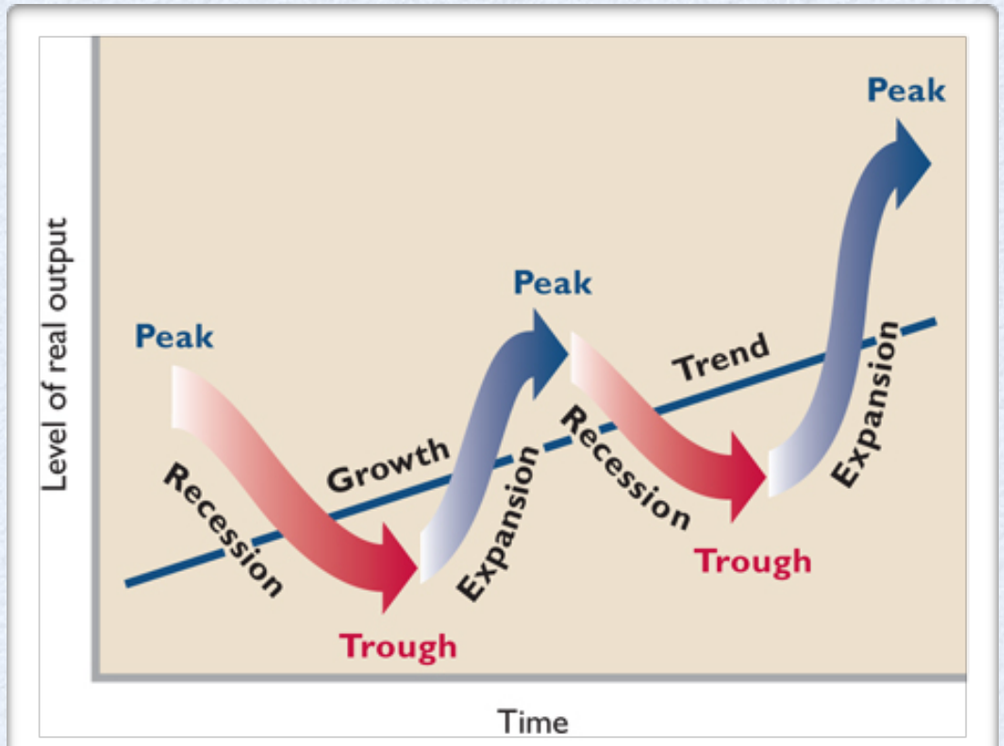
CHAPTER 27

The Business Cycle

- **Phases of the business cycle**
  1. Peak
  2. Recession
  3. Trough
  4. Expansion
- Cyclical impact: durables vs nonduarables



