• The goal of this chapter is to focus on how the three basic economic questions are answered. Specifically:
  – WHAT goods and services does the U.S. produce?
  – HOW is that output produced?
  – FOR WHOM is that output produced?
After completing this chapter, you should know:

1. How an economy’s size is measured.
2. The absolute and relative size of the U.S. economy.
3. Why the U.S. economy can produce so much.
After completing this chapter, you should know:

4. How the mix of U.S. output has changed over time.

5. How (un)equally incomes are distributed.
Measuring WHAT Is Produced

- We add up the monetary value of all produced goods and services to determine the total value of output, which is called Gross Domestic Product (GDP).
Gross Domestic Product (GDP)

• *Gross Domestic Product* is the total value of final goods and services produced in a country during a given period of time.

• It is a summary measure of a nation’s output measured by the Bureau of Economic Analysis of the Commerce Department.
Nominal GDP

• Nominal GDP is the value of GDP measured in *current* dollars.

• Because of inflation, it is useless to compare nominal GDP from one year to another.
Real GDP

• Real GDP is the inflation-adjusted value of GDP or the value of output measured in constant prices.

• These inflation adjustments delete the effects of rising prices by valuing output in constant prices.
International Comparisons

• In 2012, the U.S. economy produced over $15 trillion in output.
• With 5% of the world’s population, the U.S. economy produces roughly 20% of the entire world’s output.
• The U.S. economy is three times larger than Japan’s - the world’s third-largest - and nine times larger than Mexico’s.
Figure 2.1

Gross domestic product (in U.S. $ trillion)

<table>
<thead>
<tr>
<th>Country</th>
<th>GDP (Trillion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>15.20</td>
</tr>
<tr>
<td>China</td>
<td>11.27</td>
</tr>
<tr>
<td>Japan</td>
<td>4.52</td>
</tr>
<tr>
<td>Germany</td>
<td>3.29</td>
</tr>
<tr>
<td>Russia</td>
<td>2.92</td>
</tr>
<tr>
<td>Britain</td>
<td>2.26</td>
</tr>
<tr>
<td>Mexico</td>
<td>1.77</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1.09</td>
</tr>
<tr>
<td>Colombia</td>
<td>0.45</td>
</tr>
<tr>
<td>Haiti</td>
<td>0.01</td>
</tr>
</tbody>
</table>
Per Capita GDP

• *Per capita GDP* is total GDP divided by total population: average GDP.

• It is an indicator of how much output each person would get if all output were divided evenly among the population.

• In 2012, per capita GDP in the U.S. was approximately $49,000 - more than five times the world average.
• The living standards Americans now call “poor” resemble the lifestyle of the middle class in the 1930s.
• Since 1900, the per capita output of the economy has increased 500 percent.
• Despite minor setbacks like 2008-09, persistent economic growth is the norm for the United States.
Historical Comparisons

- **Economic growth** is an increase in output (real GDP), or an expansion of production possibilities.
- America’s real GDP has increased by about 3% a year, while the population is growing by only 1% a year.
- If real GDP keeps growing 2% faster than population, per capita incomes will double again in about 35 years.
The Mix of Output

• The major uses of total output include:
  – Household consumption
  – Business investment
  – Government services
  – Exports
Figure 2.2
C = Consumer Goods

• As the world’s leading “consumer” economy, consumer goods account for two-thirds of total U.S. output.

• There are three types of consumer goods:
  – Durable goods
  – Nondurable goods
  – Services
• **Durable goods** - expected to last three years.
  - Big-ticket items like cars, appliances, and furniture
  - Purchases of durable goods are often *cyclical*, that is, very sensitive to economic trends.
Consumer Goods

- **Nondurable goods** - items that are bought frequently.
  - Include clothes, food, and gasoline.

- **Services** - the largest and fastest-growing component in consumption.
  - Over half of all consumer output consists of medical care, entertainment, utilities, and other services.
• *Investment* is expenditures on (production of) new plant and equipment (capital) in a given time period, plus changes in business inventories.
Investment Goods

• Investment goods are used:
  – To replace worn-out equipment and factories, thus maintaining our production possibilities.
  – To increase and improve our stock of capital, thereby expanding our production possibilities.
• Federal, state, and local governments purchase resources to police the streets, teach classes, write laws, and build highways.

