

chapter:

8

>> **Unemployment and Inflation**

Krugman/Wells

WHAT YOU WILL LEARN IN THIS CHAPTER

- How **unemployment** is measured and how the **unemployment rate** is calculated
- The significance of the unemployment rate for the economy
- The relationship between the unemployment rate and economic growth
- The factors that determine the **natural rate of unemployment**

WHAT YOU WILL LEARN IN THIS CHAPTER

- The economic costs of inflation
- How inflation and deflation create winners and losers
- Why policy makers try to maintain a stable rate of inflation

Unemployment Rate

- **Employment** is the number of people currently employed in the economy, either full time or part time.
- **Unemployment** is the number of people who are actively looking for work but aren't currently employed.
- The **labor force** is equal to the sum of employment and unemployment.

Unemployment Rate

- The **labor force participation rate** is the percentage of the population aged 16 or older that is in the labor force.

$$\text{Labor force participation rate} = \frac{\text{Labor force}}{\text{Population age 16 and older}} \times 100$$

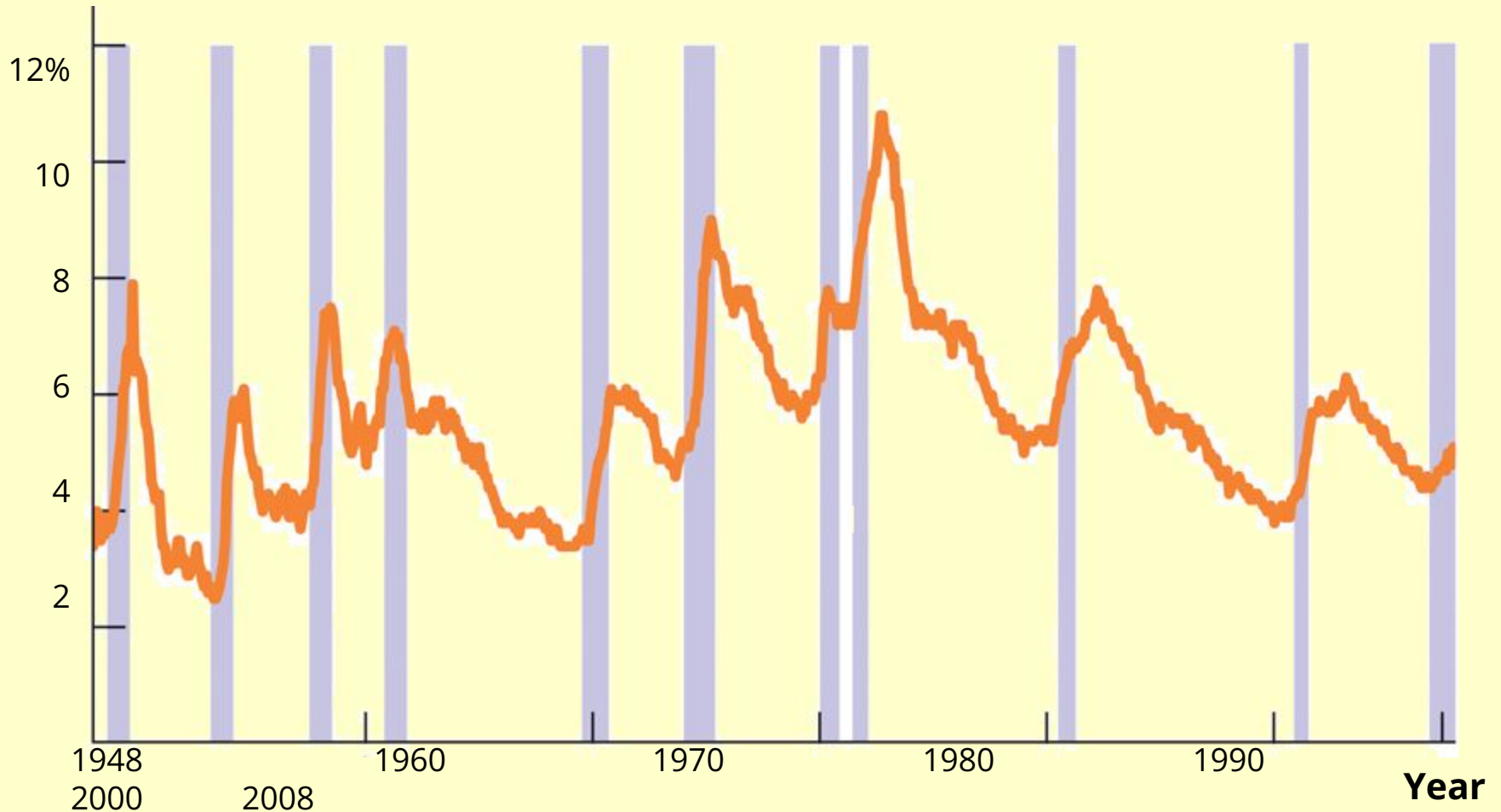
- The **unemployment rate** is the percentage of the total number of people in the labor force who are unemployed.

$$\text{Unemployment rate} = \frac{\text{Number of unemployed workers}}{\text{Labor force}} \times 100$$

