The Economic Problem:
Scarcity and Choice

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CHAPTER 2: The Economic Problem: Scarcity and Choice

Chapter Outline

Scarcity, Choice, and Opportunity Cost
- Scarcity and Choice in a One-Person Economy
- Scarcity and Choice in an Economy of Two or More
- The Production Possibility Frontier
- Comparative Advantage and the Gains from Trade
- The Economic Problem

Economic Systems
- Command Economies
- Laissez-Faire Economies: The Free Market
- Mixed Systems, Markets, and Governments

Looking Ahead
Three basic questions must be answered in order to understand an economic system:

- What gets produced?
- How is it produced?
- Who gets what is produced?
capital Things that are themselves produced and that are then used in the production of other goods and services.

factors of production (or factors) The inputs into the process of production. Another word for resources.
production  The process that transforms scarce resources into useful goods and services.

inputs or resources  Anything provided by nature or previous generations that can be used directly or indirectly to satisfy human wants.

outputs  Usable products.
SCARCITY, CHOICE, AND OPPORTUNITY COST

SCARCITY AND CHOICE IN A ONE-PERSON ECONOMY

Nearly all the same basic decisions that characterize complex economies must also be made in a simple economy.
Opportunity Cost

The concepts of constrained choice and scarcity are central to the discipline of economics.

**opportunity costs** The best alternative that we give up, or forgo, when we make a choice or decision.
SCARCITY, CHOICE, AND OPPORTUNITY COST

SCARCITY AND CHOICE IN AN ECONOMY OF TWO OR MORE

Education takes time. Time spent in the classroom has an opportunity cost.
Specialization, Exchange, and Comparative Advantage

theory of comparative advantage
Ricardo’s theory that specialization and free trade will benefit all trading parties, even those that may be absolutely more efficient producers.
**SCARCITY, CHOICE, AND OPPORTUNITY COST**

**absolute advantage**  A producer has an absolute advantage over another in the production of a good or service if it can produce that product using fewer resources.

**comparative advantage**  A producer has a comparative advantage over another in the production of a good or service if it can produce that product at a lower opportunity cost.
SCARCITY, CHOICE, AND OPPORTUNITY COST

FIGURE 2.2 Comparative Advantage and the Gains from Trade
SCARCITY, CHOICE, AND OPPORTUNITY COST

Weighing Present and Expected Future Costs and Benefits

We trade off present and future benefits in small ways all the time.
Capital Goods and Consumer Goods

**consumer goods** Goods produced for present consumption.

**investment** The process of using resources to produce new capital.

Because resources are scarce, the opportunity cost of every investment in capital is forgone present consumption.
production possibility frontier (ppf) 
A graph that shows all the combinations of goods and services that can be produced if all of society’s resources are used efficiently.
SCARCITY, CHOICE, AND OPPORTUNITY COST

FIGURE 2.3 Production Possibility Frontier
SCARCITY, CHOICE, AND OPPORTUNITY COST

Unemployment

During economic downturns or recessions, industrial plants run at less than their total capacity. When there is unemployment of labor and capital, we are not producing all that we can.
SCARCITY, CHOICE, AND OPPORTUNITY COST

Inefficiency

Waste and mismanagement are the results of a firm’s operating below its potential.

Sometimes, inefficiency results from mismanagement of the economy instead of mismanagement of individual private firms.

The Efficient Mix of Output

To be efficient, an economy must produce what people want.
SCARCITY, CHOICE, AND OPPORTUNITY COST

Negative Slope and Opportunity Cost

**marginal rate of transformation (MRT)**
The slope of the production possibility frontier (ppf).

**FIGURE 2.4** Inefficiency from Misallocation of Land in Farming
TABLE 2.1 Production Possibility Schedule for Total Corn and Wheat Production in Ohio and Kansas

<table>
<thead>
<tr>
<th>POINT ON PPF</th>
<th>TOTAL CORN PRODUCTION (MILLIONS OF BUSHELS PER YEAR)</th>
<th>TOTAL WHEAT PRODUCTION (MILLIONS OF BUSHELS PER YEAR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>700</td>
<td>100</td>
</tr>
<tr>
<td>B</td>
<td>650</td>
<td>200</td>
</tr>
<tr>
<td>C</td>
<td>510</td>
<td>380</td>
</tr>
<tr>
<td>D</td>
<td>400</td>
<td>500</td>
</tr>
<tr>
<td>E</td>
<td>300</td>
<td>550</td>
</tr>
</tbody>
</table>

The Law of Increasing Opportunity Cost

FIGURE 2.5 Corn and Wheat Production in Ohio and Kansas
Economic Growth

economic growth  An increase in the total output of an economy. It occurs when a society acquires new resources or when it learns to produce more using existing resources.
TABLE 2.2  Increasing Productivity in Corn and Wheat Production in the United States, 1935–2006

