

25

Economic Growth

Economic Growth

- Increase in real GDP or real GDP per capita over some time period
- Percentage rate of growth
- Growth as a goal
- Arithmetic of growth: Rule of 70

$$\begin{array}{l} \text{Approximate} \\ \text{number of years} \\ \text{required to double} \\ \text{real GDP} \end{array} = \frac{70}{\begin{array}{l} \text{annual percentage rate} \\ \text{of growth} \end{array}}$$

Economic Growth

- Growth in U.S. real GDP 1950-2009
 - Increased 6 fold
 - 3.2% per year
- Growth in U.S. real GDP per capita
 - Increased more than 3 fold
 - 2% per year
- Qualifications
 - Improved products and services
 - Added leisure

Modern Economic Growth

- Began with the Industrial Revolution in late 1700s
- Ongoing increases in living standards
- Time for leisure
- Social change
- Democracy
- Human lifespan doubled

Modern Economic Growth

- Began in Britain
- Has spread slowly
- Starting date main cause of worldwide differences in living standards
- Catching up is possible
 - Leader countries invent technology
 - Follower countries adopt technology
 - Can grow faster

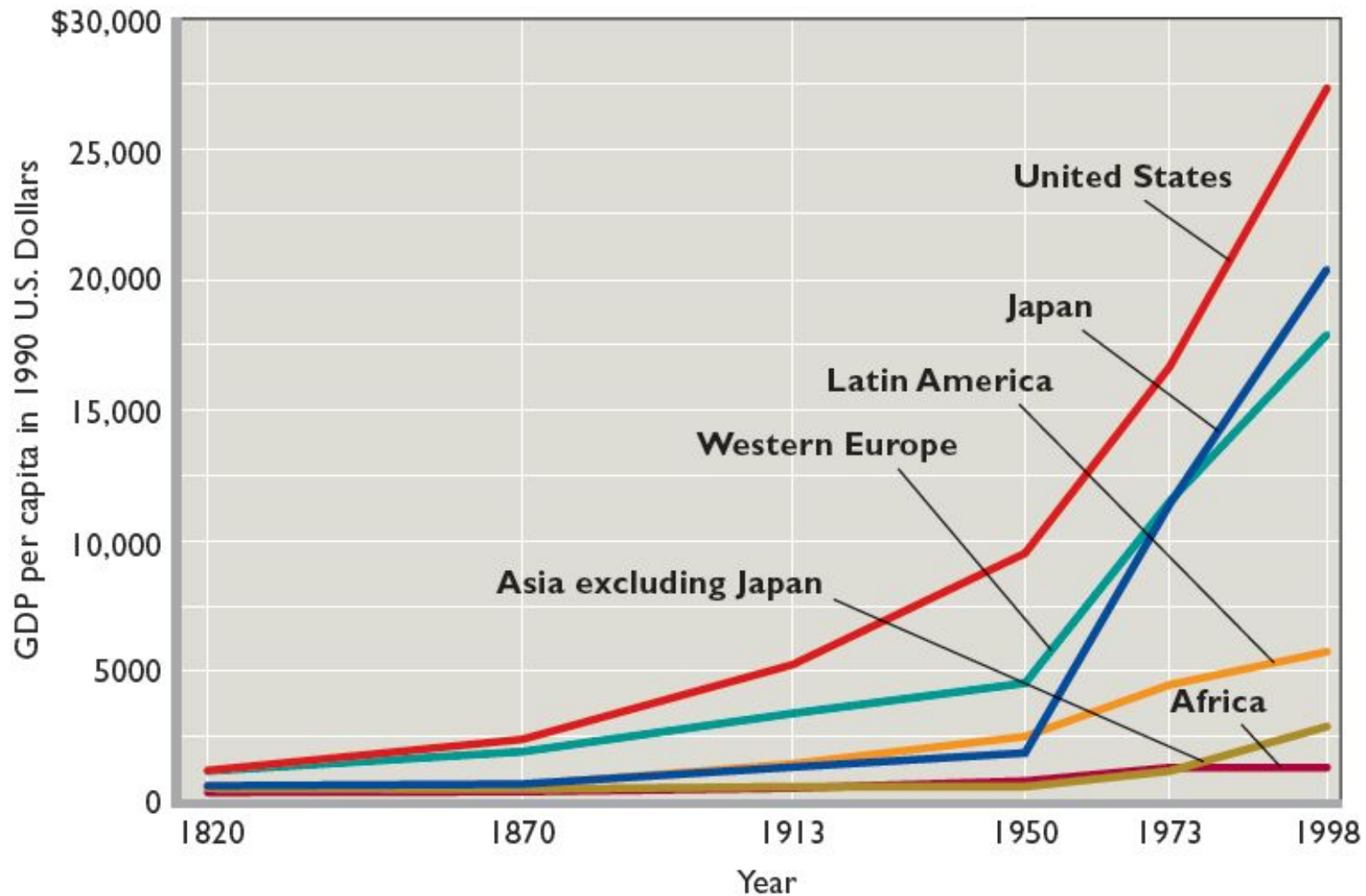
Modern Economic Growth

| Country | Real GDP per capita, 1960 | Real GDP per capita, 2007 | Average annual growth rate, 1960-2007 |
|----------------|---------------------------------|---------------------------------|---|
| United States | \$ 14,766 | \$42,887 | 2.3% |
| United Kingdom | 11,257 | 32,181 | 2.3 |
| France | 9,347 | 29,663 | 2.5 |
| Ireland | 6,666 | 41,625 | 4.0 |
| Japan | 5,473 | 30,585 | 3.7 |
| Singapore | 4,149 | 44,619 | 5.2 |
| Hong Kong | 3,849 | 43,121 | 5.3 |
| South Korea | 1,765 | 23,850 | 5.7 |

Figures are in 2005 dollars

Source: Penn World Table version 6.3, pwt.econ.upenn.edu

Modern Economic Growth



Institutional Structures of Growth

- Strong property rights
- Patents and copyrights
