

Introduction

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What is Economics?

The term **economics** was first used by philosophers of ancient Greece, such as Xenophon (author of first Oikonomikos [οἰκονομικός]), who were interested in studying all the **institutions** of civilized society and did not develop an academic specialization in the study of markets alone.

Adam Smith (1776) defined *political economy*

An Inquiry into the Nature and Causes of the Wealth of Nations

“a branch of the science of a statesman or legislator [with the twofold objectives of providing] a plentiful revenue or subsistence for the people ... [and] to supply the state or commonwealth with a revenue for the publick services.”

→ limited to economy based on currency

Alfred Marshall: Principles of Economics (1890)

extended analysis beyond wealth and from the societal to the microeconomic level:

“Economics is a study of man in the ordinary business of life. It enquires how he gets his income and how he uses it. Thus, it is on the one side, the study of wealth and on the other and more important side, a part of the study of man.”

Lionel Robbins:

“Economics is the **science** which studies human behaviour as a relationship between **ends** and **scarce means** which have alternative uses.”

经济：经邦济世，治国平天下；（儒家）文能安邦兴业，武能御侮却敌 [**we are not interested in this!**]

What is Microeconomics?

2 main branches of economics

Microeconomics: individual decision making & its collective effects on allocation of scarce resources

The Scope of Microeconomics

- Microeconomics isn't just about money!
- Micro-economists study an extremely broad range of topics, including marriage, crime, addiction, and suicide.

In effect, microeconomics has evolved into the study of decision making.

Macroeconomics: aggregate phenomena, e.g., recessions, economic growth, unemployment...

(Much of modern macroeconomics involves applications of microeconomics)

Institutions:

Microeconomic analysis begins with an understanding of the institutions, including laws, politics, customs, that define a society's procedures for allocating resources. Those procedures empower various people to make decisions, but they also constrain their choices.

Decentralization versus Centralization

capitalist economy:

- 1: production are mostly owned and controlled by and for the benefit of private individuals;
- 2: the allocation of resources is governed by voluntary trading among businesses and consumers.

Typically, trading is organized into markets. Production takes place in thousands of independent firms, which are free to produce whatever their owners and managers choose. Likewise, consumers are free to spend their money as they please.

communist economy:

- 1: government owns and controls the means of production and distribution;
- 2: government officials decide what to produce, how to produce it, and who gets it.

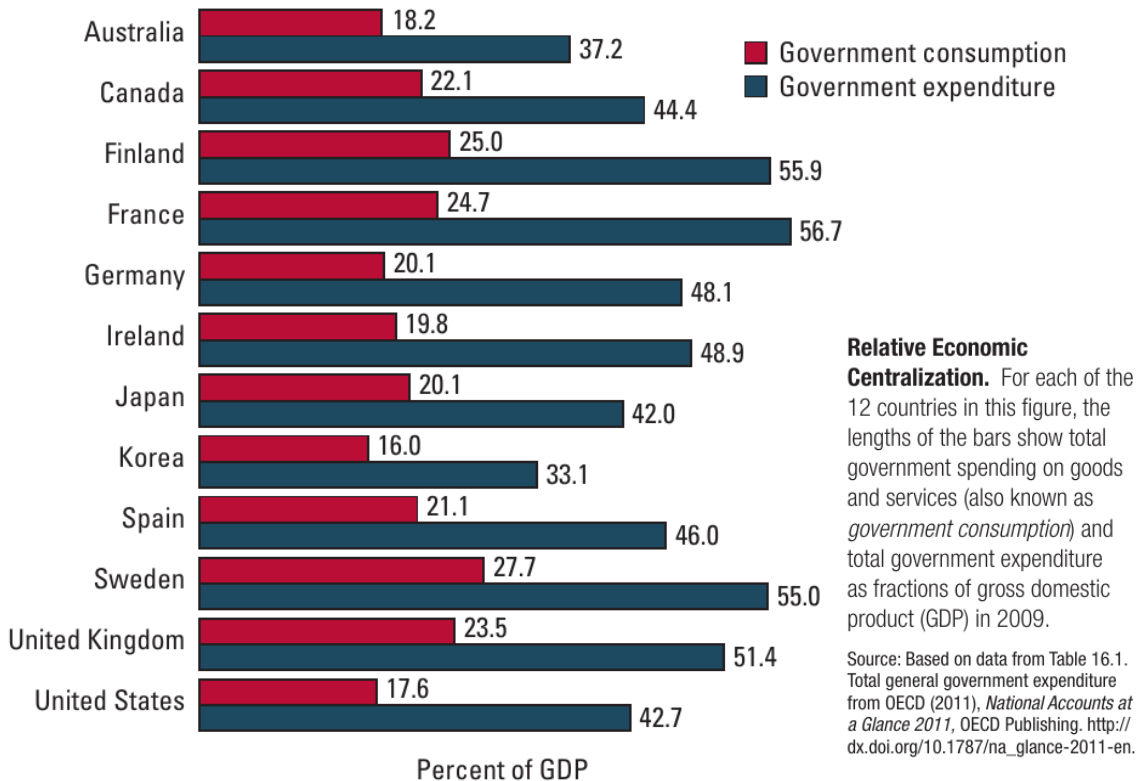
Soviet Union is a typical example, the managers of manufacturing plants received their production targets and other instructions from government ministries. Government officials also decided who would receive coveted consumer items, such as washing machines and automobiles.

