

# US Macroeconomic History

## Required Readings

- Chapter 2
- Chapter 5—pp. 83-87 & pp. 91-101

# Key Macroeconomic Variables

- Level of Income
  - Aggregate Income
  - Income per capita
- Growth Rate of Income or Output
- Unemployment Rate
- Rate of Inflation

# Basic Concepts

- **Business Cycle**
  - Short-run Movements in Key Macro Variables
  - Measurement: Quarterly or Annual Movements
- **Long-term Trends**
  - Long-run Movements in Key Macro Variables
  - Measurement:
    - ❖ Observations at widely spaced points in time:  
e.g., the year 1900 vs. the year 2000
    - ❖ Averages over long –periods of time, e.g, Last 50 Years

# Growth of Income or Output

Define:

$Y_t$  = Real Income

= Real Output

= Real GDP

= Real Gross Domestic Product

$$\begin{aligned}\Delta Y_t = Y_t - Y_{t-1} &= \text{Change in Real Income} \\ &= \text{Change in Real Output} \\ &= \text{Change in Real GDP}\end{aligned}$$

$$\begin{aligned}\frac{\Delta Y_t}{Y_{t-1}} &= \text{Growth Rate of Real Income} \\ &= \text{Growth Rate of Real Output} \\ &= \text{Growth Rate of Real GDP}\end{aligned}$$

# Expansions & Recessions

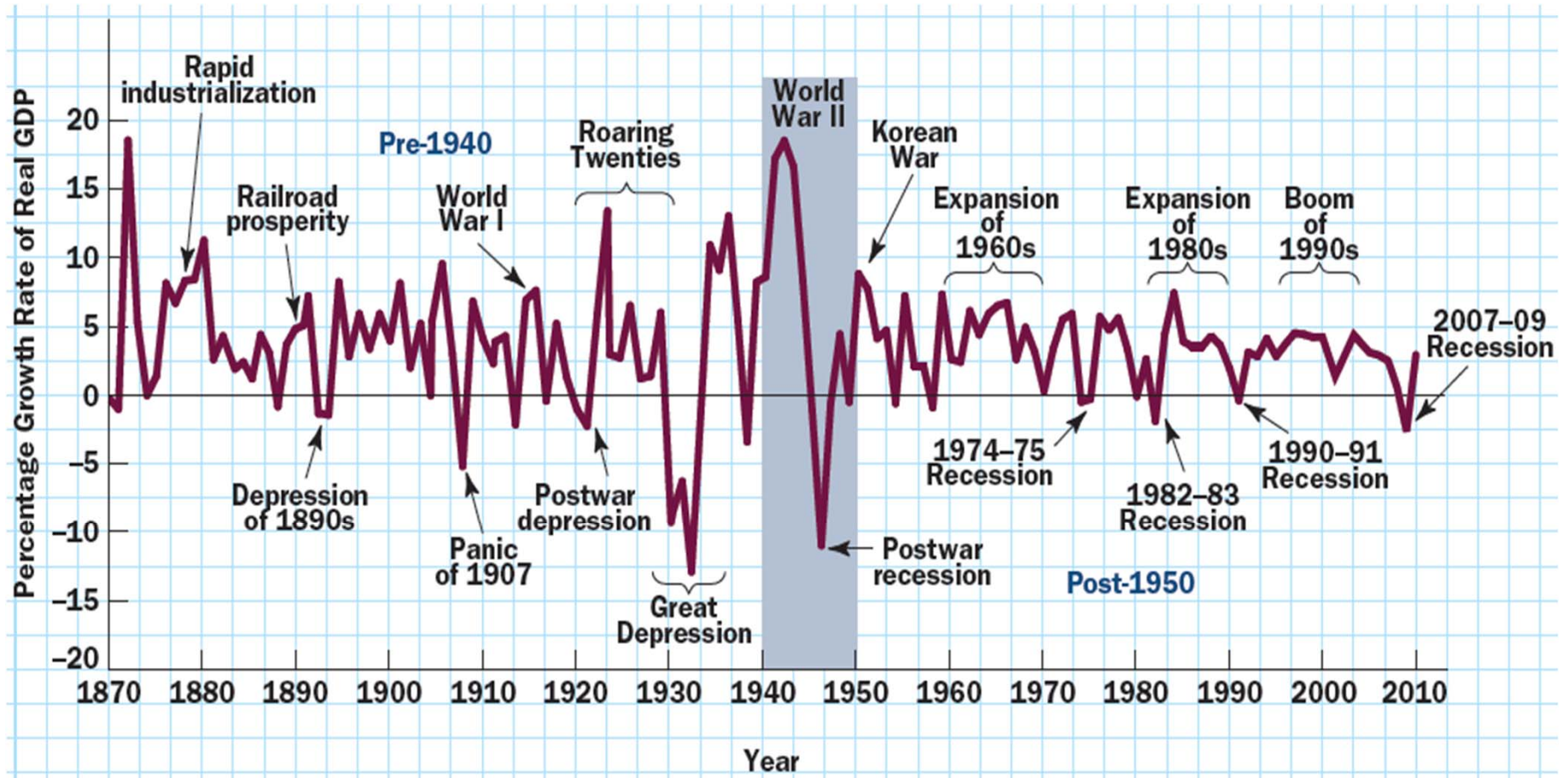
$$\frac{\Delta Y_t}{Y_{t-1}} > 0 \quad \text{Real Income is rising}$$

