Scarcity, Choice, and Opportunity Cost

- Human wants are unlimited, but resources are not.
- 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?
- Every society has some system or mechanism that transforms that society’s scarce resources into useful goods and services.
Scarcity, Choice, and Opportunity Cost

- **Capital** refers to the things that are themselves produced and then used to produce other goods and services.
- The basic resources that are available to a society are **factors of production**:
  - Land
  - Labor
  - Capital

Scarcity, Choice, and Opportunity Cost

- **Production** is the process that transforms scarce resources into useful goods and services.
- Resources or factors of production are the inputs into the process of production; goods and services of value to households are the outputs of the process of production.

Scarcity and Choice in a One-Person Economy

- Nearly all the basic decisions that characterize complex economies must also be made in a single-person economy.
- Constrained choice and scarcity are the basic concepts that apply to every society.
Scarcity and Choice
in a One-Person Economy

- Opportunity cost is that which we give up or forgo, when we make a decision or a choice.

Scarcity and Choice
in an Economy of Two or More

- 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.

- A producer has a comparative advantage in the production of a good or service over another if it can produce that product at a lower opportunity cost.
Comparative Advantage and the Gains From Trade

<table>
<thead>
<tr>
<th>Comparative Advantage and the Gains From Trade</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Daily Production</strong></td>
</tr>
<tr>
<td>Colleen</td>
</tr>
<tr>
<td>Bill</td>
</tr>
</tbody>
</table>

- Colleen has an absolute advantage in the production of both wood and food because she can produce more of both goods using fewer resources than Bill.

- In terms of wood:
  - For Bill, the opportunity cost of 8 bushels of food is 4 logs.
  - For Colleen, the opportunity cost of 8 bushels of food is 8 logs.

- In terms of food:
  - For Colleen, the opportunity cost of 10 logs is 10 bushels of food.
  - For Bill, the opportunity cost of 8 logs is 20 bushels of food.

Suppose that Colleen and Bill each wanted equal numbers of logs and bushels of food. In a 30-day month they (each separately) could produce:

**Monthly Production with No Trade:**

<table>
<thead>
<tr>
<th>Comparative Advantage and the Gains From Trade</th>
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</thead>
<tbody>
<tr>
<td><strong>Monthly Production</strong></td>
</tr>
<tr>
<td>Colleen</td>
</tr>
<tr>
<td>Bill</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
Comparative Advantage and the Gains From Trade

- By specializing on the basis of comparative advantage, Colleen and Bill can produce more of both goods.

<table>
<thead>
<tr>
<th></th>
<th>Wood (logs)</th>
<th>Food (bushels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colleen</td>
<td>80</td>
<td>200</td>
</tr>
<tr>
<td>Bill</td>
<td>50</td>
<td>250</td>
</tr>
<tr>
<td>Total</td>
<td>230</td>
<td>250</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Wood (logs)</th>
<th>Food (bushels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colleen</td>
<td>250</td>
<td>90</td>
</tr>
<tr>
<td>Bill</td>
<td>270</td>
<td>240</td>
</tr>
<tr>
<td>Total</td>
<td>270</td>
<td>270</td>
</tr>
</tbody>
</table>

To end up with equal amounts of wood and food after trade, Colleen could trade 100 logs for 140 bushels of food. Then:

<table>
<thead>
<tr>
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<th>Food (bushels)</th>
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</thead>
<tbody>
<tr>
<td>Colleen</td>
<td>90</td>
<td>240</td>
</tr>
<tr>
<td>Bill</td>
<td>170</td>
<td>170</td>
</tr>
<tr>
<td>Total</td>
<td>270</td>
<td>270</td>
</tr>
</tbody>
</table>

According to the theory of competitive advantage, specialization and free trade will benefit all trading parties, even those that may be absolutely more efficient producers.
Capital Goods and Consumer Goods

- **Capital goods** are goods used to produce other goods and services.
- **Consumer goods** are goods produced for present consumption.