What is Microeconomics?

Institutions: (continued)

Currently, almost every society takes a **hybrid** approach.

While there is no well accept measure of a society's degree of economic centralization, we will use statistics on the size of government to get a general idea:



Total government spending on goods and services (government consumption) and total government expenditure (includes both consumption and transfer payments like social security and Welfare), expressed as percentages of gross domestic product (GDP: a measure of national economic activity), for 12 countries as of 2009.

Finland, France, and Sweden have the most centralized economies of the twelve; South Korea's economy is the least centralized; only 16 percent of GDP goes to government consumption and 33.1 percent to government expenditure. The United States lies on the low end of this spectrum, along with Japan and Australia.

What is Microeconomics?

Institutions: (continued)

Markets

Markets are economic institutions that provide people with opportunities and procedures for buying and selling goods and services. The most common feature of economic decentralization.

In microeconomic analysis, a market is associated with a single group of closely related products that are offered for sale within particular boundaries, e.g., geographic. *However, the Internet makes it more interesting!*

Flea market:

Non-economist will say it is a market

To an economist, a flea market doesn't qualify as a market:

- 1: Sellers offer a wide variety of goods, from socks to sofas; an economist would distinguish between a sock market and a sofa market.
- 2: The sock market will include other sources of socks for the flea market's customers, e.g., local clothing and department stores, and possibly companies that sell socks over the Internet.

In modern markets, trade is usually governed by prices. A price is the rate at which someone can swap money for a good. Much of microeconomics seeks to understand the process by which prices are determined.

Markets rely on institutions that establish and protect private property rights. A property right is an enforceable claim on a good or resource. Holding all the property rights to an object is the same thing as owning it. If sellers lacked property rights, they would have nothing of value to offer buyers.

What is Microeconomics?

Institutions: (continued)

Markets (continued)

Trade can occur only if property rights are transferrable, i.e., the current owner of a good can reassign the rights to another consenting party.

- EX: 1) When you buy a used car, the previous owner transfers the car's title into your name. When property rights aren't transferrable, markets can't operate.
2) Many workers in the United States have rights to pension benefits, those rights aren't legally transferrable, so there's no market for them. You can't buy the rights to someone else's pension benefits.

Counties that allocate scarce resources primarily through markets are said to have market economies.

Governments can play either large or small roles in such economies.

- In a free market system, markets are allowed to operate as they will, with little regulation or other intervention. The role of government is mostly limited to enforcing and protecting property rights.