Unemployment

- Measurement of unemployment

  Unemployment rate = $\frac{\text{unemployed}}{\text{labor force}}$ * 100

- Unemployment data is understated: part-time employment, discouraged workers

Types of Unemployment

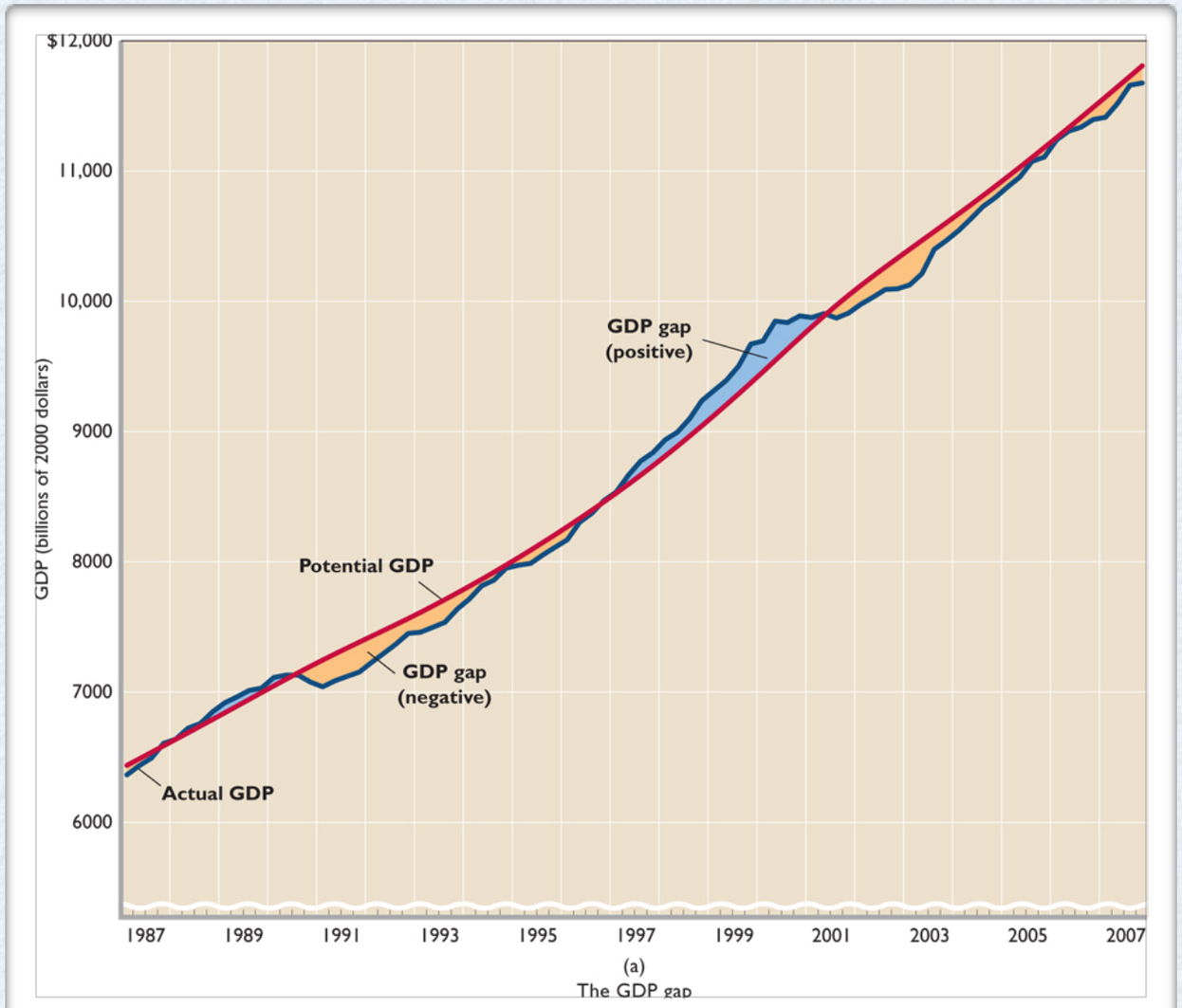
- **Frictional unemployment** - workers who are "between jobs"
- **Structural unemployment** - *occupationally*: demand for certain skills changes, *geographically*: migration of workers to different locations (E ➠ W for example)
- **Cyclical unemployment** - unemployment that is caused by a decline in total spending and typically begins in the recession of the business cycle

Definition of Full Employment

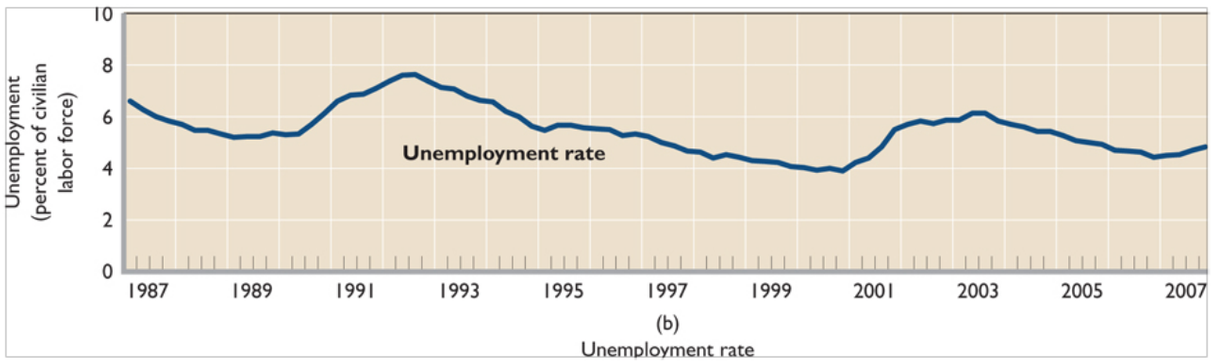
- The unemployment rate that is consistent with full employment is called the full employment rate of unemployment or the **natural rate of unemployment (NRU)**
- **Economic cost of unemployment**

