have to be a wasting resource, if the farmer uses farming methods that maintain fertility. But this difference is not absolute. Copper ores, for example, may be used and then recycled.

David Ricardo (1772-1823) was one of the most important British economists of the period around 1800. He was a businessman from the age of fourteen; in finance, made a large fortune, and retired from business at 42. From about 1799, Ricardo entered into controversy with the major British economists in a series of books and pamphlets and in his book, *The Principles of Political Economy and Taxation* (1817).

LABOR We may not always think of labor as a resource, and of course it differs from the other two categories, since labor is *directed human action* and thus requires that the human being have some motivation. (Money is one possible motivation, of course, and a common one). Land does not require motivation.

But, from several points of view, labor is the most important resource. From the point of view of cost, it is quite important. In the American economy, labor costs amount to something between two-thirds and three-quarters of costs (net of raw materials). Labor is also important to most of us because it is the resource from which we expect to get our living.

CAPITAL consists of all goods produced by human labor (with other resources) and used in the production of still more goods and services; in other words, produced means of production.³ Some examples are

- machinery
- houses and other buildings
- grapevines, fruit trees and hogs on the hoof
- and human capital

Austrian School Economists. The Austrian School are a group of economists, a “school of thought,” who originated in Vienna, Austria toward the end of the nineteenth century. Their ideas include a stress on the importance of subjective aspects of the economic experience, perception, information, and entrepreneurship. The Elder Austrian School (Menger, Wieser, and Bohm-Bawerk) originated such key ideas as “opportunity cost” (which will be defined later) and a distinctive view of the role of capital and investment in the economy. They identified investment with increasingly “roundabout” production, that is, production that relies on second-order or “capital goods,” and argued that this mode of production is more productive than the alternatives. The Younger Austrian School (Mises, Hayek), active in the first half of the Twentieth Century, stressed information, diversity, and the importance of free markets.

HUMAN CAPITAL Anything we do to change ourselves, which makes us more productive employees in the future, or that we benefit from in other ways in the future, is an investment in human capital. An obvious example is education.

³ Marxists would disagree with this definition, taking the view that “capital” is not a resource but a social relation between owners and employees. “Capital” in the sense given here corresponds to what the Elder Austrian School called second-order goods, that is, goods that do not directly meet consumer needs, but meet consumer needs only indirectly when combined with other goods and labor services. However, the definition given here is standard in modern economics.

Another example is preventive health care. When we get health care that keeps us healthy in the future, so that we miss fewer days of work and are more productive (and enjoy life more in the future), that is an investment in human capital.

One way to increase production is to increase the quantity of resources available. Of these three resources, the supply of labor and capital can be increased. By contrast, the quantity of land and natural resources on the planet cannot be increased. It is true that we can discover more natural resources -- even if we cannot, like Columbus, discover a new supply of agricultural land on this planet. Discovery is not quite the same thing as creation, though; we can discover, but cannot create, more land and natural resources. We can create more capital and give birth to more labor.

An increase in the population increases the supply of labor, but, as the saying goes, every additional person is also an additional mouth to feed. So increase of the population will not lead to a higher standard of living -- a more wealthy nation -- in and of itself. It may lead to a declining standard of living instead.

On the other hand, an increase in the supply of capital means that each worker has more tools to work with, and can be more productive. That can lead to a higher standard of living -- to economic growth. Thus, investment can be a source of growth. In the long run, probably, discoveries are even more important.

Discovery of new sources of raw materials certainly can lead to a higher standard of living. We can also discover new methods of doing things. The discovery of new methods -- new techniques and technologies -- is called "technical progress." Many students of economic history believe that technical progress is the only source of

continuing economic growth in the long run, and that all countries and societies which have experienced rising standards of living over long periods of time (as the European and North American societies have done) have done so because of continuing, and progressive, technological change.