Unemployment Rate

The U.S. Unemployment Rate, 1948-2008

Unemployment Rate

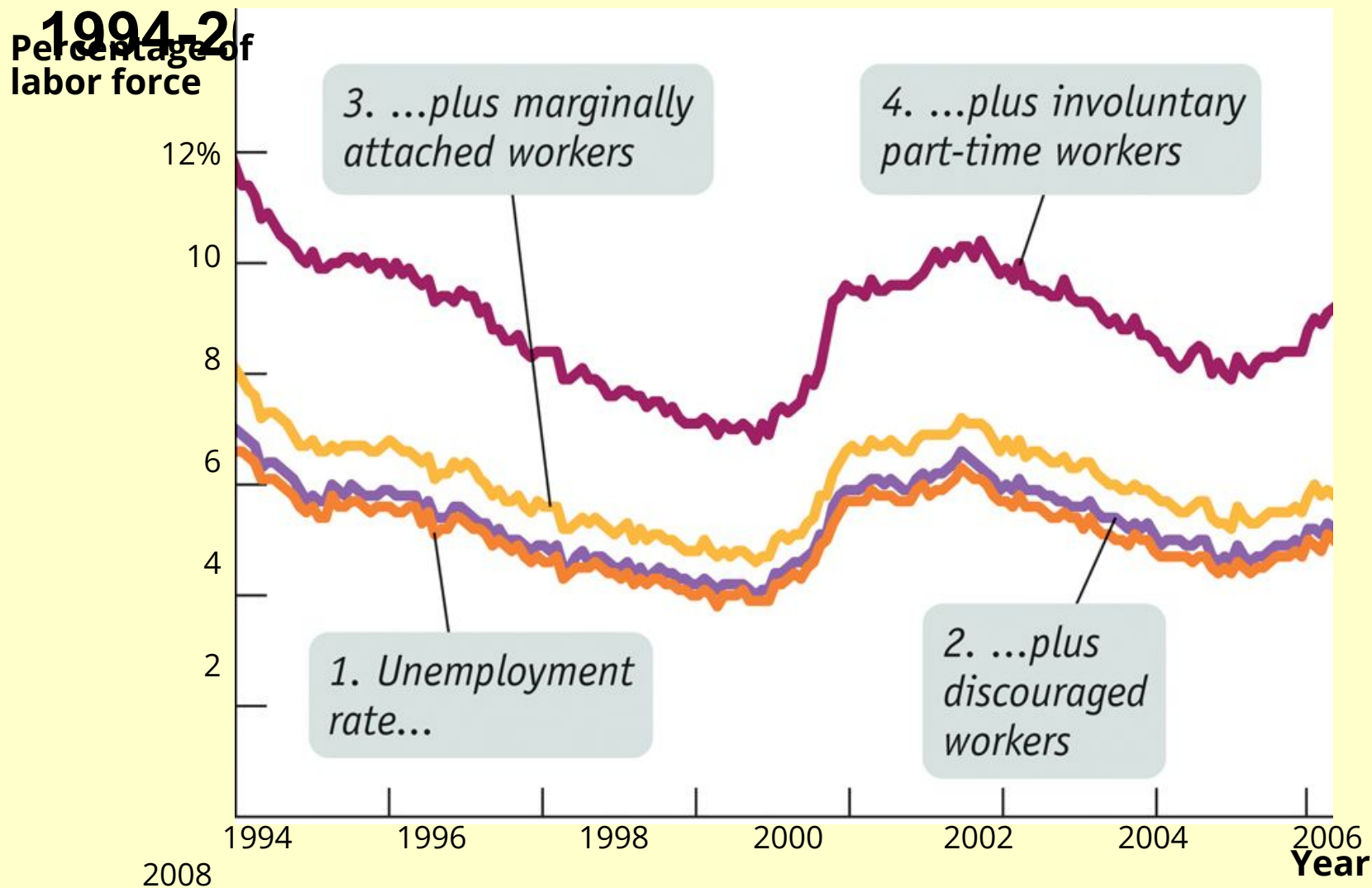


Unemployment Rate

- **Discouraged workers** are nonworking people who are capable of working but have given up looking for a job given the state of the job market.
- **Marginally attached workers** would like to be employed and have looked for a job in the recent past but are not currently looking for work.
- **Underemployment** is the number of people who work part time because they cannot find full-time jobs.