$\Rightarrow$  Economy is in an Expansion

$$\frac{\Delta Y_t}{Y_{t-1}} < 0 \quad \text{Real Income is falling}$$

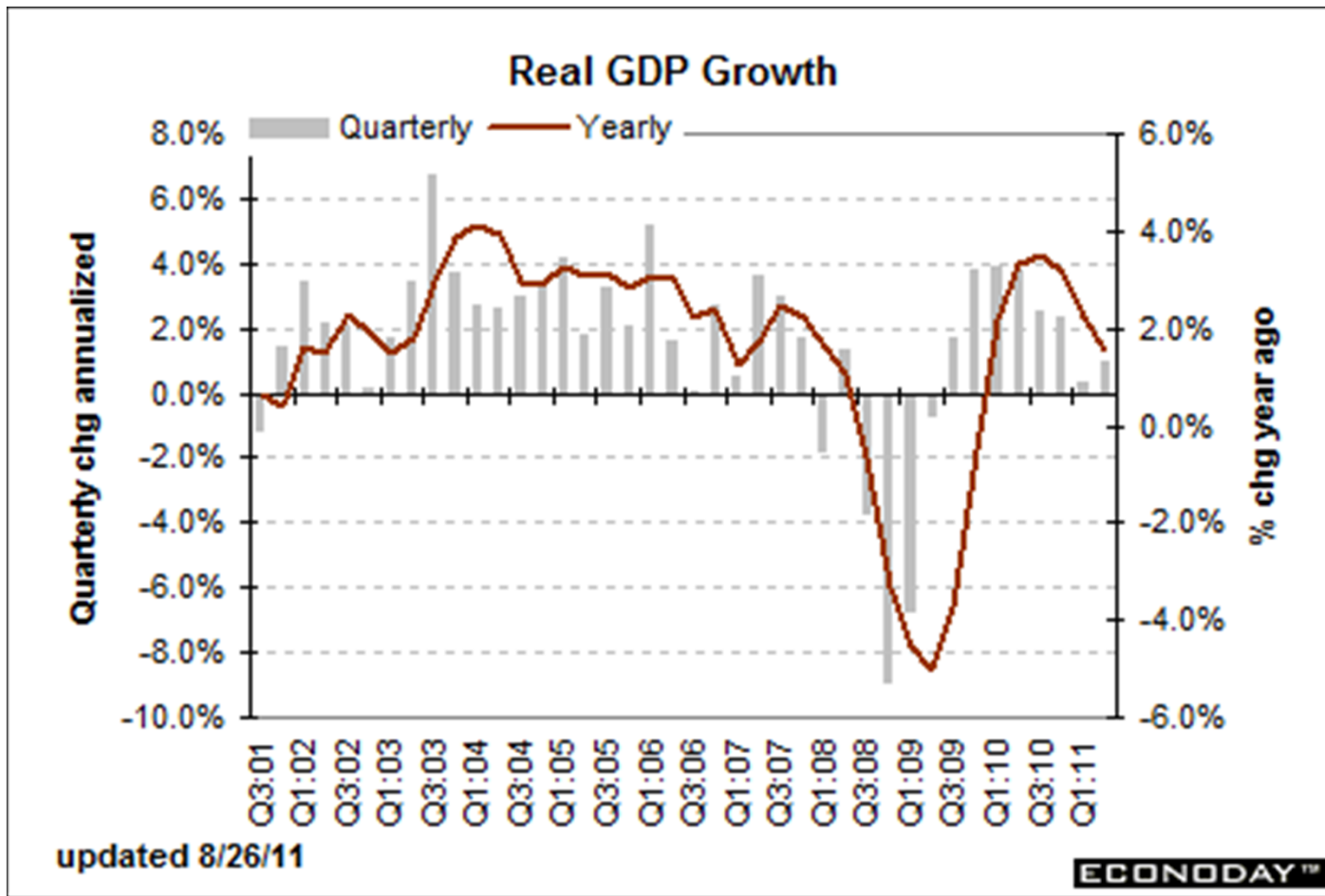
$\Rightarrow$  Economy is in a Recession