Adam Smith on the Division of Labor

The view of economic growth we have just been discussing is a relatively modern one. Adam Smith had a different view -- not necessarily contrary to the modern view, just different. It will be worthwhile to digress a bit and review what the founder of our science had to say about the growth of production.

Like modern economists, Smith believed that the standard of living (the Wealth of a Nation) could rise only if the productivity of labor were to rise. (Indeed, Smith was the originator of that idea). For Smith, the most important force leading to a rising standard of living was division of labor.

What most people associate with Adam Smith is the idea of the "invisible hand;" the idea, that is, that free markets restrain prices to some "natural" level and assure the supply of goods and services at the "natural" price. Indeed Smith's discussion of the "invisible hand" comes quite early in *The Wealth of Nations*, but it is not the first topic Smith takes up. In Smith's logic, it could not be. The very first topic Smith takes up is the division of labor.

Smith argues that increasing the division of labor increases productivity. In one of the most famous passages in the book, Smith illustrates this tendency by a description of work in a pin factory:

But in the way in which this business is now carried on, not only the whole work is a particular trade, but is divided into a number of branches, of which the greater part are likewise peculiar trades. One man draws out the wire, another straightens it, a fourth points it, a fifth grinds it at the top for receiving the head; to make the head requires two or three distinct operations; to put it on, is a particular business, to whiten the pins is another; it is even a trade by itself to put them in the paper; and the important business of making a pin is, in this manner, divided into about eighteen distinct operations, which, in some manufactories, are all performed by distinct hands, though in some others the same man will sometimes perform two or three of them. I have seen a small manufactory of this kind where only ten men were employed, and where some of them consequently performed two or three distinct operations. But though they were very poor, and therefore but indifferently accommodated with the necessary machinery, they could, when they exerted themselves, make among them about twelve pounds of pins in a day. There are in a pound about four thousand pins of a middling size. Those ten persons, therefore, could make among them upwards of forty-eight thousand pins in a day. But if they had all wrought separately and independently, and without any of them having been educated to this particular business, they certainly

could not each of them have made twenty, perhaps not one pin a day; that is, certainly, not the two hundred fortieth, perhaps not the four thousand eight hundredth part of what they are at present capable of performing, in consequence of a proper division and combination of their different operations. (pp. 4-5)

This passage shows what Smith meant by the division of labor, and by the claim that increasing division of labor increases the productivity of labor. What I want to add is that the division of labor and specialization are aspects of what we might call cooperative production. In the pin factory, each worker is taking a different part of the work, and in doing his part he is working along with -- co-oper-ating with -- the other workers in the pin factory. Each relies on the others for the part he or she does not do. They take different roles in production, and the roles are complementary. Classical economists of the nineteenth century extended this idea, until Richard Ely⁴, a founder of the American Economic Association, argued that cooperation in production is the primary source of high standards of living.

Smith's first great insight here is that cooperative production increases productivity. "The division of labor ... occasions, in every art, a proportionable increase

⁴ Ely also synthesized the ideas of the Austrian School, with respect to "roundabout production" with those of Smith. For Ely, division of labor and roundabout production were major aspects of the complex cooperation of labor that gives rise to high productivity and high standards of living.

in the productive powers of labor. ... It is the great multiplication of the productions of all the different arts, in consequence of the division of labor, which occasions, in a well-governed society, that universal opulence which extends itself to the lowest ranks of the people." (pp. 5, 11) In short, "In civilized society [one] stands at all times in need of the co-operation and assistance of great multitudes, ..." (p. 14)

The division of labor into different trades is also an aspect (and perhaps the more important aspect) of the division of labor, according to Smith. "In the lone houses and very small villages which are scattered about in so desert a country as the Highlands of Scotland, every farmer must be butcher, baker and brewer for his own family. ... A country carpenter deals in every sort of work that is made of wood ...[he] is not only a carpenter, but a joiner, a cabinet maker, and even a carver in wood, as well as a wheelwright, a ploughwright, a cart and waggon maker." (p. 17) This is in contrast to a more developed region. "Observe the accommodation of the most common artificer or day-laborer in a civilized and thriving country, and you will perceive that the number of people of whose industry a part, though but a small part, has been employed in procuring him his accommodation, exceeds all computation." (p. 11. By accommodation, here, Smith means not only his residence, but everything he consumes, and the example that Smith gives is his coat). Conversely, the laborer's work usually will contribute, directly or indirectly, to meeting the needs of many others in society.