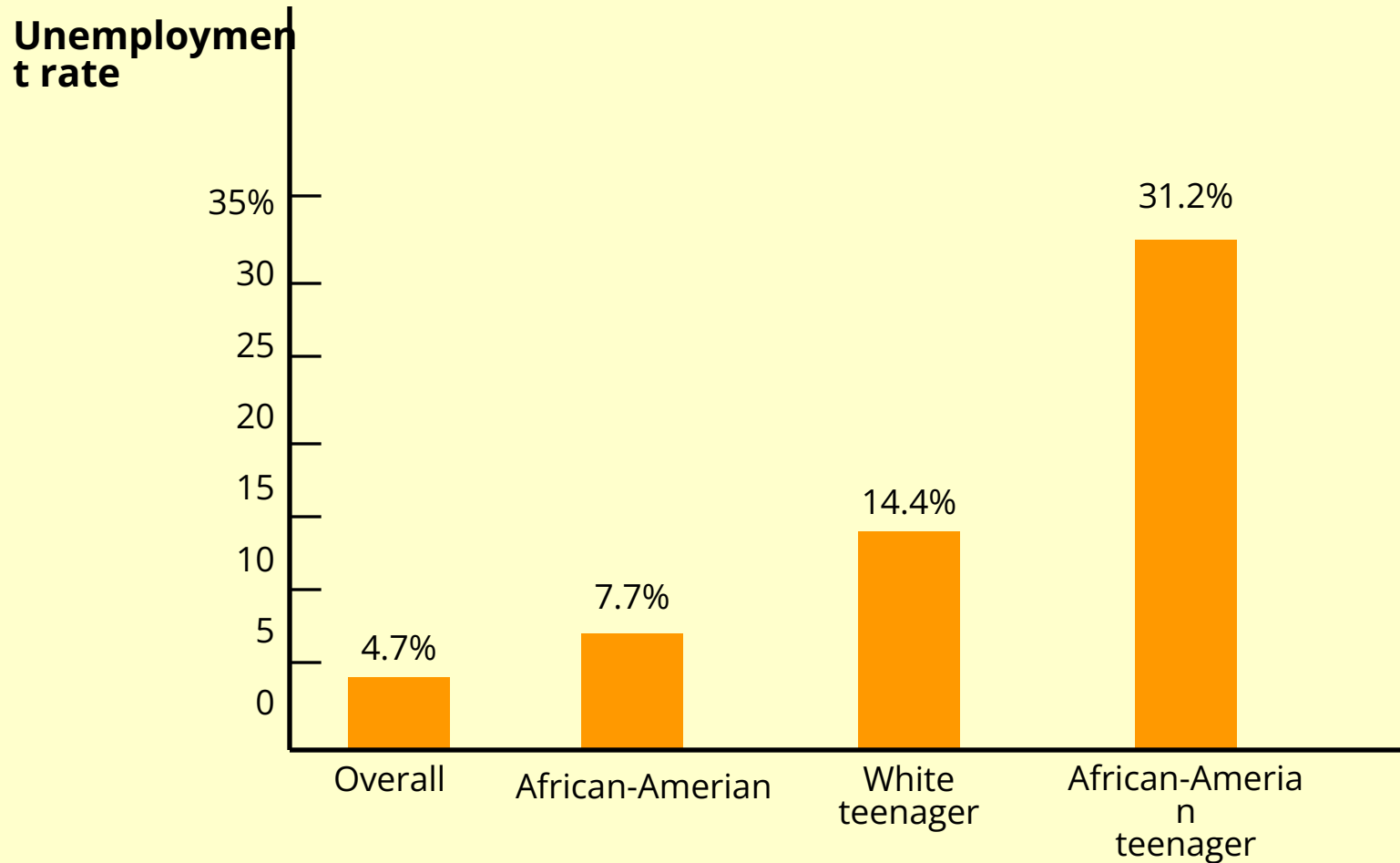
Unemployment Rate

Alternative Measures of Unemployment,



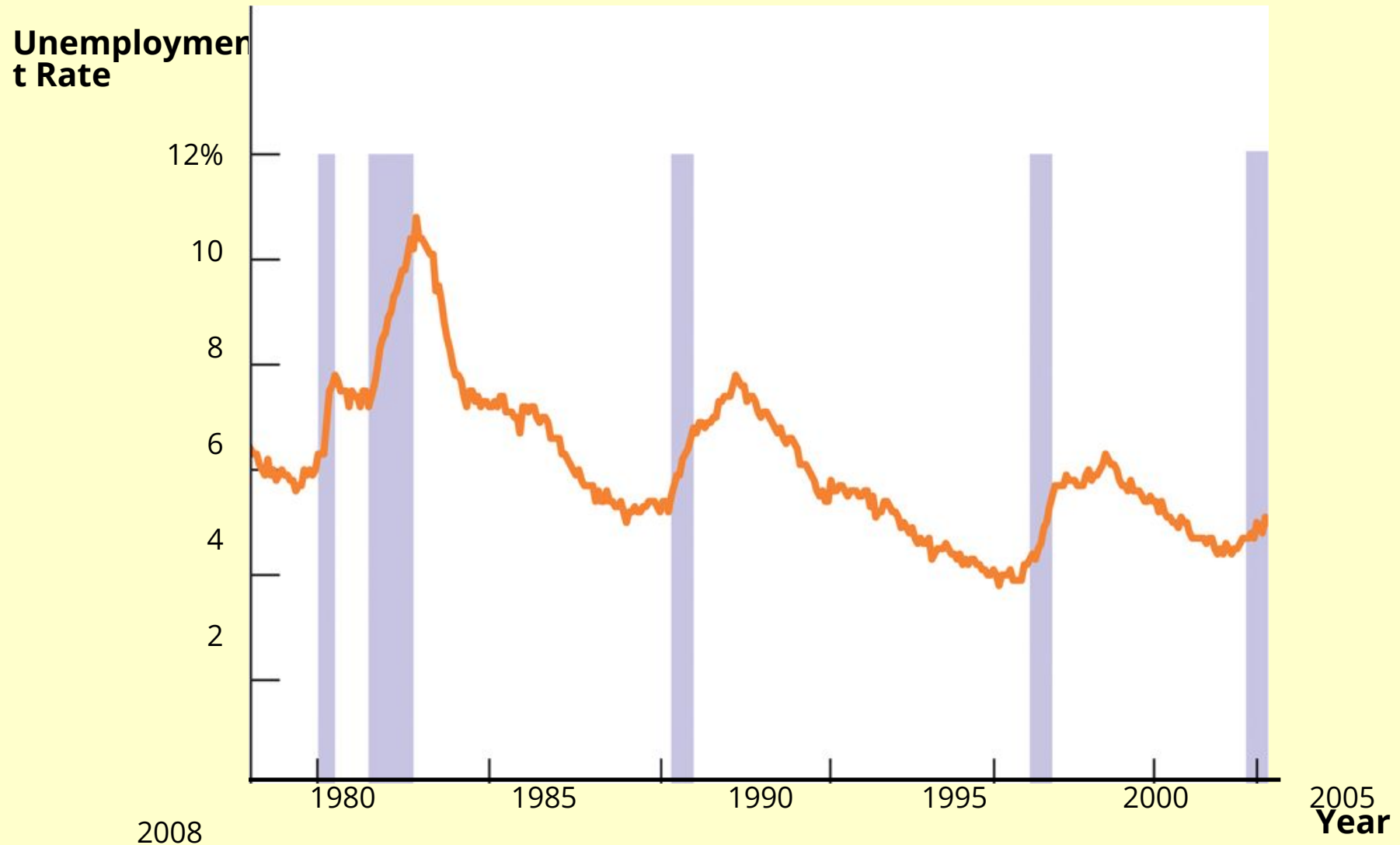
Unemployment Rate

Unemployment Rates of Different Groups, 2007



Unemployment Rate

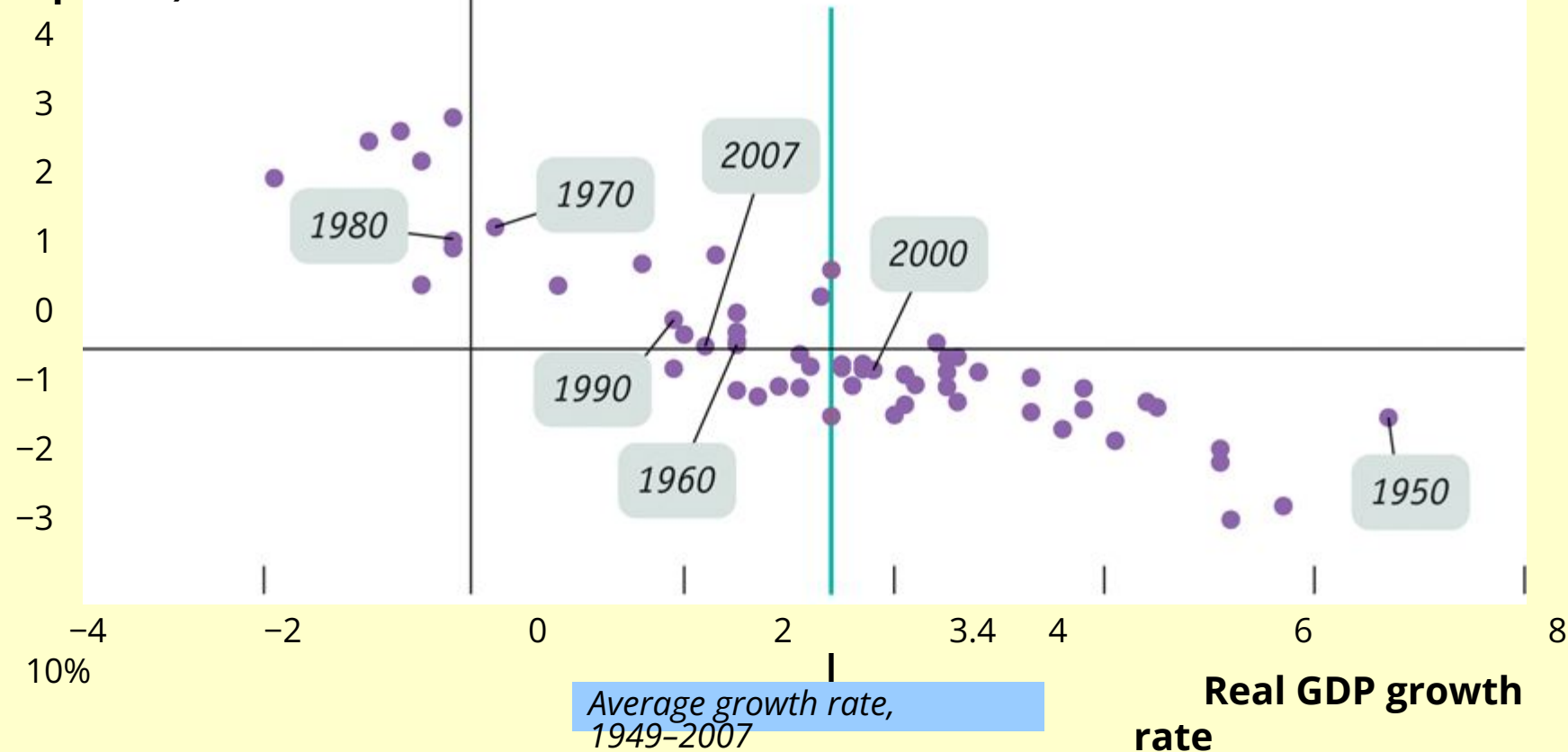
Unemployment and Recessions, 1978-2008



Unemployment Rate

Growth and Changes in Unemployment, 1949-2007

