Every field of study has its own terminology

**Mathematics**
- integrals
- axioms
- vector spaces

**Psychology**
- ego
- id
- cognitive dissonance

**Law**
- torts
- Promissory estoppel
- venues

**Economics**
- Supply
- Opportunity cost
- Elasticity
- Comparative advantage
- Consumer Surplus
- Demand
- Deadweight loss

Economics trains you to . . .

- Think in terms of alternatives.
- Evaluate the cost of individual and social choices.
- Examine and understand how certain events and issues are related.

The Economist as a Scientist

**The economic way of thinking . . .**

- Involves thinking analytically and objectively.
- Makes use of the scientific method.

The Scientific Method

- Uses abstract models to help explain how a complex, real world operates.
- Develops theories, collects, and analyzes data to prove the theories.

Observation, Theory and More Observation!
The Role of Assumptions

- Economists make assumptions in order to make the world easier to understand.
- The art in scientific thinking is deciding which assumptions to make.
- Economists use different assumptions to answer different questions.

Economic Models

- Economists use models to simplify reality in order to improve our understanding of the world.
- Two of the most basic economic models include:
  - The Circular Flow Model
  - The Production Possibilities Frontier

The Circular-Flow Model

The circular-flow model is a simple way to visually show the economic transactions that occur between households and firms in the economy.

The Circular-Flow Diagram

- **Firms**
  - Produce and sell goods and services
  - Hire and use factors of production
  - Households
  - Buy and consume goods and services
  - Own and sell factors of production

- **Markets for Goods & Services**
  - Firms sell
  - Households buy

- **Markets for Factors of Production**
  - Households sell
  - Firms buy
The Circular-Flow Diagram

Factors of Production

- Inputs used to produce goods and services
- Land, labor, and capital
- Capital – equipment and structures used to produce goods and services (e.g., machines).

The Production Possibilities Frontier

The production possibilities frontier is a graph showing the various combinations of output that the economy can possibly produce given the available factors of production and technology.

The Production Possibilities Frontier

<table>
<thead>
<tr>
<th>Quantity of Computers Produced</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000</td>
</tr>
<tr>
<td>2,000</td>
</tr>
<tr>
<td>3,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quantity of Cars Produced</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
<tr>
<td>1,000</td>
</tr>
<tr>
<td>2,000</td>
</tr>
<tr>
<td>3,000</td>
</tr>
</tbody>
</table>

Concepts Illustrated by the Production Possibilities Frontier

- Efficiency
- Tradeoffs
- Opportunity Cost
- Economic Growth

An outward shift in the production possibilities frontier
PPF Exercise – Athletic Country

<table>
<thead>
<tr>
<th>Bats</th>
<th>Rackets</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>420</td>
</tr>
<tr>
<td>100</td>
<td>400</td>
</tr>
<tr>
<td>200</td>
<td>360</td>
</tr>
<tr>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>400</td>
<td>200</td>
</tr>
<tr>
<td>500</td>
<td>0</td>
</tr>
</tbody>
</table>

Plot the production possibility frontier for Athletic Country. Place Bats on the x-axis and Rackets on the y-axis.

PPF Exercise - Continued

1. Is producing 200 bats and 400 rackets feasible?
2. Is producing 200 bats and 200 rackets efficient?
3. Suppose AC is producing 200 bats and 200 rackets. How many additional bats could they produce without giving up any rackets?
4. If Athletic Country currently produces 100 bats and 400 rackets, what is the opportunity cost of an additional 100 bats?
5. If AC currently produces 300 bats and 300 rackets, what is the opportunity cost of an additional 100 bats?
6. Why is the opportunity cost higher in part 2 than in part 1?

Production Possibilities Frontier

Microeconomics and Macroeconomics

- **Microeconomics** focuses on the individual parts of the economy.
  - How households and firms make decisions and how they interact in specific markets
- **Macroeconomics** looks at the economy as a whole.
  - How the markets, as a whole, interact at the national level.

Two Roles of Economists

- When they are trying to explain the world, they are **scientists**.
- When they are trying to change the world, they are **policymakers**.

Positive versus Normative Analysis

- **Positive statements** are statements that describe the world as it is.
  - Called **descriptive analysis**
- **Normative statements** are statements about how the world should be.
  - Called **prescriptive analysis**
Positive Versus Normative

- A key difference between positive and normative statements is how we judge them.
  - We can confirm or refute positive statements by examining evidence.
  - Evaluating normative statements involves values as well as facts.

Positive or Normative Statements?

State governments should be allowed to collect from tobacco companies the costs of treating smoking-related illnesses among the poor.

Positive or Normative Statements?

An increase in the minimum wage will cause a decrease in employment among the least-skilled.

Positive or Normative Statements?

Higher federal budget deficits will cause interest rates to increase.

Positive or Normative Statements?

The income gains from a higher minimum wage are worth more than any slight reductions in employment.

Positive or Normative Statements

- The sky is green.
- Positive statements attempt to describe the world as it is. It is possible that a positive statement can be proved false.
Economists in Washington . . .

. . . serve as advisers in the policymaking process of the three branches of government:
- Legislative
- Executive
- Judicial

Why Economists Disagree

- They may disagree on theories about how the world works.
- They may hold different values and, thus, different normative views.

Examples of What Most Economists Agree On

- A ceiling on rents reduces the quantity and quality of housing available.
- Tariffs and import quotas usually reduce general economic welfare.

Summary

- In order to address subjects with objectivity, economics makes use of the scientific method.
- The field of economics is divided into two subfields: microeconomics and macroeconomics.

Summary

- Economics relies on both positive and normative analysis. Positive statements assert how the world “is” while normative statements assert how the world “should be.”
- Economists may offer conflicting advice due to differences in scientific judgments or to differences in values.