

BY THE END OF THIS CHAPTER, STUDENTS SHOULD UNDERSTAND:

- how economists apply the methods of science.
- how assumptions and models can shed light on the world.
- two simple models—the circular flow and the production possibilities frontier.
- the difference between microeconomics and macroeconomics.
- the difference between positive and normative statements.
- the role of economists in making policy.
- why economists sometimes disagree with one another.

KEY POINTS IN THE CHAPTER:

1. Economists try to address their subject with a scientist's objectivity. Like all scientists, they make appropriate assumptions and build simplified models in order to understand the world around them. Two simple economic models are the circular-flow diagram and the production possibilities frontier.
2. The field of economics is divided into two subfields: microeconomics and macroeconomics. Microeconomists study decisionmaking by households and firms and the interaction among households and firms in the marketplace. Macroeconomists study the forces and trends that affect the economy as a whole.
3. A positive statement is an assertion about how the world *is*. A normative statement is an assertion about how the world *ought to be*. When economists make normative statements, they are acting more as policy advisers than scientists.
4. Economists who advise policymakers offer conflicting advice either because of differences in scientific judgments or because of differences in values. At other times, economists are united in the advice they offer, but policymakers may choose to ignore it.

I. THE ECONOMIST AS SCIENTIST**A. Economists follow the scientific method.**

1. Observations help us to develop theory.
2. Data can be collected and analyzed to evaluate theories.
3. Using data to evaluate theories is more difficult in economics than in physical science because economists are unable to generate their own data and must make do with whatever data are available.
4. Thus, economists pay close attention to the natural experiments offered by history.

B. Assumptions make the world easier to understand.

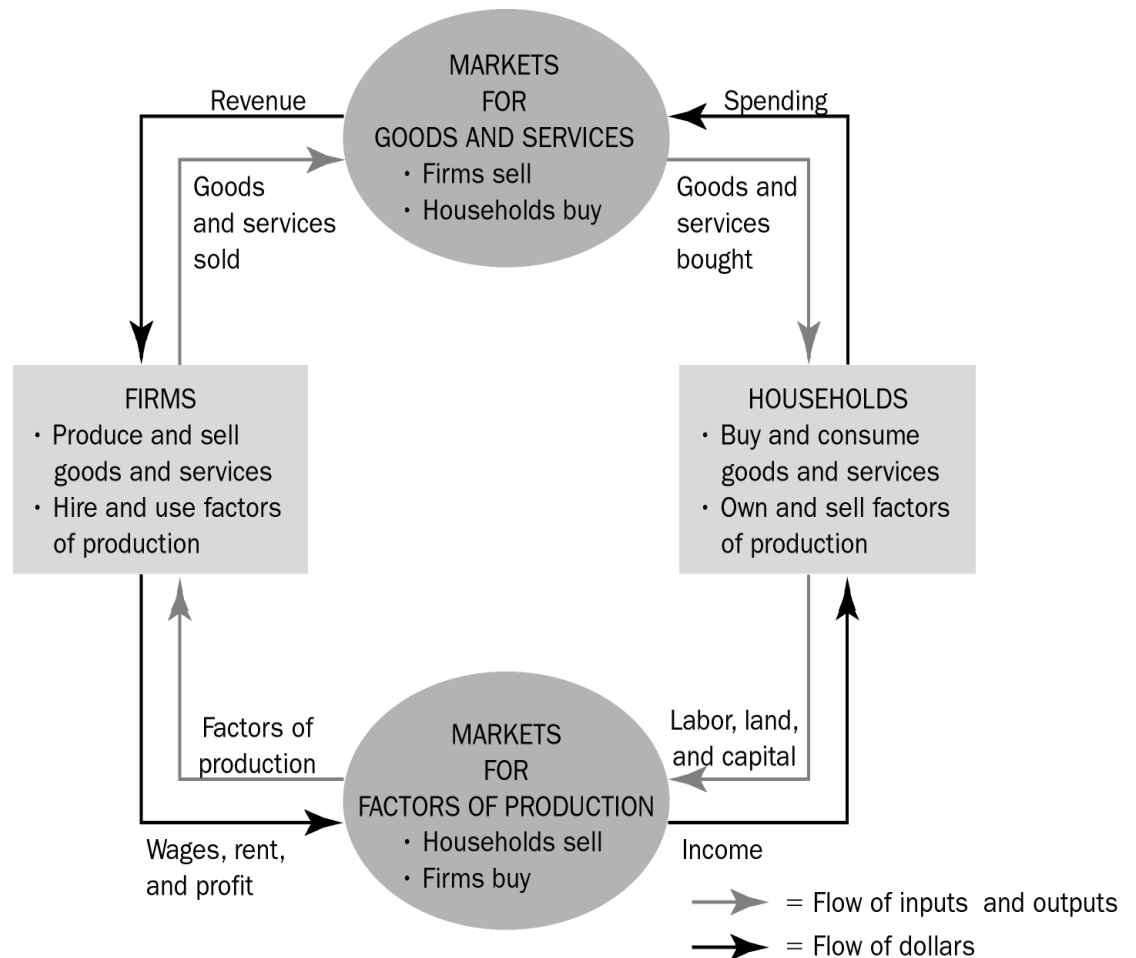
1. Example: to understand international trade, it may be helpful to start out assuming that there are only two countries in the world producing only two goods. Once we understand how trade would work between these two countries, we can extend our analysis to a greater number of countries and goods.
2. One important role of a scientist is to understand which assumptions one should make.

