• The goal of this chapter is to take a longer-term view of economic performance. Specifically:
  – How important is economic growth?
  – How does an economy grow?
  – What policies promote economic growth?
Learning Objectives

After completing this chapter, you should know:

1. How economic growth is measured.
2. What GDP per capita and GDP per worker measure.
3. How productivity increases.
Learning Objectives

After completing this chapter, you should know:

5. Why economic growth is desirable.
The Nature of Growth

• *Economic growth* refers to increases in the output of goods and services (real GDP) – an expansion of production possibilities.

• Improvements in output may result from:
  – Increased use of existing capacity.
  OR
  – Increases in that capacity itself.
Short-Run Changes in Capacity Use

- The easiest kind of growth comes from increased use of our existing productive capacity.
- When we operate inside the PPC, we do not take full advantage of our productive capacity.
• To achieve large and lasting increases in output, we must push the PPC outward. The PPC represents our potential GDP.

• Economists tend to define economic growth in terms of changes in potential GDP.
Figure 15.1

(a) The short run: increased capacity utilization

(b) The long run: expanded capacity
Aggregate Supply Focus

• Economic growth – sustained increases in total output – is possible only if the AS curve shifts rightward.
Nominal versus Real GDP

- **Nominal GDP** is the total value of goods and services produced within a nation’s borders, measured in *current* prices.

- **Real GDP** is the inflation-adjusted value of GDP, the value of output measured in *constant* prices.
  
  — We use real GDP to measure growth.
The GDP Growth Rate

- **Growth rate** is the percentage change in real GDP from one period to another.
- The challenge for the future is to maintain higher rates of economic growth.

\[
\text{Growth rate} = \frac{\text{Change in real GDP}}{\text{Base period GDP}}
\]
Figure 15.3
The Exponential Process

• Even one year of “low” growth implies lost output.
• Economic growth is a *continuing* process where gains made in one year accumulate in future years.
• This cumulative process is called an *exponential* process.
• **GDP per capita**: total GDP divided by total population.

• Growth in GDP per capita is attained only when the growth of output exceeds population growth.

• U.S. GDP per capita has more than doubled since 1980.
GDP per Capita

• As the economy grows, *living standards* rise as evidenced by:
  – More goods and services produced.
  – Better goods and services produced.
  – Improved wealth.
  – More leisure time.
• The non-Western world has not enjoyed the robust real GDP growth that the West has enjoyed, usually due to the population growing faster than output growth.
Figure 15.4

**Growth Explosion**

<table>
<thead>
<tr>
<th>Year</th>
<th>World</th>
<th>The West</th>
<th>West Europe</th>
<th>North America</th>
<th>Japan</th>
<th>The Rest</th>
<th>Other Europe</th>
<th>Latin America</th>
<th>China</th>
<th>Other Asia</th>
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<td>5,031</td>
<td>2,653</td>
<td>2,768</td>
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</tr>
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</table>
• Average workers today produce nearly twice as much as their parents did.
• The U.S. labor force grew faster than the population during the 1990s.
• The U.S. employment rate also increased during the 1990s.
• If *productivity* — output per unit of input — is increasing, then per capita GDP is likely to rise as well.

• We are now able to consume more goods and services than our parents did because the average worker produces more.
Sources of Productivity Growth

• The sources of productivity gains include:
  – Higher skills (labor quality).
  – More capital (equipment quality).
  – Improved management (resource use).
  – Technological advance (research and development).
• As education and training levels rise, workers have higher skills and productivity rises.
Capital Investment

- Capital investment is a prime determinant of both productivity and growth.
- Investment in more and better tools and equipment sets up the average worker to be more productive.
Management

• Entrepreneurship and the quality of management are major determinants of economic growth.

• Managers must overcome the potential conflict between short-term profits and long-term productivity gains.

• Managers must develop personnel structures and incentives that make employees contribute to production.
• R&D includes:
  – Scientific research.
  – Product development.
  – Innovations in production technique.
  – Development of management improvements.
• R&D leads to the upgrading of equipment, processes, products, and also workers.
• Government policies can have a major impact on whether and how far the AS curve shifts.
• Government policies that support education and training have a dual payoff:
  – They stimulate the economy in the short run.
  – They increase the long-run capacity to produce.
• The quality and quantity of labor are affected by immigration policy because:
  
  – It is a direct contributor to an outward shift of our production possibilities.
  
  – Recent immigrants have much lower educational attainments than native-born Americans.
• Tax policy is not only a staple of short-term stabilization policy, but a determinant of long-run growth as well.
  – The tax treatment of capital gains is one of the most debated supply-side policy levers.
  – Lowering the tax rate on capital gains may stimulate investment and increase the capacity of the nation to produce.
Savings Incentives

• Supply-side economists favor tax incentives that encourage saving as well as greater tax incentives for investment.

• This policy stimulates production, in sharp contrast to Keynes’ emphasis on stimulating consumption.
• When government borrows to finance its spending, it dips into the nation’s savings pool and can crowd out private-sector investment.

  – *Crowding out* is a *reduction* in private-sector borrowing (and spending) caused by increased government borrowing.
Government Finances

- In the unlikely event that the government runs a surplus, crowding in can occur.
  - *Crowding in* is an *increase* in private-sector borrowing (and spending) caused by decreased government borrowing.

- Policy selection must be evaluated in terms of their impact on both short-run AD and on long-run AS.
• Excessive government regulation impacts AS by:
  – Limiting the flexibility of producers to respond to changes in demand.
  – Raising production costs.
• Economic growth can be simulated by deregulation.
Factor Markets

• Regulation of factor markets include:
  – Minimum-wage laws.
  – Occupational Safety and Health Administration (OSHA) standards.

• The unintended consequences of these regulations are that fewer people are hired.
• Regulation of product markets raises production costs and restricts supply.
• The basic contention of supply-side economists is that regulatory costs are too high and shift the AS curve to the left.
Financial Markets

• The huge increase in regulation of financial markets, designed to avoid another crisis like 2008–2009, caused:
  – Increased uncertainty in the market.
  – Banks to be less willing to lend.
  – Loans to be more costly and harder to get.
  – Dampened economic growth.
Economic Freedom

• Any government regulation shifts decision-making power from the private sector to the public sector.
• Excessive government regulation reduces economic freedom.
• Nations with the most economic freedom have the highest GDP per capita and grow the fastest.
Is More Growth Desirable?

• More growth can lead to:
  – Congestion.
  – Air pollution.
  – Depleted natural resources.
• The debate usually centers around the *mix* of goods and services being provided rather than the quantity of output.
What We Learned

1. Economic growth refers to increases in real GDP.
2. GDP per capita measures living standards. GDP per worker measures worker productivity.
3. Productivity increases due to better labor quality, increased capital investment, more R&D, and improved management.
What We Learned

4. Government policies can either foster or inhibit growth. Policy levers an increase or decrease the quantity or quality of resources, the availability of investment funds, or the incentive to produce.
5. Continued economic growth brings a higher standard of living for people and an increased ability to produce and consume socially desirable goods and services.