This division of labor is so characteristic of modern society that we may fail to notice it, as a fish fails to notice the water in which he swims. It was newer, and thus perhaps more noticeable, in Smith's time. Economists have had little to say about it in the

twentieth century -- at least, in most of the twentieth century. Just recently, in the 1990's, a number of economists specializing in the study of economic growth have again come to see the division of labor as a key cause of growth in the wealth of nations.⁵

Other Causes of Increased Production

We have said a bit about the first three causes of increased production on the list. What about the other two?

If we have only a certain amount of resources to use, and we discover no new methods for using them, and there is no change in the division of labor and specialization in society, then how can production be increased? The answer is that we might improve the use of the resources we have, in either or both of two ways:

- Put the resources to work where they are more productive and useful; that is, improve the "allocation of resources;" or
- Make increased use of resources that are not now being fully used.

⁵ In their book *Innovation and Growth in the Global Economy*, (Cambridge Mass.: MIT Press, 1993) Helpman and Grossman summarize and extend some recent work in economics that stresses the role of division of labor and complementary production activities in economic progress -- returning, to some extent, to Adam Smith's ideas in this area.

These have been the focus of most of the writing on economics in the twentieth century, and accordingly, they correspond roughly to the two great divisions of twentieth century economics:

- microeconomics

and

- macroeconomics

Kinds of Economics

Economics, like other studies, can be broken down into more specialized subfields. The broadest categories are the two just mentioned: microeconomics and macroeconomics.

In explaining these two terms, it might help to go back in history a bit. The word "economics" is based on Greek roots, but that is a bit of a humbug, since the Greeks didn't have a field of study anything like economics. The two Greek roots of the word "economics" are *oikos* -- meaning more or less the household or family estate -- and *nomos*, which can mean rules, natural laws or laws made by the government, but which in this case primarily means "wise saws" or "rules of thumb." Thus the title of the book *Oikonomia*, by the Greek author Xenophon, is probably best translated as "rules of thumb for estate management."

Here's how the word "economics" evolved to its modern use. By the 1600's, the interdependence of people and nations through markets had grown so great that it was necessary for governments to have carefully thought out policies to deal with the markets. The most common such policy was "mercantilism" -- and the

Xenophon was a Greek author, a contemporary of Plato, and, like him, a student of Socrates. Xenophon's writings ranged from philosophic works to his treatise on estate management, entitled *Oikonomia* (that is, *Economics*); but his most famous written work was *Anabasis*. Xenophon, as a gentleman adventurer and aspiring historian, accompanied a force of Greek mercenaries in the service of Persian King Cyrus in a Persian war of succession. The mercenaries marched deep into the Persian empire and were victorious -- but both Cyrus and their own general were killed. For the march back to Greece, the mercenaries had to elect a new general -- and they elected Xenophon. He led them to Greek territory and later wrote it all up in *Anabasis*.

There must be a cast-of-thousands movie in the story, but, so far as I know, it has never been shot.

essence of mercantilism is to try to sell as much as you can to your neighbors, while limiting what they sell to you, so that they have to pay you in gold. But this policy was criticized by a number of thoughtful scholars, of whom Adam Smith is the most famous. They were engaged in a new specialization: the study of "rules of thumb for the management of the common political household," which is expressed in the Greek-derived phrase "Political Economy." And that is what the new field was called.

(The Greek root of the word political is, of course, polis -- the word for the political community, or state).