# The Growth Rate of U.S. Real GDP 1870-2010



# Real GDP Growth in the US

## Recent Developments



# Questions

## Growth Rate of Income & Output

- What causes Expansions and Recessions?
- Why was GDP growth less volatile after WWII than before?
- What has caused the current recession—often referred to as the “Great Recession”?
- What Macroeconomic Policies can be followed to offset recessions or to sustain expansions?

# The Inflation Rate

$P_t$  = Average Level of Prices  
= Implicit Price Deflator for GDP

$\Delta P_t = P_t - P_{t-1}$  = Change in the Price Level

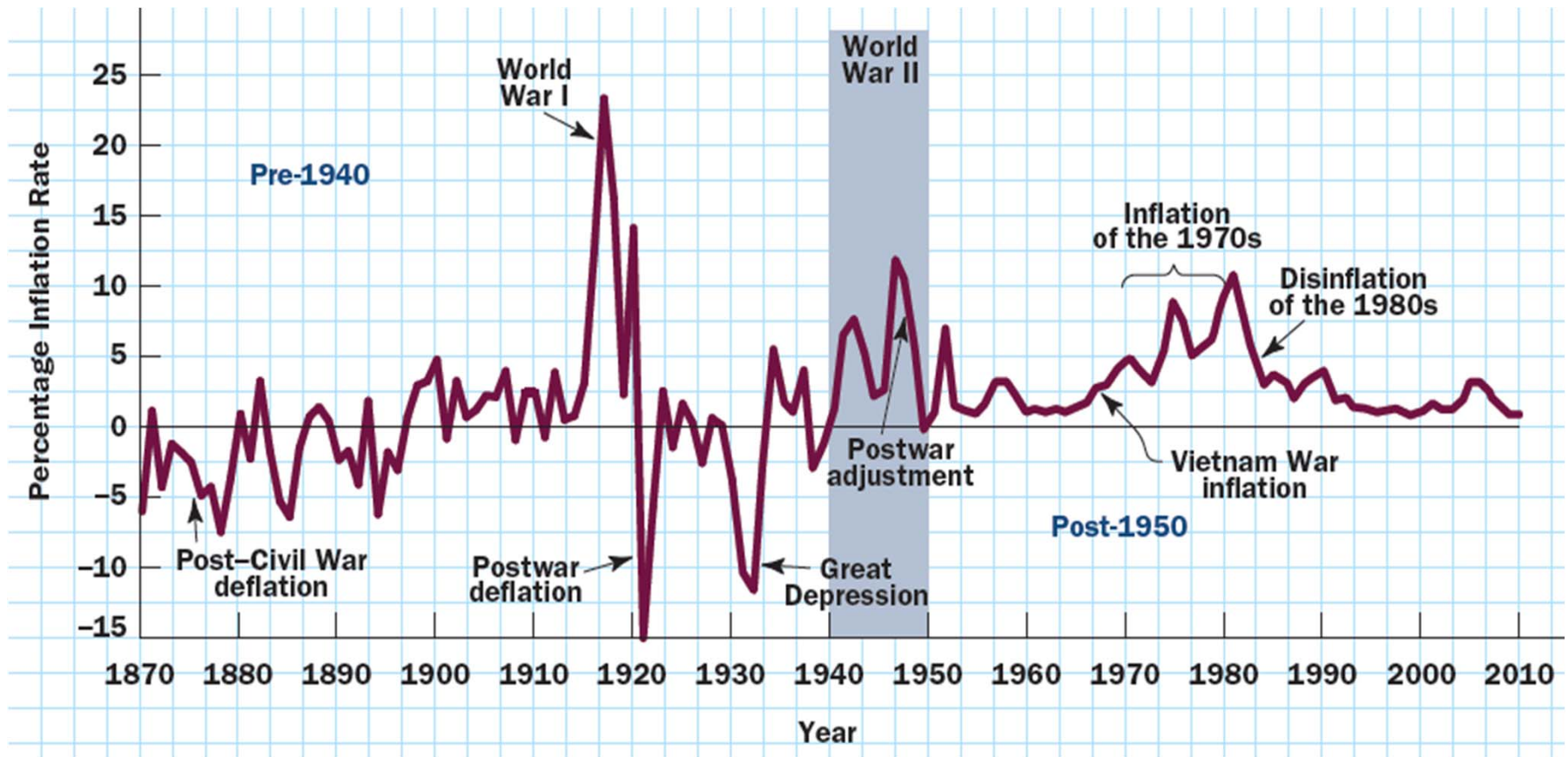
$\frac{\Delta P_t}{P_{t-1}} = \pi_t$  = Rate of Inflation