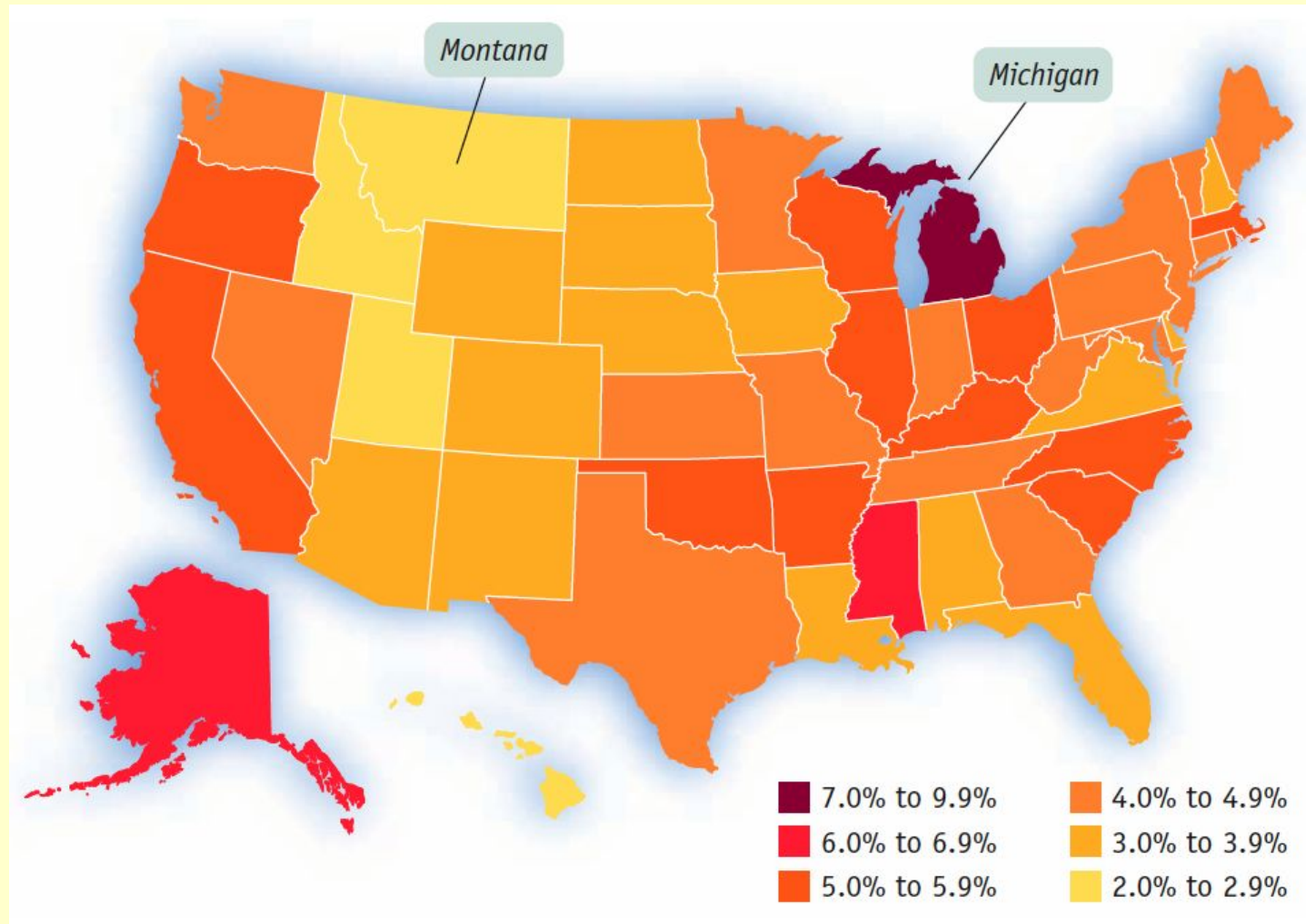
Change in
unemployment
rate (percentage
points)



Rocky Mountain Low

- In addition to estimating the unemployment rate for the nation as a whole, the U.S. government also estimates unemployment rates for each state.
- In July 2007 the unemployment rate in Montana, like that in other mountain states, was very low: just 2.7%. Meanwhile, Michigan had a 7.2% unemployment rate.
- Montana was doing well mainly because the state's booming oil business was creating new jobs even as the state's aging population reduced the size of the labor force. Michigan was at the opposite extreme.
- Layoffs by auto manufacturers, the traditional mainstay of Michigan's economy, had given the state the highest unemployment rate in the nation: 7.2% in July 2007.