There are ways to decentralize resource allocation without using markets, e.g.,

- 1st-come 1st-served: many resources, like space on the beach;
- Lottery: seats in an oversubscribed college class.

One of the main objectives of microeconomics: determine how well each method of allocating scarce resources performs → judge whether specific economic decisions should be centralized or decentralized, and whether markets are preferable to other economic institutions.

What is Microeconomics?

Economic Motives

We usually assume that people are motivated by material self-interest, i.e., by the desire for goods and services. (other motivations, e.g., someone might care about someone else's well-being.)

The procedures used to allocate scarce resources create **incentives** for people to engage in certain activities and to avoid others. In market economies, the ways people respond to material incentives depend on whether they act as *consumers, employees, or owners of firms*.

- Self-interested consumers try to choose the mix of goods and services that provides the highest possible level of **satisfaction**.
Their incentives depend on prices:
 High price discourages the consumption of a good, while a low price encourages it.
- Self-interested employees try to choose the mix of work and leisure that provides the highest possible level of satisfaction.
Their incentives depend on how they are compensated:
 Higher pay for each hour of work increases the attractiveness of work relative to leisure.
- The owners of firms try to choose the mix of inputs and outputs that provides the highest possible level of profit. Because owners can exchange profits for goods and services, higher profits permit greater satisfaction.
Owners respond to incentives created by the prices of inputs and outputs:
 For inputs, high prices discourage their use. For outputs, high prices encourage their production.

Satisfaction also motivates behavior outside of markets:

- children respond to incentives to study hard at school;
- politicians respond to incentives to promote policies that increase the likelihood of their reelection;
- military officers respond to incentives to behave in ways that increase the likelihood of their promotion.

Microeconomic analysis can help us understand how people respond to incentives in these non-market settings.

What is Microeconomics?

Positive versus Normative Analysis

Positive questions (*positive economics analysis*):

a central objective of microeconomics, addresses factual questions

Positive questions concern what *did* happen, what *will* happen, or what *would* happen.

- what *did* happen: provide a factual account of the past
EX: how the distribution of wealth among U.S. households changed between 1900 and 2000.
- what *will* happen: forecast the future
EX: how the average interest rate charged on home mortgages will change over the next year.
- what *would* happen: describe the likely consequences of certain actions, based on an understanding of cause and effect.
EX: If Dell were to reduce the price of notebook computers by 10 percent, how many more notebooks would the company sell? Would the increase in the sale of notebooks cut into the sales of Dell's desktop computers? If so, by how much?

Normative questions (*normative economics question*) :

addresses questions that involve value judgment concerning the allocation of resources

Normative questions concern what ought to happen, rather than what did, will, or would happen.

- EX:
- 1) Is society better off with free trade between countries or with trade barriers?
 - 2) What is the best way to control carbon emissions?
 - 3) Are there ways to improve the structure of our health insurance system?

Since value judgments are subjective, answers to normative questions are neither right nor wrong, and their validity isn't testable. Consider the following normative statement: "Economic inequality is evil." This statement is a value judgment, and people are free to disagree about it, even when they agree about the objective facts.

Tools of Microeconomics?

Economics is a social science:

- Social: it concerns human behavior;
- Science: economists follow the scientific method.

The Scientific Method

1. Initial observation

Starts with the observation of an unexplained phenomenon,
e.g., why water, which is essential to life, costs far less per ounce than diamonds, which are not.

2. Theory

Tries to come up with a possible explanation, known as a theory,
e.g., economists developed the theory of supply and demand.

3. Additional implications

Good theorizing requires the scientist to “stick your neck out.” Having formulated a theory, you must look for additional implications that can either be verified or falsified.
e.g., the theory of supply and demand implies that prices should rise following an increase in the cost of an input.

4. Further observation and testing

To determine whether a theory is valid, scientists make further observations, gathering data that to test the theory and additional implications.
e.g., gather the data needed to determine whether prices do rise following an increase in the cost of an input.