- Efficient financial institutions
- Literacy and widespread education
- Free trade
- Competitive market system

Determinants of Growth

Supply factors

- Increases in quantity and quality of natural resources
- Increases in quality and quantity of human resources
- Increases in the supply (or stock) of capital goods
- Improvements in technology

Demand factor

- Households, businesses, and government must purchase the economy's expanding output

Efficiency factor

- Must achieve economic efficiency and full employment

Accounting for Growth

- Factors affecting productivity growth
 - Technological advance (40%)
 - Quantity of capital (30%)
 - Education and training (15%)
 - Economies of scale and resource allocation (15%)

Productivity Growth

- Average rate of growth
 - 1.5% per year 1973-1995
 - 2.8% per year 1995-2009
- Affects real output, real income, and real wages
- Pay higher wages without lowering profit

Productivity Growth

- Microchip/information technology
- New firms and increasing returns
- Sources of increasing returns
 - More specialized inputs
 - Spreading of development costs
 - Simultaneous consumption
 - Network effects
 - Learning by doing

Economic Growth

- Is economic growth desirable and sustainable?
- The antigrowth view
 - Environmental and resource issues
- In defense of economic growth
 - Higher standard of living
 - Human imagination can solve environmental and resource issues

Economic Growth

- Growth is the path to greater material abundance
- Results in higher standards of living
- Increases leisure time
- Allows for the expansion and application of human knowledge

Global Perspective

| Country | Global Competitiveness Ranking, 2009–2010 |
|---------------|---|
| Switzerland | 1 |
| United States | 2 |
| Singapore | 3 |
| Sweden | 4 |
| Denmark | 5 |
| Finland | 6 |
| Germany | 7 |
| Japan | 8 |
| Canada | 9 |
| Netherlands | 10 |