Unemployment Rates Across America, July 2007

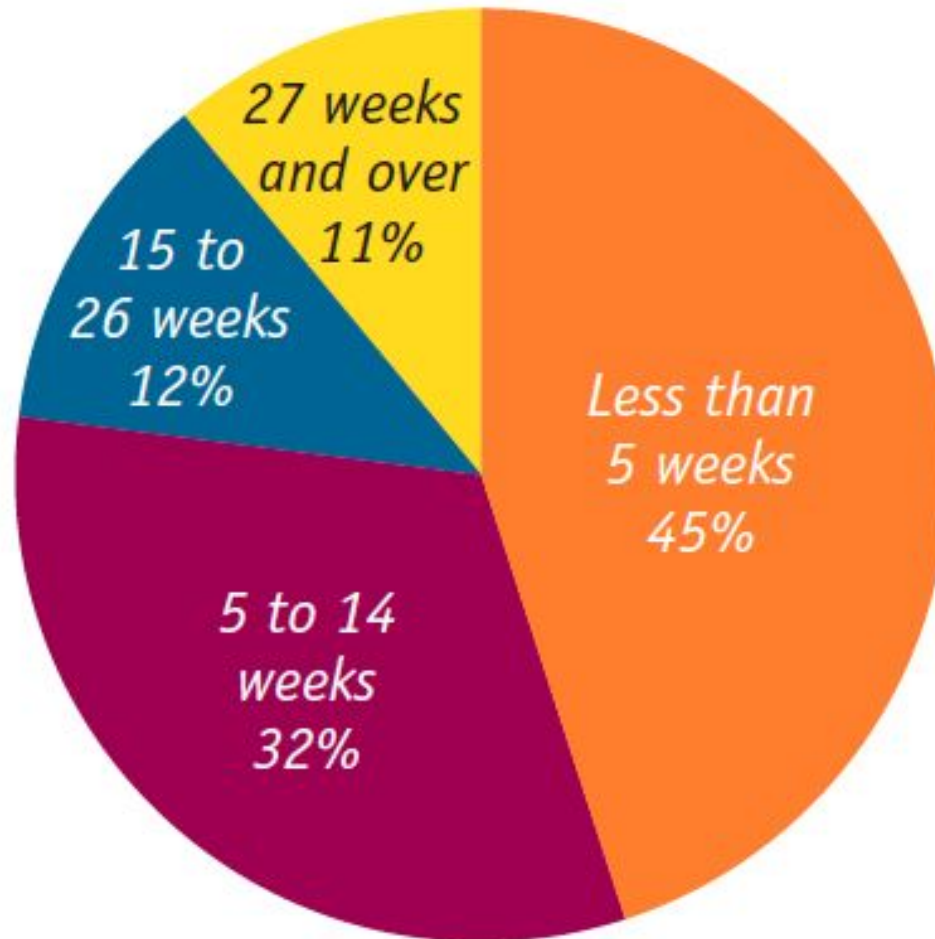


The Nature of Unemployment

- Workers who spend time looking for employment are engaged in **job search**.
- **Frictional unemployment** is unemployment due to the time workers spend in job search.
- **Structural unemployment** is unemployment that results when there are more people seeking jobs in a labor market than there are jobs available at the current wage.