# Inflation & Deflation

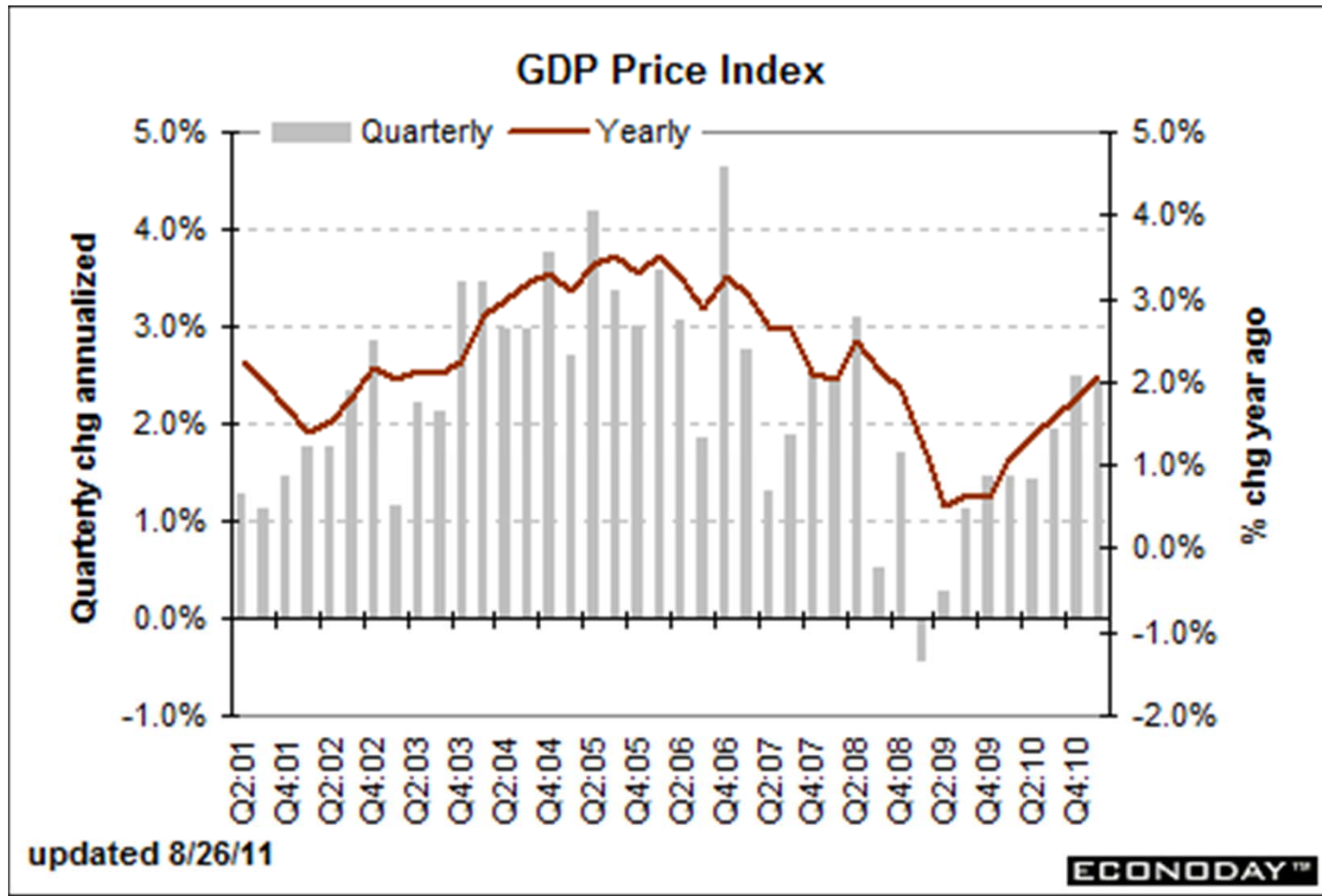
$\pi_t > 0$  Inflation: Price level is rising  
or the Cost of Living is rising