• These resources are not available for private consumption or investment.
Government Services

- Only that part of federal spending used to acquire resources and produce services is counted in GDP.
- The federal government spends nearly $4 trillion per year.
- In 2012, federal purchases of goods and services accounted for 8% of total output.
- Income transfers are not counted in GDP.
Government Services

• **Income transfers** are payments to individuals for which no current goods or services are exchanged.
  – Examples include Social Security, welfare, and unemployment benefits.

• State and local governments use far more of our scarce resources than does the federal government.
• **Exports** are goods and services sold to foreign buyers.
• **Imports** are goods and services purchased from foreign sources.
Net Exports

• Net Exports = exports – imports
  – In 2012, the value of exports was less than the value of imports.
  – *We used* more goods and services than we *produced* in that year.
  – Net exports were *negative*. 
As the economy has grown, the mix of output has changed dramatically.

Decline in Farming:
- In 1900, nearly 40% of workers were employed in agriculture.
- Today fewer than 2% of workers are farmers who grow more food due in great part to technological advances.
Changing Industry Structure

• Decline of Manufacturing Share:
  – Between 1860 and 1920, the manufactured share of GDP doubled.
  – After World War II, the manufactured share of output declined and now accounts for less than 20% of total output.
  – Since 1960, the amount of manufacturing has increased fourfold, due to technological advances.
Changing Industry Structure

• Growth of Services:
  – America has become largely a service economy.
  – Service generate over 70% of total output.
  – Over the next ten years, 98% of net job growth will be in service industries.
Figure 2.4

THE MIX OF OUTPUT IN 1900
- Manufacturing: 22%
- Services: 22%
- Construction and mining: 9%
- Farming: 37%

THE MIX OF OUTPUT IN 2000
- Manufacturing: 20%
- Services: 54%
- Construction and mining: 6%
- Government: 18%
- Farming: 2%
Changing Industry Structure

• Growth in Trade:
  – Increasing globalization of the U.S. economy is likely to continue due to:
    • Advances in communications and transportation technologies.
    • Increased consumption of services.
How America Produces

Increased international trade has also affected HOW goods and services are produced.

– The United States has an abundance of:
  
  • Factors of production - resource inputs used to produce goods and services, e.g., land, labor, capital, entrepreneurship.
  
  • Capital stock.
• The U.S. capital stock is over $60 trillion worth of machinery, factories, and buildings.

• American production tends to be very capital intensive:
  – *Capital intensive* – production processes that use a high ratio of capital to labor inputs.
Factor Quality

- **Productivity** - output per unit of input, e.g., output per labor hour.
- **Human capital** - the knowledge and skills possessed by the work force.
- The high productivity of the U.S. economy results from using highly educated workers in capital-intensive production processes.
Our continuing ability to produce the goods and services that consumers demand also depends on our agility in reallocating resources from one industry to another.
Private Sector: Business Types

• The three different legal organizations:
  – **Corporations** - owned by many individuals who owns shares of (stock in) the corporation and have limited liability.
  – **Partnerships** - owned by a small number of individuals who share liability.
  – **Proprietorships** - owned by one individual with sole liability.
Corporate America

• Corporations tend to be much larger than other businesses and produce the largest portion of GDP. They account for more than 80% of business sales.

• Proprietorships are the most common type of firm. Although 72% of all firms are proprietorships, they generate only 4% of all sales.
Figure 2.5

NUMBER OF FIRMS
- Proprietorships: 72%
- Partnerships: 10%
- Corporations: 18%

SHARE OF TOTAL SALES
- Corporations: 81%
- Partnerships: 15%
- Proprietorships: 4%

SHARE OF TOTAL ASSETS
- Corporations: 84%
- Proprietorships: 8%
- Partnerships: 8%
The Government Role

• Government plays a large role in deciding WHAT, HOW, and FOR WHOM goods are produced by:
  – Providing a Legal Framework
  – Protecting Consumers
  – Protecting Labor
  – Protecting the Environment
Providing a Legal Framework

• One of the most basic functions of government is to establish and enforce ownership rights, contract rights, and other rules of the game.