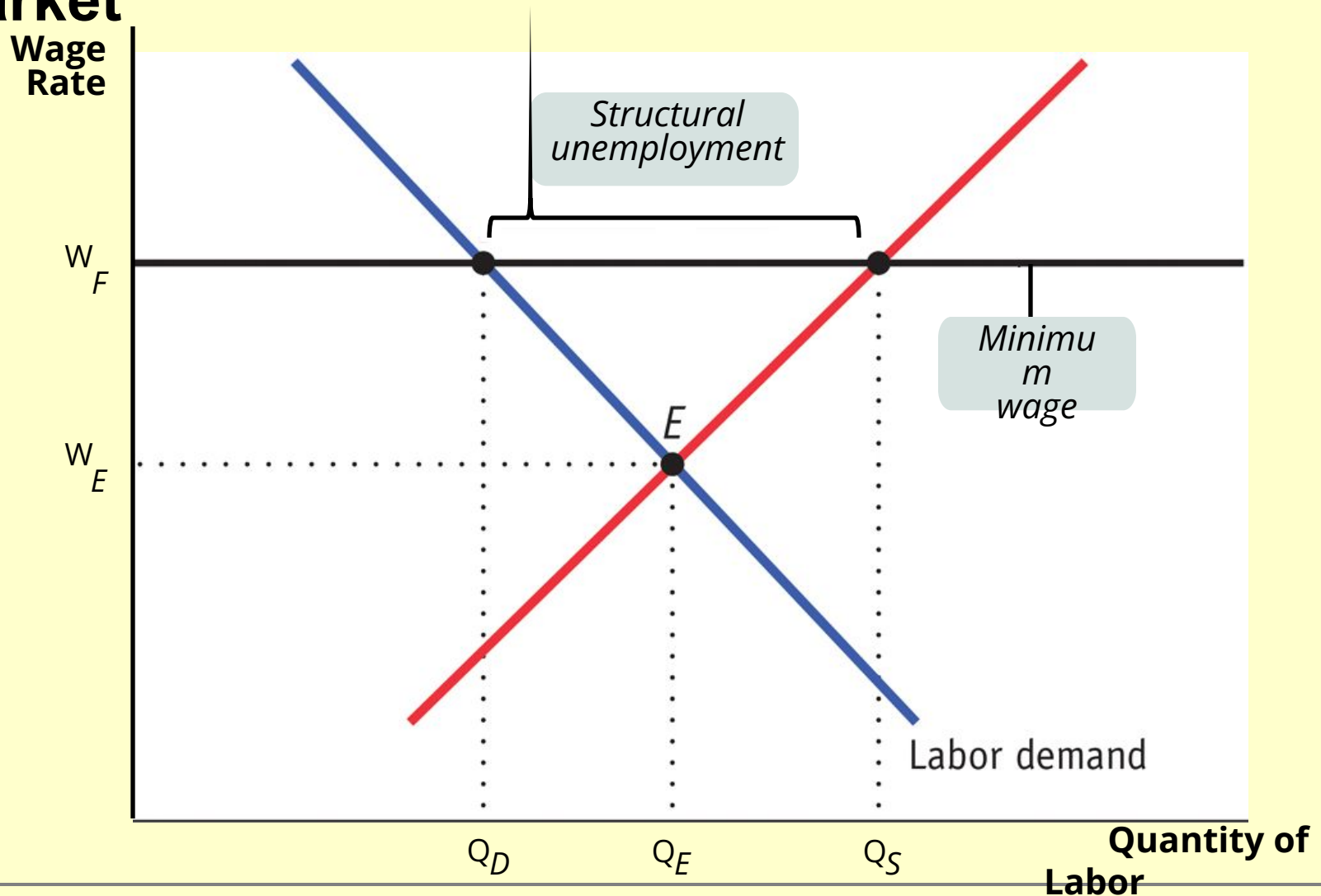
The Nature of Unemployment

Distribution of the Unemployed by Duration



Structural Unemployment

The Effect of a Minimum Wage on the Labor Market



Structural Unemployment

- **Minimum wages** - a government-mandated floor on the price of labor. In the U.S., the national minimum wage in 2005 was \$5.15 an hour.
- **Unions** - by bargaining for all a firm's workers collectively (collective bargaining), unions can often win higher wages from employers than the market would have otherwise provided when workers bargained individually.

Structural Unemployment

- **Efficiency wages** - wages that employers set above the equilibrium wage rate as an incentive for better performance.
- **Side effects of government policies** - public policies designed to help workers who lose their jobs; these policies can lead to structural unemployment as an unintended side effect.

The Natural Rate of Unemployment

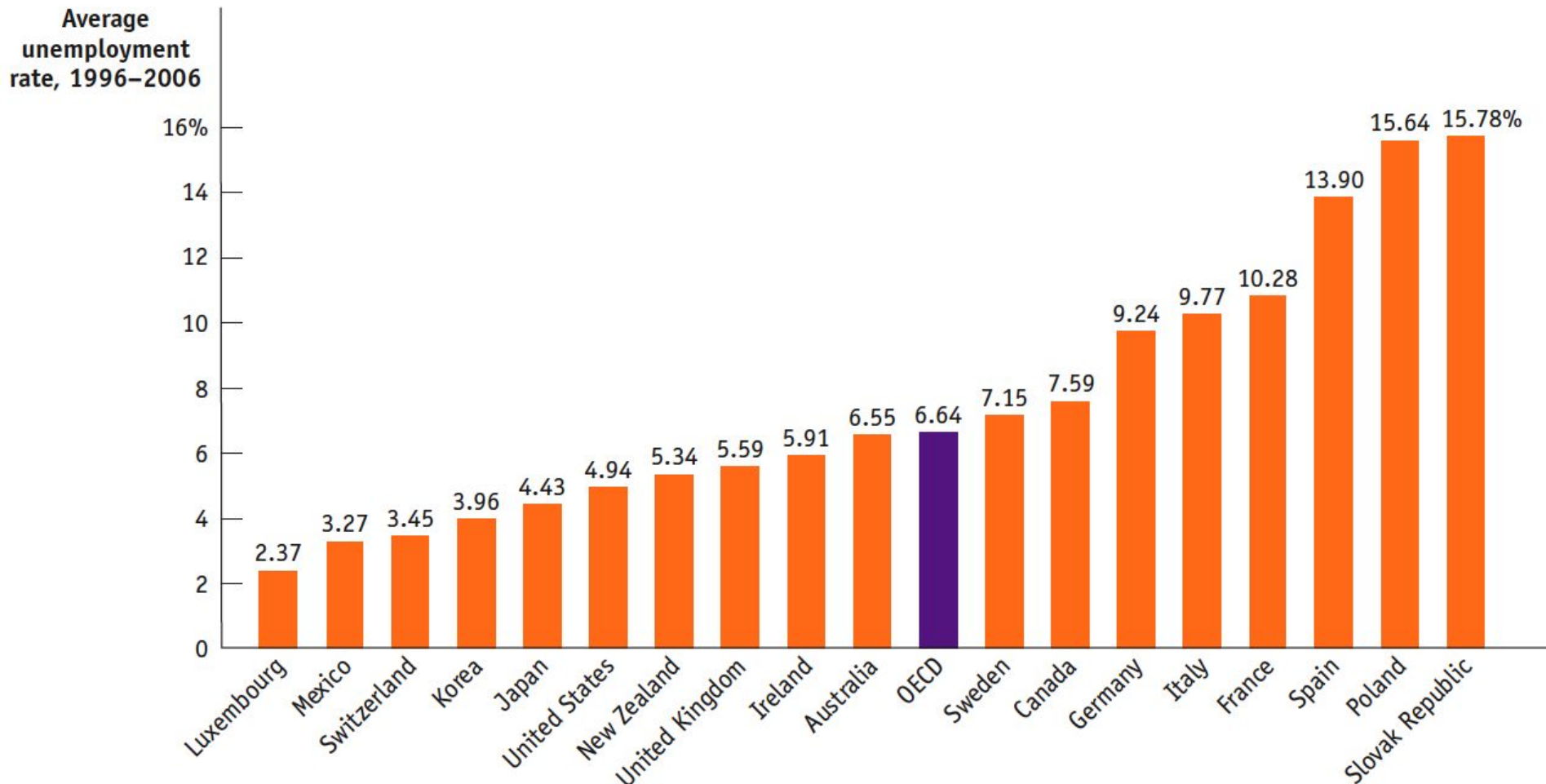
- **The natural rate of unemployment** is the normal unemployment rate around which the actual unemployment rate fluctuates. It is the unemployment rate that arises from the effects of frictional plus structural unemployment.
- **Cyclical unemployment** is a deviation in the actual rate of unemployment from the natural rate.