$\pi_t < 0$  Deflation: Price level is falling  
or the Cost of Living is falling

# The Inflation Rate in the United States 1870-2010



# Inflation in the U.S. Recent Developments



# Questions: Inflation

- What causes the Price Level to rise and fall?
- What causes Inflation?

What causes Deflation?

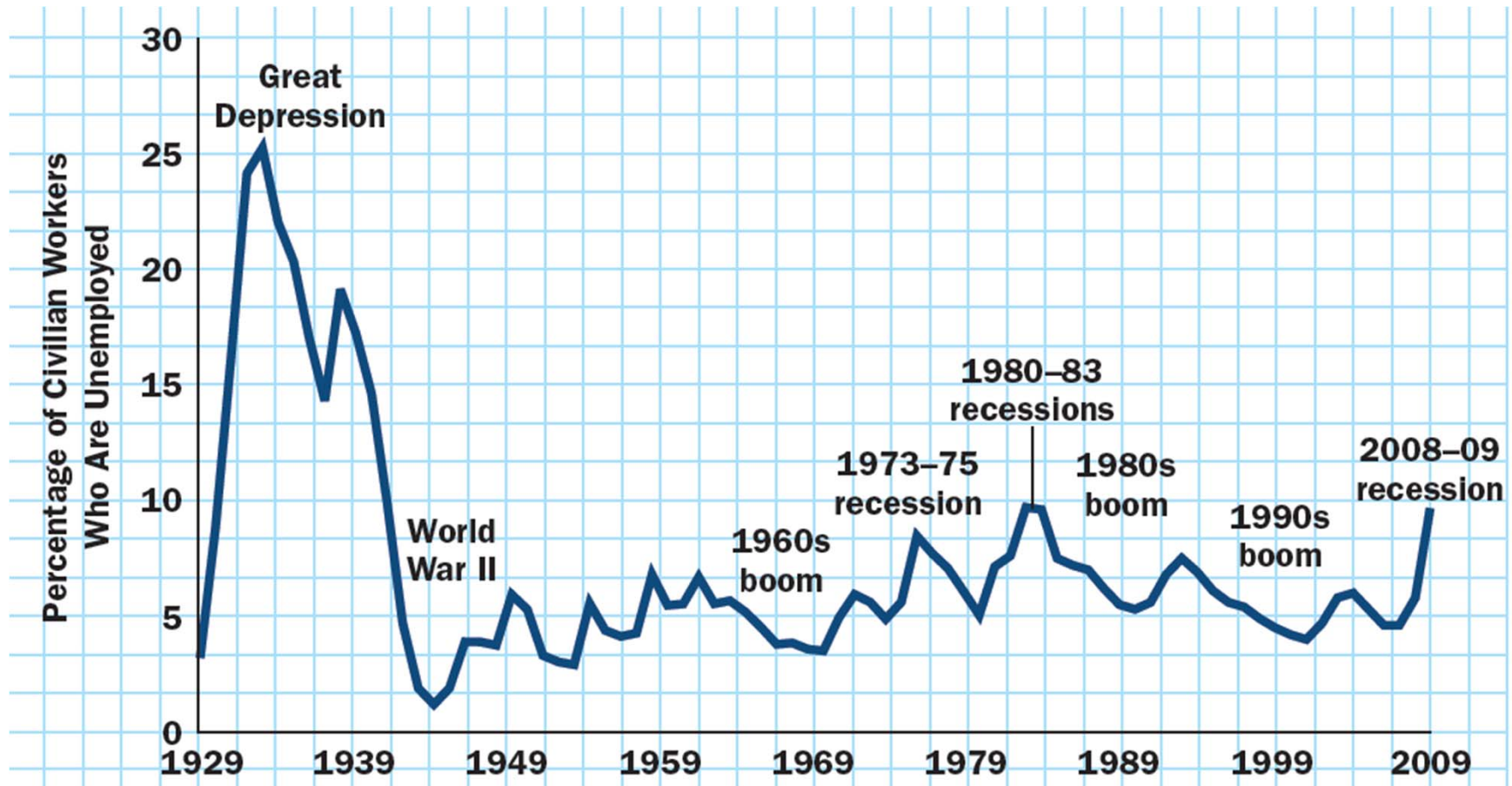
- Can Macroeconomic Policies be used to combat high Inflation?
- What are the obstacles?

