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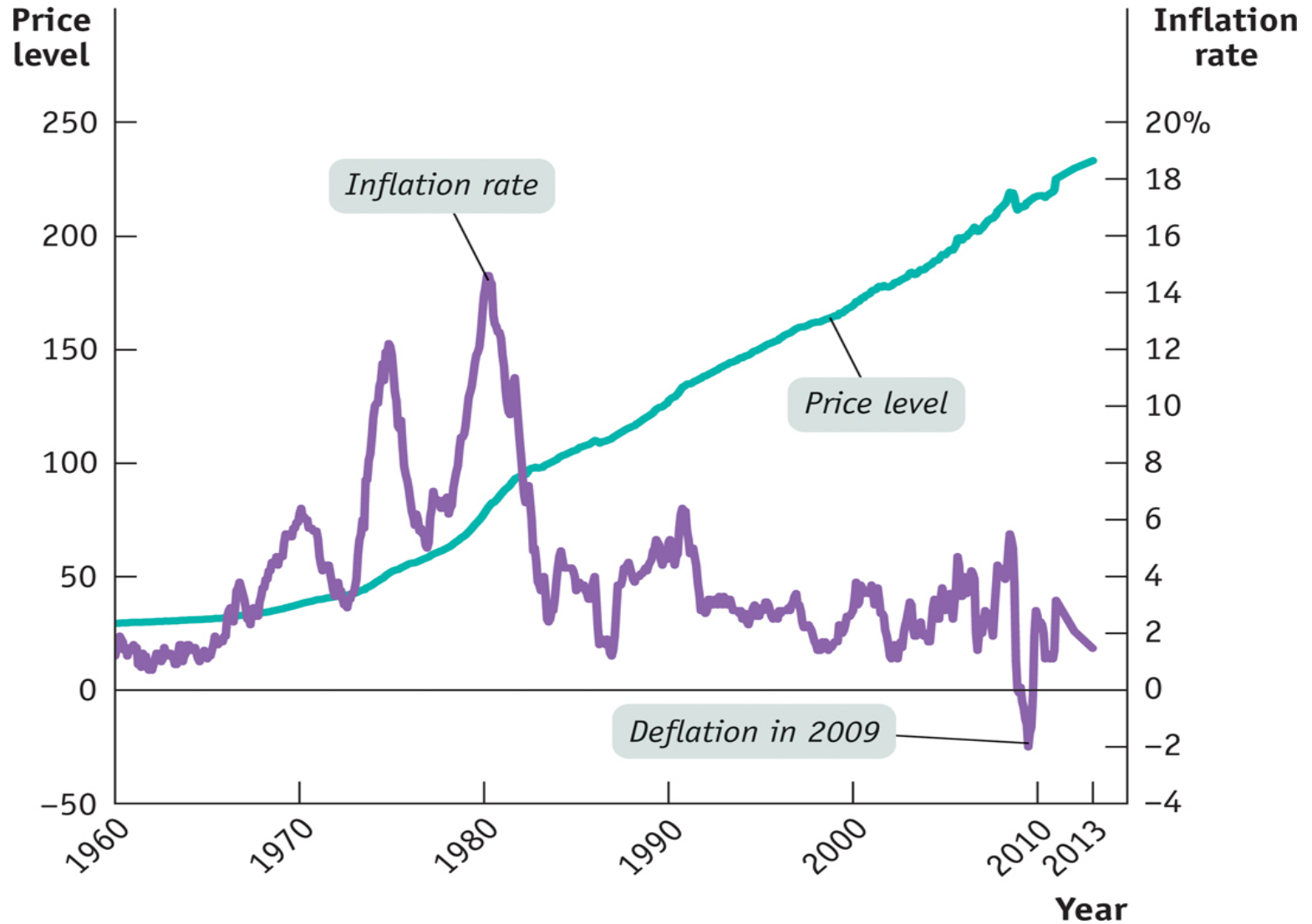
16 Measuring Inflation

# The Inflation Rate

- Many people think inflation is bad because it makes you poorer; however, nominal wages and the price level tend to move together.
- A better measure is the **real wage**, the nominal wage rate divided by the price level.
- The inflation rate is then the percent increase in the overall level of prices per year.

$$\text{Inflation rate} = \frac{(\text{New price level} - \text{Old price level})}{\text{Old price level}} \times 100$$

# Inflation and Deflation



# Costs of Inflation

- High rates of inflation impose significant economic costs.
  - **Shoe-leather costs** are the increased costs of transactions.
  - **Menu cost** is the real cost of changing a listed price.
  - **Unit-of-account costs** arise from the way inflation makes money a less reliable unit of measurement.
  - **Redistribution of wealth** between borrowers & lenders.

# Winners and Losers from Inflation

- Inflation changes the dollar repayment of a loan because the loan contract is stated in nominal terms.
  - The **nominal interest rate** is the interest rate expressed in today's dollars.
  - The **real interest rate** is the nominal interest rate minus the rate of inflation.
  - If inflation is higher than expected, borrowers gain at the expense of lenders.
  - If inflation is lower than expected, lenders gain at the expense of borrowers.

# Interest Rate and Fisher Equation

- The **Fisher Equation** relates the nominal and real interest rate.
- Fisher Equation:  $r_t = i_t - \pi_t$ 
  - $r_t$ : real interest rate
  - $i_t$ : nominal interest rate
  - $\pi_t$ : inflation rate
- ...but contracts are written before inflation is known so parties must use **expected inflation**.

# The Costs of Disinflation