Adam Smith and his immediate successors, the "Classical Political Economists" (as Karl Marx called them) were concerned mostly with the workings of a market economy as a whole. In modern terms, we would say that they were concerned with

"macroeconomics." The new Greek root here is, of course, "macro," meaning "big." Macroeconomics is concerned with the economic system as a whole and therefore with economic phenomena which are "big" in the sense that the whole is "big" in relation to its parts.

Karl Marx (1818-83) is the towering figure in the origins of Socialism and Communism as they have been known in the twentieth century. A German of middle-class origins, he was educated as a philosopher but became a democratic revolutionary. Because of his revolutionary activities he found it necessary to leave Germany and to make his living as a journalist. In the mid-1840's, he became a socialist, entered into his long association with Friedrich Engels, and began his study of economics. *The Communist Manifesto* and *Capital* (commonly known by its German title, *Das Kapital*), written with Engels' collaboration, support, or assistance in various cases, became the key works for the evolution of Socialism and Communism in the late nineteenth and twentieth centuries.

However, beginning in the 1870's, scholarship in economics took a turn toward a much more analytic approach, and economists began to be concerned with the workings of the parts which make up a market economy: with the workings of markets for particular goods and services, the functioning of particular companies, and the determinants of demand on the part of individual consumers. This is now called "microeconomics." The Greek root "micro," meaning small, tells us that the microeconomist is concerned with economic phenomena which are small in the sense that the parts are small in relation to the whole.

This analytic economics began to see itself (with some reason) as a science, and the term "political" in the phrase "political economy" seemed an embarrassment. So it was dropped, and the ending "-ics," as in physics, was tacked onto the end of "econom," to make it sound more scientific.

John Maynard Keynes was probably the most influential economist of the first half of the twentieth century. The son of a professor of economics, John Neville Keynes, and destined by family connection to be influential in the narrow British university world, Keynes added his own intellectual powers, daring conception, and the courage of his convictions to create an impact that a lesser mind and soul would not have had. Keynes was on the staff of the British delegation that negotiated peace after World War I, but he regarded the terms as the seeds of disaster, resigned in protest, and wrote his criticisms in *The Economic Consequences of the Peace* (1919), "...bursting" (as Schumpeter wrote) "into international fame when men of equal insight but less courage and men of equal courage but less insight kept silent." Keynes became editor of the *Economic Journal*, certainly one of the most important of journals of professional work and research in economics then as now. After the disaster of the Great Depression, Keynes was the leading figure in a group of (mostly) younger and very creative economists who attempted to understand and explain the disaster. Borrowing freely from their ideas, Keynes published *The General Theory of Employment, Interest and Money*, which (again quoting Schumpeter) "was a similar feat of leadership. It taught England, in the form of an apparently general analysis, his own personal view of her social and economic situation and also his own personal view of 'what should be done about it.'" *The General Theory*, as it is known, also founded modern macroeconomics, and virtually all of the work in that field emerges from Keynes' work, if not positively as extensions and adaptations then negatively as criticism or the extension of criticism of it.

The analytic approach was very successful for a time. The macroeconomic approach of the Classical Political Economists never disappeared entirely, but it was (so to say) put on the back burner around 1900. But by 1930 -- as the

The period about 1929-40, a period of sustained economic problems for the industrialized countries of the world, is known as The Great Depression. Following a sharp drop in stock markets in October, 1929, production and employment in the United States declined steadily until the middle of the nineteen-thirties, recovered somewhat, and then declined again. In the worst periods, about one-third of the American work force was out of work. Details and dates of economic decline varied from country to country, and to some extent from one industry and region to another; but generally the Great Depression ended in the frenzy of war production in World War II.

Great Depression got well under way -- the analytic approach didn't look so good. Many economists felt it was time to go back at least partway to the macroeconomic concerns of the Classical Political Economists. The most famous of the economists who took this direction is John Maynard Keynes.