# The Unemployment Rate

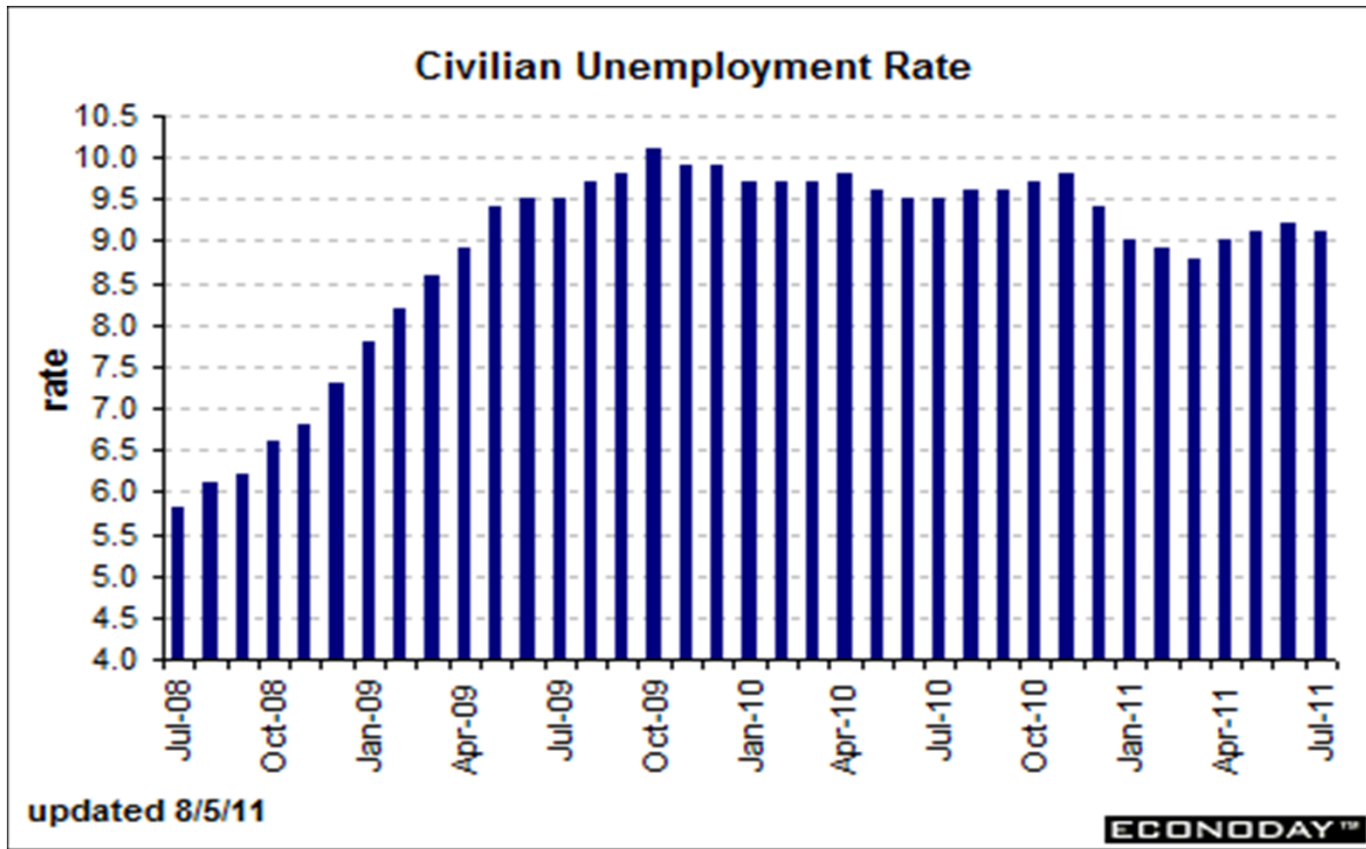
$U_t$  = Unemployment Rate

$$= \frac{\text{Number of Workers Unemployed}}{\text{Labor Force}}$$

# Unemployment Rate in the U.S. 1929-2010



# The Unemployment Rate in the US Recent Developments



# Questions: Unemployment Rate

- What causes Unemployment to rise and fall?
- Can Monetary and Fiscal Policies be used to keep the Unemployment Rate low?
- What are the obstacles?

# Long - Run Trends

$$\text{Income Per Capita} = \frac{\text{Real GDP}}{\text{Population}}$$

# Important Note

## Income per Capita

- **An important** component of a measure of the standard of living of a society
- **Not** the only component of a measure of the standard of living of a society