3. Economists often use assumptions that are somewhat unrealistic but will have small effects on the actual outcome of the answer.

C. Economists use economic models to explain the world around us.

1. Most economic models are composed of diagrams and equations.
2. The goal of a model is to simplify reality in order to increase our understanding. This is where the use of assumptions is helpful.

D. First Model: The Circular Flow Diagram

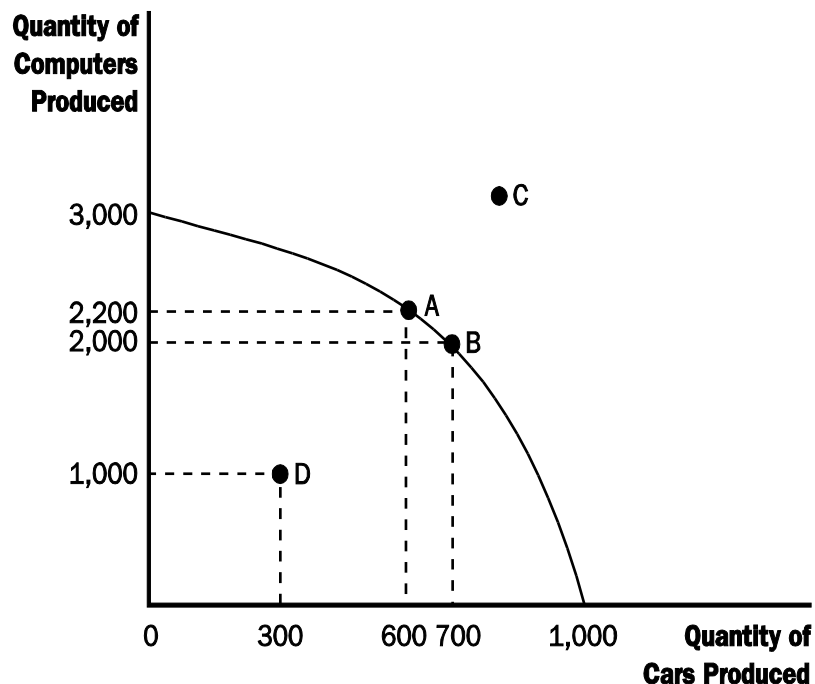


1. Definition of **circular-flow diagram**: a visual model of the economy that shows how money flows through markets among households and firms.
2. This diagram is a very simple model of the economy. Note that it ignores the roles of government and international trade.
 - a. There are two decision makers in the model: households and firms.
 - b. There are two markets: the market for goods and services and the market of factors of production.
 - c. Firms are sellers in the market for goods and services and buyers in the market for factors of production.
 - d. Households are buyers in the market for goods and services and sellers in the market for factors of production.
 - e. The inner loop represents the flows of inputs and outputs between households and firms.
 - f. The outer loop represents the flows of dollars between households and firms.