5. Refinement of the theory

further observations are inconsistent with some or all of a theory's additional implications, return to 3 to modify theory.

Tools of Microeconomics?

Models and Mathematics

Model: A simplified representation of a phenomenon—a story or analogy that explains how part of the world works. Often, a model provides an account of cause and effect.

A model needn't be mathematical, however.

EX:

Take the following statement: “**If you study longer for a microeconomics exam, you’ll receive a higher grade.**”

This qualitative model is certainly useful, though not as useful as a good quantitative model. For example, if you knew that another hour of studying would improve your numerical score on an exam by 10 percent, you could better assess whether additional studying is worth the time and effort.

Economists usually work with mathematical models. Why?

- Most economic choices are quantitative,
- Most of the economic questions raised in business and government call for precise answers.
Mathematical models can provide precision; qualitative theories cannot.

The typical economic model takes certain variables as given and describes how others are determined.

- **exogenous:** variables taken as given
- **endogenous:** variables determined by the agent in the model, most are choice variables

When we study how the endogenous variables respond as exogenous factors change, we call it comparative statics

Tools of Microeconomics?

Simplifying Assumptions

A Joke: *An economist and two scientists stranded on a desert island with a great deal of canned food, but no can opener. The scientists suggest various methods for opening the cans, which the economist dismisses out of hand. When they ask irritably what he would suggest, he smiles and replies, "Assume a can opener."*

- Models are simplified representations of the real world. Simplification allows us to wrap our minds around phenomena that might otherwise be too complex to understand.
- The social phenomena they study are extremely complex, they must make many simplifying assumptions. Often, some of those assumptions are easy to criticize.
- In evaluating economic models, we must remember that no model is literally true. The real test of a good model is its usefulness. A model that contributes to our understanding of social phenomenon and does a reasonably good job of predicting outcomes is certainly useful, even if it isn't entirely realistic.
- The same simplifying assumption can be reasonable in one context but unreasonable in another.
EX:
In studying patterns of household spending on goods like food, clothing, and shelter, it's probably reasonable to assume that people care only about their material self-interest. But in studying charitable contributions, that is not a good assumption.

Occam's razor: "Entities must not be multiplied beyond necessity".

Tools of Microeconomics?

Data Analysis

The scientific method requires us to test our theories by confronting them with data.

- **Records**

Most companies maintain detailed business records, including financial accounts, personnel records, and client or customer databases. Other companies compile data for the express purpose of selling it to others.

- **Surveys**

A survey can be used to collect data on virtually anything, including topics for which there are no records, such as the amount of time people devote to work, housekeeping, leisure, and sleep.

- **Experiments**

To test theories of consumer behavior, economists present experimental subjects with options and then observe their choices. Economists also set up experimental markets and study their operation.

- Treatment group & Control group (lab experiment)
- How do economists determine cause and effect using data obtained from the real world?

Sometimes, the circumstances of otherwise identical people differ entirely by chance. In those cases, economists can attribute the differences in the average outcomes for different groups of people to the differences in their circumstances, just as in the laboratory. This approach is known as a **natural experiment**.

- EX: Whether single men and single women have different tastes in furniture?

Merely observing differences in their choices won't settle the issue. Why not? Among other reasons, men tend to have higher incomes than women. Before attributing gender differences in spending habits to tastes, then, we need to remove differences that are attributable to income. Statistical methods allow us to adjust data on spending by men and women to reflect a common level of income.

- The application of statistical methods to empirical questions in economics is known as **econometrics**.

Uses of Microeconomics?

Why study microeconomics? The simple answer is that it helps us make better economic decisions.

- Business Investment
 - e.g., VC, stock market, crypto market, inventory purchase ...
- Portfolio Management
 - e.g., stock market, corporate bonds, government bonds ...
- Government Policy
 - e.g., environmental policy, monetary policy ...
- **Research**