• This legal framework lays the foundation for market transactions.
Protecting Consumers

• The government:
  – Prevents individual businesses from becoming too powerful.
  – Regulates the safety of products.
Protecting Labor

- The government:
  - Establishes child labor laws.
  - Sets standards for workplace safety.
  - Sets minimums for wages, benefits, and overtime.
Protecting the Environment

• The government:
  – Limits air, water, and noise pollution.
  – Regulates environmental use of resources.
Striking a Balance

• Government interventions reflect the view that the market alone would not always select the best possible way of producing goods and services.

• However, *Government failure* might replace market failure, leaving us no better off and possibly even worse off.
• Who gets which slice of the pie?
  – Will everyone get an equal slice?
  – Will some get a lot more than others?
In a market economy, an individual’s income depends on:

- The quantity and quality of resources owned.
- The price that those resources command in the market.
For Whom America Produces

• Karl Marx believed that:
  – Capitalists would continue to accumulate wealth, power, and income.
  – All capitalist are rich, all workers are poor.
Marx’s predictions of how output would be distributed turned out to be wrong in two ways:

- Labor’s share of output has risen greatly over time.
- Differences within the labor and capitalist classes have become more important than differences between the classes.
The distinction between workers and capitalists has been blurred by profit-sharing plans, employee ownership, and widespread ownership of corporate stock.
The Distribution of Income

• The richest fifth (or quintile) of U.S. households gets *half* of all the income.
• The poorest fifth gets only a sliver.
• Inequalities tend to be even larger in poorer countries.
As countries develop, the personal distribution of income tends to become more equal:

– *Personal distribution of income* - the way total personal income is divided up among households or income classes.
Figure 2.6

- Richest fifth of population: 51%
- Second fifth: 23%
- Third fifth: 14%
- Fourth fifth: 9%
- Poorest fifth: 3%
• *Permanent* inequality is more the exception than the rule in the U.S. economy.

• Income *mobility* makes lifelong incomes much less unequal than annual incomes.
<table>
<thead>
<tr>
<th>Income Group</th>
<th>2011 Income (Dollars)</th>
<th>Average Income</th>
<th>Share of Total Income (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest fifth</td>
<td>Above $100,000</td>
<td>178,020</td>
<td>51.1%</td>
</tr>
<tr>
<td>Second fifth</td>
<td>60,000–100,000</td>
<td>80,080</td>
<td>23.0</td>
</tr>
<tr>
<td>Third fifth</td>
<td>40,000–60,000</td>
<td>49,842</td>
<td>14.3</td>
</tr>
<tr>
<td>Fourth fifth</td>
<td>20,000–40,000</td>
<td>29,204</td>
<td>8.4</td>
</tr>
<tr>
<td>Lowest fifth</td>
<td>0–20,000</td>
<td>11,239</td>
<td>3.2</td>
</tr>
</tbody>
</table>
People may feel that the distribution of income is not “fair.”
Therefore, another role of government is to redistribute incomes.
Taxes and transfers are used to do this.
Taxes

• **Progressive tax** - a tax system in which tax rates *rise* as incomes rise.
  – An example is the federal income tax.

• A progressive tax makes after-tax incomes more equal than before-tax incomes.
The largest income-transfer program is Social Security: Over $700 billion per year is paid to 50 million older or disabled persons.

The income-transfer system gives lower-income households more output than the market itself would provide and raises their share from 1% to 3.2% of total income.
What We Learned

1. Gross Domestic Product (GDP), inflation-adjusted, is the basic measure of how much an economy produces.

2. The U.S. produces roughly $15 trillion of output, one-fifth of the world’s total. The U.S. GDP per capita is five times the world average.
3. The high level of U.S. production is due to an abundance of capital stock and the high productivity of American workers.

4. The service industries are growing much faster than goods-producing industries.
What We Learned

5. Households in the highest income quintile receive 15 times more than the average household receives.