E. Second Model: The Production Possibilities Frontier

1. Definition of **production possibilities frontier**: a graph that shows the combinations of output that the economy can possibly produce given the available factors of production and the available production technology.
 - 1.1. Production possibility frontier assume that;
 - a. The economy has given set of resources, such as land, technical, knowledge, factories, tools, and labor.
 - b. The society can produce only two commodities cars and computers with these resources.
 2. Example: an economy that produces two goods, cars and computers.
 - a. If all resources are devoted to producing cars, the economy would produce 1,000 cars and zero computers.
 - b. If all resources are devoted to producing computers, the economy would produce 3,000 computers and zero cars.
 - c. More likely, the resources will be divided between the two industries. The feasible combinations of output are shown on the production possibilities frontier.

The Production Possibilities Frontier



3. Because resources are scarce, not every combination of computers and cars is possible. Production at a point outside of the curve (such as C) is not possible given the economy's current level of resources and technology.
4. Production is **efficient** at points on the curve (such as A and B). This implies that the economy is getting all it can from the scarce resources it has available. There is no way to produce more of one good without producing less of another.
5. Production at a point inside the curve (such as D) is **inefficient**.
 - a. This means that the economy is producing less than it can from the resources it has available.
 - b. If the source of the inefficiency is eliminated, the economy can increase its production of both goods.

6. The production possibilities frontier reveals Principle #1: People face tradeoffs.
 - a. Suppose the economy is currently producing 600 cars and 2,200 computers.
 - b. To increase the production of cars to 700, the production of computers must fall to 2,000.
 7. Principle #2 is also shown on the production possibilities frontier: The cost of something (*100 additional cars*) is what you give up (*200 computers*) to get it (opportunity cost).
 - a. The opportunity cost of increasing the production of cars from 600 to 700 is 200 computers.
 - b. Thus, the opportunity cost of each car is two computers.
 8. The opportunity cost of a car depends on the number of cars and computers currently produced by the economy.
 - a. The opportunity cost of a car is high when the economy is producing many cars and few computers.
 - b. The opportunity cost of a car is low when the economy is producing few cars and many computers.
 9. Economists generally believe that production possibilities frontiers often have this bowed-out shape because some resources are better suited to the production of cars than computers (and vice versa).
 10. The production possibilities frontier can shift if resource availability or technology changes. Economic growth can be illustrated by an outward shift of the production possibilities frontier.
- F. Microeconomics and Macroeconomics**
1. Economics is studied on various levels.
 - a. Definition of **microeconomics: the study of how households and firms make decisions and how they interact in markets.**
It is study of individuals' behaviour
 - b. Definition of **macroeconomics: the study of economy-wide phenomena, including inflation, unemployment, and economic growth.**
It is study of aggregates' behaviour
 2. Micro means small and macro means large
 3. Microeconomics teaches about demand, supply, and price of a good. While macroeconomics teaches about national income, money supply, inflation, interest rates, unemployment, growth rate, international trade, and government policies.
 4. Micro events may produce macro consequences and vice versa.

II. THE ECONOMIST AS POLICY ADVISER

A. Positive Versus Normative Analysis

1. Economics is a science as well as it requires art to execute it.
2. It is Positive as well as normative
3. **Positive:**
 - a. It adopts a scientific approach to the analysis of economic events hence it is POSITIVE.
 - b. It concerns itself with the statements that are capable of verification by reference to the facts.

- c. e.g. “ if price of cloth is higher, people will buy less” one can taste the validity of the above statement by analyzing and testing data on price and demand for cloths
5. **Normative:**
- a. It can be normative also as it involves prescriptions of statements about “what ought to be”
 - b. It involves the advocacy of specific policy prescriptions, because it uses ethical judgments as well as knowledge of positive economics.
 - c. Contrary to positive economic statements, normative economic statements cannot be tested before they are accepted or rejected.
 - d. For instance: “Corporate sector should not maximize profits.” Or “ Monopolies should be regulated.”

III. WHY ECONOMISTS DISAGREE

A. Differences in Scientific Judgments

- 1. Economists often disagree about the validity of alternative theories or about the size of the effects of changes in the economy on the behavior of households and firms.
- 2. Example: some economists feel that a change in the tax code that would eliminate a tax on income and create a tax on consumption would increase saving in this country. However, other economists feel that the change in the tax system would have little effect on saving behavior and therefore do not support the change.

B. Differences in Values