By the late 1950's -- when Paul Samuelson's seminal economics textbook appeared -- it was clear that there was much that was useful and true in both approaches, and that the economics profession had to be committed to both macroeconomics and microeconomics. Thus, it was necessary to have words for the two great divisions of economics.

Of course, most economists specialize in one or the other. In practice, the microeconomist studies the working of markets for particular goods and services, and the interdependencies among these, and the supplies and demands of individual enterprises and consumers. (I should say that the individual enterprises and consumers are abstract, not concrete and specific, individuals, as a rule. The individual markets may be either

abstract or concrete). The macroeconomist studies phenomena which seem to affect or arise from the operation of the market system as a whole: unemployment, inflation, the workings of the monetary system, and the determinants of economic growth.

Paul Samuelson, for many years Professor of Economics at Massachusetts Institute of Technology, was the author of a large volume of distinguished work in mathematical economics, including the influential *Foundations of Economic Analysis*, but is probably best known for his introductory text, *Economics*, the first to incorporate both Keynesian economics and modern developments in microeconomics, and thus a formative influence on economic teaching after World War II.

Applied Fields in Economics

Of course, there are a larger number of applied fields in economics. Some of these draw more especially on macroeconomics, some on microeconomics, and some draw on aspects of both. An important applied field that draws on both microeconomics and macroeconomics is **international trade theory**. Since this field treats the economic system of a country both as a whole and as a part of a world community of trading nations, it is both macroeconomic and microeconomic. Similarly, **urban and regional economics** tends to be both microeconomic and macroeconomic, since it treats the economies of regions and cities both as wholes and as parts of a larger interdependent

community. **Economic development**, which studies the economic progress the poorer countries, is largely macroeconomic but has its microeconomic aspects.⁶

Industrial organization is an applied field which concentrates on the operation of individual industries, in a less abstract way, but is mainly a specialization within microeconomics. Similarly, **labor economics** studies the economics of labor markets, and, while it has some macroeconomic aspects, is mainly a specialization within microeconomics. **Agricultural economics** and **the economics of public utilities and regulation** are similarly specializations within microeconomics.

The study of the **monetary system** and the demand for money are a specialization within macroeconomics, as are the studies of investment, inventories, consumption expenditure, and **business fluctuations**.

Some subspecializations focus more on method and approach and so can be either macroeconomic or microeconomic, depending on the application. **Economic statistics**, **econometrics**, and **economic history** are cases in point. Somewhat similarly, **the economics of the public sector** is both macroeconomic and microeconomic because government has functions in both spheres.

⁶ Outside economics, the term “economic development” is often used in reference to the development of regions and cities within the wealthier countries, but this would be included in urban and regional economics in most economics programs.

Other subspecializations straddle the border of microeconomics and macroeconomics because they draw on one of the two great fields but have applications in the other. The **economics of information** is a case in point. The methods used in this field of specialization are mostly microeconomic, but the results are widely believed to be important in macroeconomics.

Of course, some subfields belong to microeconomics, and some to macroeconomics, but many overlap these two great subdivisions. Table 1 is a tabular summary of the major subfields.

Table 1. Subfields of Economics

Micro-economics	Macro-economics	Overlapping
Industrial organization	monetary economics	financial economics
labor economics	investment	international trade theory
agricultural economics	inventories	urban and regional economics
the economics of public utilities and regulation	consumption expenditure	economic development
environmental economics	business fluctuations	econometrics
the economics of information industries		economic history
		economics of the public sector

But now is the time to see how these fields and subfields of economics try to think through their subject matter. How do we study economics?

Positive and Normative Economics

Earlier in the chapter, we distinguished two major kinds of economics: microeconomics and macroeconomics. Now we must consider another great dichotomy: Positive versus normative economics. This is an idea we owe to the great conservative social philosopher and economic theorist and statistician, Milton Friedman.