<table>
<thead>
<tr>
<th>Year Range</th>
<th>Corn Yield Per Acre (Bushels)</th>
<th>Corn Labor Hours Per 100 Bushels</th>
<th>Wheat Yield Per Acre (Bushels)</th>
<th>Wheat Labor Hours Per 100 Bushels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1935–1939</td>
<td>26.1</td>
<td>108</td>
<td>13.2</td>
<td>67</td>
</tr>
<tr>
<td>1945–1949</td>
<td>36.1</td>
<td>53</td>
<td>16.9</td>
<td>34</td>
</tr>
<tr>
<td>1955–1959</td>
<td>48.7</td>
<td>20</td>
<td>22.3</td>
<td>17</td>
</tr>
<tr>
<td>1965–1969</td>
<td>78.5</td>
<td>7</td>
<td>27.5</td>
<td>11</td>
</tr>
<tr>
<td>1975–1979</td>
<td>96.3</td>
<td>4</td>
<td>31.3</td>
<td>9</td>
</tr>
<tr>
<td>1981–1985</td>
<td>107.2</td>
<td>3</td>
<td>36.9</td>
<td>7</td>
</tr>
<tr>
<td>1985–1990</td>
<td>112.8</td>
<td>NA&lt;sup&gt;a&lt;/sup&gt;</td>
<td>38.0</td>
<td>NA&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>1990–1995</td>
<td>120.6</td>
<td>NA&lt;sup&gt;a&lt;/sup&gt;</td>
<td>38.1</td>
<td>NA&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>1998</td>
<td>134.4</td>
<td>NA&lt;sup&gt;a&lt;/sup&gt;</td>
<td>43.2</td>
<td>NA&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>2001</td>
<td>138.2</td>
<td>NA&lt;sup&gt;a&lt;/sup&gt;</td>
<td>43.5</td>
<td>NA&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>2006</td>
<td>145.6</td>
<td>NA&lt;sup&gt;a&lt;/sup&gt;</td>
<td>42.3</td>
<td>NA&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a</sup> NA: Data not available.
SCARCITY, CHOICE, AND OPPORTUNITY COST

FIGURE 2.6  Economic Growth Shifts the ppf Up and to the Right
SCARCITY, CHOICE, AND OPPORTUNITY COST

Sources of Growth and the Dilemma of the Poor Countries

FIGURE 2.7 Capital Goods and Growth in Poor and Rich Countries
SCARCITY, CHOICE, AND OPPORTUNITY COST

COMPARATIVE ADVANTAGE AND THE GAINS FROM TRADE

FIGURE 2.8 Production Possibility Frontiers with No Trade
Although it exists only as an abstraction, the ppf illustrates a number of very important concepts that we shall use throughout the rest of this book: scarcity, unemployment, inefficiency, opportunity cost, the law of increasing opportunity cost, economic growth, and the gains from trade.
SCARCITY, CHOICE, AND OPPORTUNITY COST

THE ECONOMIC PROBLEM

Recall the three basic questions facing all economic systems:

1. What gets produced?
2. How is it produced?
3. Who gets it?

Given scarce resources, how exactly do large, complex societies go about answering the three basic economic questions?
COMMAND ECONOMIES

**command economy** An economy in which a central government either directly or indirectly sets output targets, incomes, and prices.
LAISSEZ-FAIRE ECONOMIES: THE FREE MARKET

**laissez-faire economy**  Literally from the French: “allow [them] to do.” An economy in which individual people and firms pursue their own self-interests without any central direction or regulation.

**market**  The institution through which buyers and sellers interact and engage in exchange.

Some markets are simple and others are complex, but they all involve buyers and sellers engaging in exchange. The behavior of buyers and sellers in a laissez-faire economy determines what gets produced, how it is produced, and who gets it.
Consumer Sovereignty

consumer sovereignty  The idea that consumers ultimately dictate what will be produced (or not produced) by choosing what to purchase (and what not to purchase).
ECONOMIC SYSTEMS

Individual Production Decisions: Free Enterprise

**free enterprise** The freedom of individuals to start and operate private businesses in search of profits.
Distribution of Output

The amount that any one household gets depends on its income and wealth.

*Income* is the amount that a household earns each year. It comes in a number of forms: wages, salaries, interest, and the like.

*Wealth* is the amount that households have accumulated out of past income through saving or inheritance.
Price Theory

New businesses arise each day and some go out of business in response to profit opportunities and losses.

In a free market system, the basic economic questions are answered without the help of a central government plan or directives. This is what the “free” in free market means—the system is left to operate on its own, with no outside interference. Individuals pursuing their own self-interest will go into business and produce the products and services that people want. Others will decide whether to acquire skills; whether to work; and whether to buy, sell, invest, or save the income that they earn. The basic coordinating mechanism is price.
ECONOMIC SYSTEMS

MIXED SYSTEMS, MARKETS, AND GOVERNMENTS

The differences between command economies and laissez-faire economies in their pure forms are enormous. In fact, these pure forms do not exist in the world; all real systems are in some sense “mixed.”

Even staunch defenders of the free enterprise system recognize that market systems are not perfect. First, they do not always produce what people want at lowest cost—there are inefficiencies. Second, rewards (income) may be unfairly distributed, and some groups may be left out. Third, periods of unemployment and inflation recur with some regularity.
absolute advantage
capital
command economy
comparative advantage
consumer goods
consumer sovereignty
economic growth
factors of production (or factors)
free enterprise
inputs or resources
investments
laissez-faire economy
marginal rate of transformation (MRT)
market
opportunity cost
outputs
production
production possibility frontier (ppf)
theory of comparative advantage