Capital Goods and Consumer Goods

- **Investment** is the process of using resources to produce new capital. Capital is the accumulation of previous investment.
- The opportunity cost of every investment in capital is forgone present consumption.

The Production Possibility Frontier

- The **production possibility frontier (ppf)** is a graph that shows all of the combinations of goods and services that can be produced if all of society’s resources are used efficiently.
The Production Possibility Frontier

• The production possibility frontier curve has a negative slope, which indicates a trade-off between producing one good or another.

• Points inside the curve are inefficient.
  • At point H, resources are either unemployed, or are used inefficiently.
  • Point F is desirable because it yields more of both goods, but it is not attainable given the amount of resources available in the economy.
The Production Possibility Frontier

- Point C is one of the possible combinations of goods produced when resources are fully and efficiently employed.

- A move along the curve illustrates the concept of opportunity cost.
- From point D, an increase in the production of capital goods requires a decrease in the amount of consumer goods.

The Law of Increasing Opportunity Cost

- The slope of the ppf curve is also called the marginal rate of transformation (MRT).
- This negative slope of the ppf curve reflects the law of increasing opportunity cost. As we increase the production of one good, we sacrifice progressively more of the other.
Economic Growth

- **Economic growth** is an increase in the total output of the economy. It occurs when a society acquires new resources, or when it learns to produce more using existing resources.

- The main sources of economic growth are capital accumulation and technological advances.

Outward shifts of the curve represent **economic growth**.

- An outward shift means that it is possible to increase the production of one good without decreasing the production of the other.

- From point D, the economy can choose any combination of output between F and G.
Economic Growth

- Not every sector of the economy grows at the same rate.
- In this historic example, productivity increases were more dramatic for corn than for wheat over this time period.

Capital Goods and Growth in Poor and Rich Countries

- Rich countries devote more resources to capital production than poor countries.
- As more resources flow into capital production, the rate of economic growth in rich countries increases, and so does the gap between rich and poor countries.

Economic Growth and the Gains From Trade

- By specializing and engaging in trade, Colleen and Bill can move beyond their own production possibilities.
Economic Systems

- The economic problem: Given scarce resources, how, exactly, do large, complex societies go about answering the three basic economic questions?

Economic Systems

- Economic systems are the basic arrangements made by societies to solve the economic problem. They include:
  - Command economies
  - Laissez-faire economies
  - Mixed systems

Economic Systems

- In a command economy, a central government either directly or indirectly sets output targets, incomes, and prices.
- In a laissez-faire economy, individuals and firms pursue their own self-interests without any central direction or regulation.
Economic Systems

- The central institution of a laissez-faire economy is the **free-market system**.
- A **market** is the institution through which buyers and sellers interact and engage in exchange.

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- **Consumer sovereignty** is the idea that consumers ultimately dictate what will be produced (or not produced) by choosing what to purchase (and what not to purchase).

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- **Free enterprise**: under a free market system, individual producers must figure out how to plan, organize, and coordinate the production of products and services.
**Economic Systems**

- In a laissez-faire economy, the distribution of output is also determined in a decentralized way. The amount that any one household gets depends on its income and wealth.

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**Economic Systems**

- The basic coordinating mechanism in a free market system is price. **Price** is the amount that a product sells for per unit. It reflects what society is willing to pay.

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**Mixed Systems, Markets, and Governments**

Since markets are not perfect, governments intervene and often play a major role in the economy. Some of the goals of government are to:

- Minimize market inefficiencies
- Provide public goods
- Redistribute income
- Stabilize the macroeconomy:
  - Promote low levels of unemployment
  - Promote low levels of inflation
Review Terms and Concepts

- absolute advantage
- capital
- command economy
- comparative advantage, theory of
- consumer goods
- consumer sovereignty
- economic growth
- economic problem
- investment
- laissez-faire economy
- marginal rate of transformation (mrt)
- market
- opportunity cost
- outputs
- price
- production
- production possibility frontier (ppf)
- resources or inputs
- three basic questions