According to Friedman, positive economics has to do with "what is," while normative economics has to do with "what ought to be." Positive economics is a social science, and as such is subject to the same checks on the basis of evidence as any science. By contrast, normative economics has a moral or ethical aspect, and as such goes beyond what a science can say.

Milton Friedman, the son of immigrants from Eastern Europe, graduated from Rutgers University in 1932, having pursued studies in both mathematics and economics. He went on to graduate study at the University of Chicago, where he joined the faculty in 1946. His work on the consumption function, analysis of income, monetary economics and economic fluctuations have been formative influences on modern economics, as has his writing on the methodology of positive economics. A leading advocate of free-market conservatism, he was an economic advisor to Barry Goldwater and Richard Nixon.

It is true that economics cannot rely on experimental methods to verify its hypotheses, in many cases. (Experimental economics is now a growing field, and Vernon Smith shared the 2002 Nobel Memorial Prize in economics for his contributions to this

field, but it is still somewhat limited in scope). However, the same is true of some of the sciences, ranging from astronomy to ecology. These are observational sciences, and so is positive economics.

Let us illustrate the distinction -- and some of its pitfalls -- by an example. A person might say "Everybody ought to be paid the same hourly wage, because it is just that each person should be rewarded in proportion to her labor." This is clearly normative economics -- it has to do with what should be.

Now, a "positive" economist might observe that this rule would be inefficient, in the following sense. Some occupations require more training, more effort, or more talent than others; or they are more responsible. If these occupations are better rewarded, they will be better performed, and overall productivity of labor will increase as a result. This increase in productivity will be more than enough to pay the higher wages for the skilled, talented, effortful and responsible occupations, with something left over that might make everyone better off. This is positive economics so far as it goes, and like any proposition of positive science, it might be either true or false.

But suppose it is true, and suppose the "positive" economist goes on to say that, because equal wages are inefficient, wages should not be equalized. That would be normative, not positive economics, and it would be fallacious. The normative economist can respond with perfect logic that justice is more important than a reduction in output which may well be quite modest. There is a hidden assumption, and the assumption is that people "ought" to value production over equality of reward, and there is no logical reason why they should, and some people do not.

What the positive economist can do is spell out (so far as the evidence and reason permit) the consequences of a rule such as equal pay. This is important, since rules always have consequences that are hard to anticipate, and if we understand the consequences we may want to reconsider our support for the rule. But the rules we propose, and the consequences we are interested in, depend upon our values. Not all consequences are equally important! In the last analysis, positive economics is the servant of normative economics. It is a powerful servant, but a poor master, and "positive" economists who lose sight of this and try to give "scientific" answers to questions of "what ought to be" are not only mistaken but, I believe, ineffective. (I don't believe Milton Friedman ever made that mistake). It is possible for economics to be too "scientific."

Most economists agree that logic and evidence, the two main aspects of positive economics, are crucial for a sound approach to economics. Logic is especially important in economics because of the danger of fallacies in economic reasoning. One important example is the fallacy of composition.

Fallacy of Composition

Green says:

If a tobacco company advertises, its sales will increase.

All tobacco companies advertise.

Therefore, prohibition of advertising would reduce sales of tobacco.

There is an unspoken step, here. Green thinks that the tobacco industry as a whole sells more tobacco than it would sell in the absence of advertising. A critic might point that out.

Brown says:

Are you sure that the overall sales of tobacco are greater on account of advertising than they would be if tobacco companies did not advertise?

Green says:

If each company sells more, then the total sales must be more, right? It's simple addition!

Brown responds:

Not necessarily. An individual company might be able to sell more by taking customers away from the other companies. But they all can't do that at the same time. It's possible that, when they all advertise, those advertisements just cancel out -- leaving the same total sales as before.

Brown has shown the fallacy in Green's reasoning. This illustrates the danger of fallacies in economics. But that doesn't mean that Green was wrong. Advertising may cancel out or it may not -- some nonsmokers may be persuaded to smoke if the industry advertises more -- but Green's reasoning does not really lead to the conclusion he drew.