1. **GDP Gap = actual GDP - potential GDP**
2. **Okun's Law** - for every 1% by which the actual unemployment rate exceeds the natural rate, a negative GDP gap of bout 2 % occurs (NRU = 6% ➠ 7.4% unemployment - 6% = 1.4% ➠ 1.4% * 2% = 2.8% GDP gap (1992 = $7,337 Bill.)

Definition of Full Employment



(a)
The GDP gap



(b)
Unemployment rate

Inflation

- **Inflation** - a rise in the general price level

- **Measurement of inflation - Consumer Price Index (CPI)**

  CPI = $\frac{\text{P of the most recent market basket in the particular year}}{\text{P estimate of the market basket in 1982-84}} * 100$

- The **rate of inflation** is equal to the percentage growth of CPI from one year to the next ($CPI_{2006} = 201.6$, $CPI_{2007} = 207.3$)

  Rate of inflation = $\frac{207.3 - 201.6}{201.6} * 100 = \mathbf{2.8\%}$

- **Rule of 70** ➠ 70 / 3 = 23 ➠ A 3% inflation will double the price level in about 23 years

Types of Inflation

- **Demand Pull Inflation** - caused by an excess of total spending beyond the economy's capacity to produce. When resources are already fully employed, the business sector cannot respond to excess demand by expanding output. "Too much money chasing too few goods". *Demand pull inflation will continue as long as there is excess total spending.*

- **Cost Push Inflation** - arise on the supply, or cost, side of the economy. Prices are rising because of per-unit production costs rise at each level of spending. *Cost push inflation is self-limiting.* Per-unit costs ⇑ ➠ S⇓ ➠ Q ⇓ ➠ employment ⇓ ➠ recesssion

- **Supply shocks** (1979-80) - great sources of cost push inflation

Redistribution Effects of Inflation

- **Real Income** = $\frac{\text{nominal income}}{\text{price index (in hundredths)}}$

- **Real income** is a measure of the amount of goods and services nominal income can buy; it is the **purchasing power** of nominal income, or income adjusted for inflation.

- When inflation occurs, not everyone's nominal income rises at the same pace as the price level

- Δ P level > Δ Y ➠ real income will be less (opposite is also true)

- %Δ in real Y ~= %Δ in nominal Y - %Δ in P level
  (+6% Y) - (+6% P) = 0%Δ in real Y
  (+10%Y) - (+6% P) = +4%Δ in real Y

- Who is hurt by inflation? - fixed income receivers, savers, creditors

- Who is unaffected or helped by inflation? - flexible income receivers, debtors (borrowers)

Redistribution Effects of Inflation

- Anticipated inflation - if inflation is anticipated, nominal incomes can be adjusted, contracts can be negotiated, interest rates can be adjusted

- *Example* - $100 borrowed at 5% interest for 1 year. ➠ Payback $105
  Unanticipated inflation = 6% ➠ Payback = $105 = worth (105*94%) = $99 ➠ Not a good deal for the lender
  Anticipated inflation = 6% ➠ 5% interest + inflation premium of 6% = 11% interest
  ➠ Payback = $111 ➠ $100 principal + i = 5% = $5 + inflation = 6% = $6

- **Nominal interest rate** = real interest rate + inflation premium

- Hyperinflation