TABLE

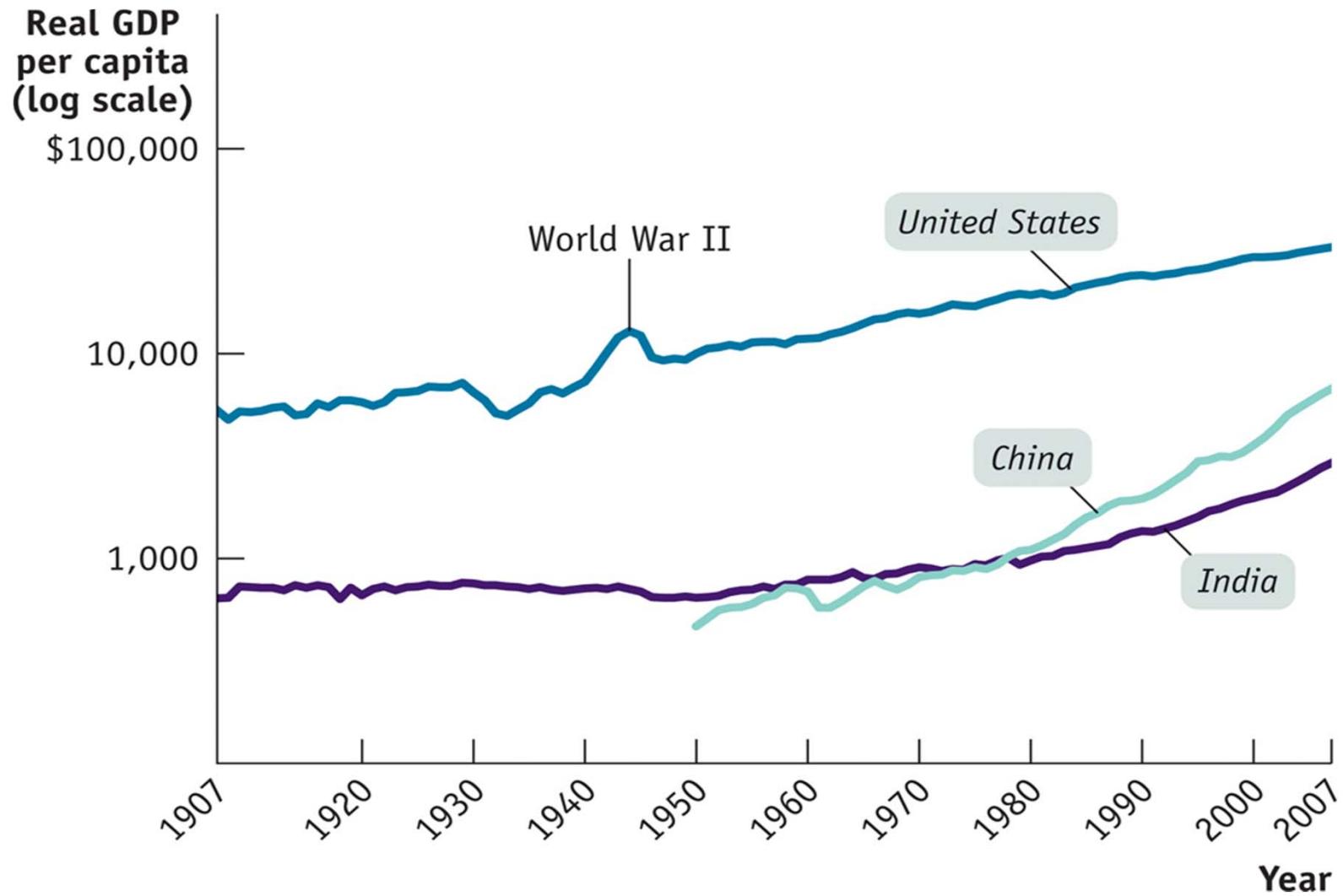
### The Variety of Growth Experiences

**Source:** Robert J. Barro and Xavier Sala-i-Martin, *Economic Growth* (New York: McGraw-Hill, 1995), tables 10.2 and 10.3; *World Development Report 2005*, Table 1; and author's calculations.

Country	Period	Real GDP per Person at Beginning of Period <sup>a</sup>	Real GDP per Person at End of Period <sup>a</sup>	Growth Rate (per year)
Japan	1890–2003	\$1,280	\$28,620	2.79%
Brazil	1900–2003	663	7,480	2.38
Mexico	1900–2003	987	8,950	2.16
China	1900–2003	610	4,990	2.06
Germany	1870–2003	1,859	27,460	2.05
Canada	1870–2003	2,022	29,740	2.04
United States	1870–2003	3,412	37,500	1.82
Argentina	1900–2003	1,952	10,920	1.69
India	1900–2003	575	2,880	1.58
United Kingdom	1870–2003	4,094	27,650	1.45
Indonesia	1900–2003	759	3,210	1.41
Pakistan	1900–2003	628	2,060	1.16
Bangladesh	1900–2003	531	1,870	1.16

<sup>a</sup>Real GDP is measured in 2003 dollars.

# Comparing Economies



# Questions: Long-Run Trends

- Why do some countries, but not others, experience dramatic increases in Income per capita over time?
- What causes the large gaps in the levels of Income per capita across countries?
- What causes the gaps in Income per capita to narrow or widen?
- What sets of macroeconomic policies would close the gaps?