Green's argument, as he originally stated it, contained a *fallacy*. It is an important fallacy for economics, too, and is called the *fallacy of composition*. To commit the fallacy of composition is to reason that

what one family or company can (or should) do

also

can (or should) be done by a whole group of families or companies.

This is a fallacy because it ignores the possibility that the group of families or households may interact (for example, taking away customers from one another) so that the group works differently than an individual does. Since interactions of this kind are very common in economics, the fallacy of composition is one we have to be on the look-out for.

But now let's apply these ideas by exploring ideas from one particular school of thought -- a key school of thought in twentieth century economics -- the Neoclassical Economists. We next explore some of the major schools of thought in economics, to put the Neoclassical School in context. The chapter to follow will discuss the basic ideas of the Neoclassical school in more detail.

Schools of Thought in Economics

At the beginning of economics, the leaders of the conversation were the "Classical Political Economists," who extended and followed the ideas of Adam Smith. Most of the ideas in this chapter come to us from the Classical Political Economists. In the next chapter we will review some basic ideas from a more recent, very influential group called the Neoclassical Economists. As the name "Neoclassical" suggests, their ideas have grown out of the "Classical" ideas, but with some important differences of theme and detail. Ideas from the Neoclassical Economists are especially important for microeconomics. However:

- Classical and Neoclassical Economists are not the only kinds there are. There are also (at least)
 - Keynesian economists (we will talk a lot about them in the Macroeconomics section)
 - Austrian economists, who believe economics should be a purely deductive, but nonmathematical study, and
 - Marxist economists, who rely on the dialectical method to investigate the world
- There are varieties of opinion among neoclassical and classical economists, and some of them might not agree 100% with the descriptions given here.
- The major orientation of this book is Classical. We suppose that could seem a bit old-fashioned, but we believe it isn't really. The concept of "classical economics" in this book is not meant to be a "fundamentalist" one, but rather a twenty-first

century version of that 200-year old approach. That will include a good deal from the neoclassical and Keynesian schools, and this and that from other schools of thought.

All the same, I believe this chapter is a fair beginning summary of the most important approaches to the field, and (most important) a good start on learning what the various schools of thought agree and disagree on -- the subject matter of economics.

Economics as a Conversation: Chapter Summary

What is economics? I would like to say that economics is a conversation. It is a conversation that has been going on for over two hundred years. The conversation includes professional economists, citizens, managers, and others. The conversation began with Adam Smith's book "The Wealth of Nations." Smith's topic was: why do some countries have high standards of living? Like many long-running conversations, the economics conversation has wandered a bit from one topic to another, and subconversations have split off and rejoined the main stem. What sort of conversation is it? I want to say that, at its best, economics is a "reasonable dialog," that is, a dialog in which all participants can give (more or less sound and conclusive) reasons for their opinions.

The major orientation of this book is toward Classical Economics. Accordingly, we will define economics as Adam Smith did, as "an enquiry into the nature and causes of the wealth of nations." We can recognize at least five causes that might lead to greater wealth: increase in the supply of resources, especially through investment; discovery of

new techniques of production and new supplies of natural resources, increases in the division of labor, improvements in the allocation of resources, and increased use of the resources already available. The last two of these will take up most of our pages, because modern economics has a lot to say about them and they correspond roughly to the two great branches of modern economics, microeconomics and macroeconomics. As to methods of investigation, we will try to be as scientific as we can, where scientific answers can be gotten. But we will put nothing beyond criticism and discussion. Assumptions and definitions of terms should be open to criticism, and carefully chosen in the light of critical reasoning. (In practice, careful definitions of terms are especially important in economics).

Anyway, this book will try to present modern economics as an ongoing conversation, and the product of more than two centuries of discussion. I hope you will join the conversation, enjoy it, and gain something from it.