The Natural Rate of Unemployment

- Natural unemployment = Frictional unemployment + Structural unemployment
- Actual unemployment = Natural unemployment + Cyclical unemployment

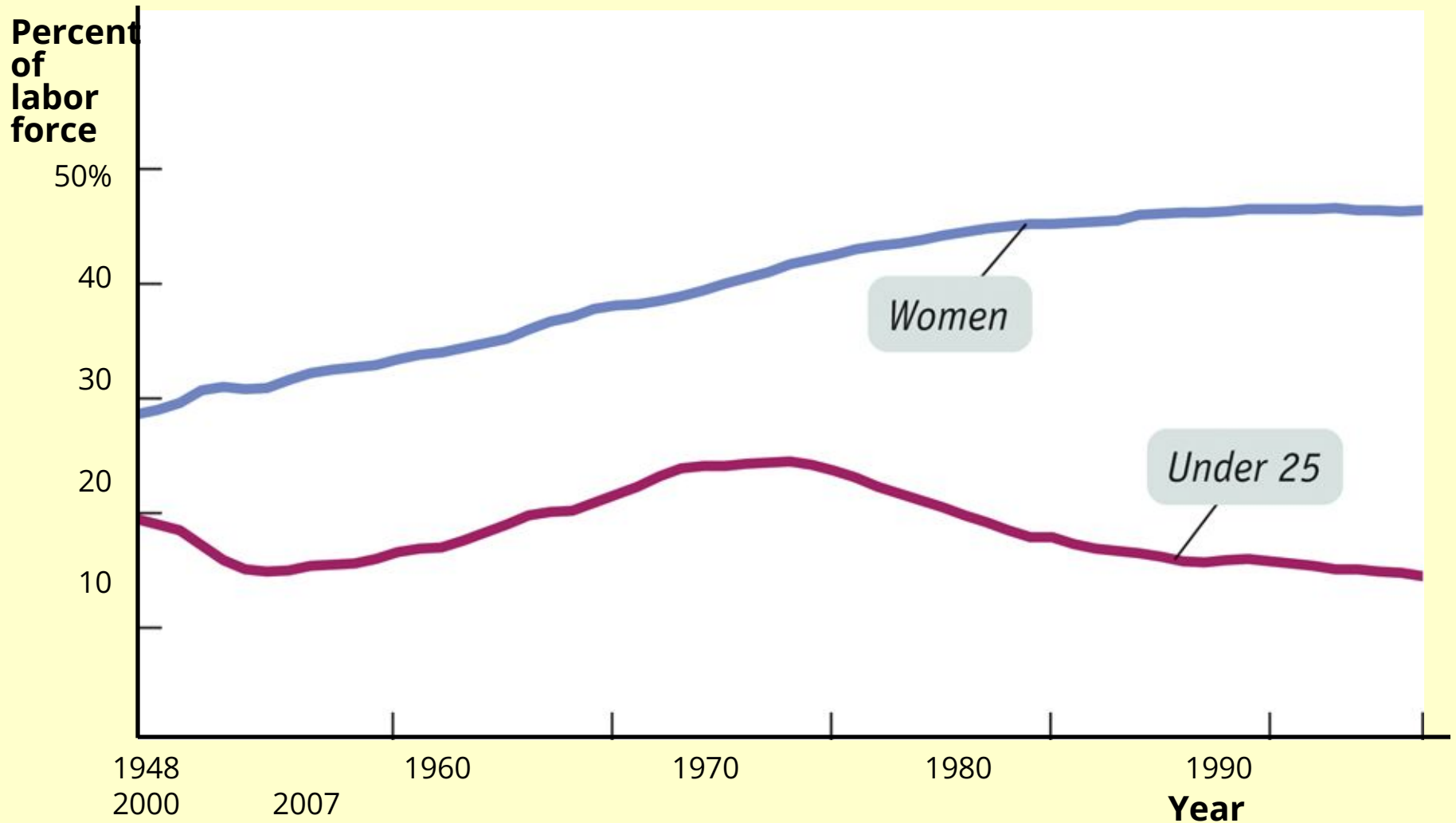
GLOBAL COMPARISON

Natural Unemployment around the OECD



Changes in the Natural Rate of Unemployment

The Changing Makeup of the U.S. Labor Force



An Unemployment Lockdown?

- Most analysts believe that the natural rate of unemployment in the United States has fallen substantially since 1980; the Congressional Budget Office estimate has fallen from 6.2% to 4.8%.
- One factor is that many of those who would otherwise be counted as unemployed may be behind bars.
- Largely owing to changes in law enforcement strategies, the number of American adults in jail or prison has risen from 503,586 in 1980, or 0.5% of the labor force, to 2.3 million, or 1.5% of the labor force, in 2007.
- The rise in the prison population might have lopped about 0.2 percentage points off the natural rate of unemployment.

Structural Unemployment in Eastern Germany

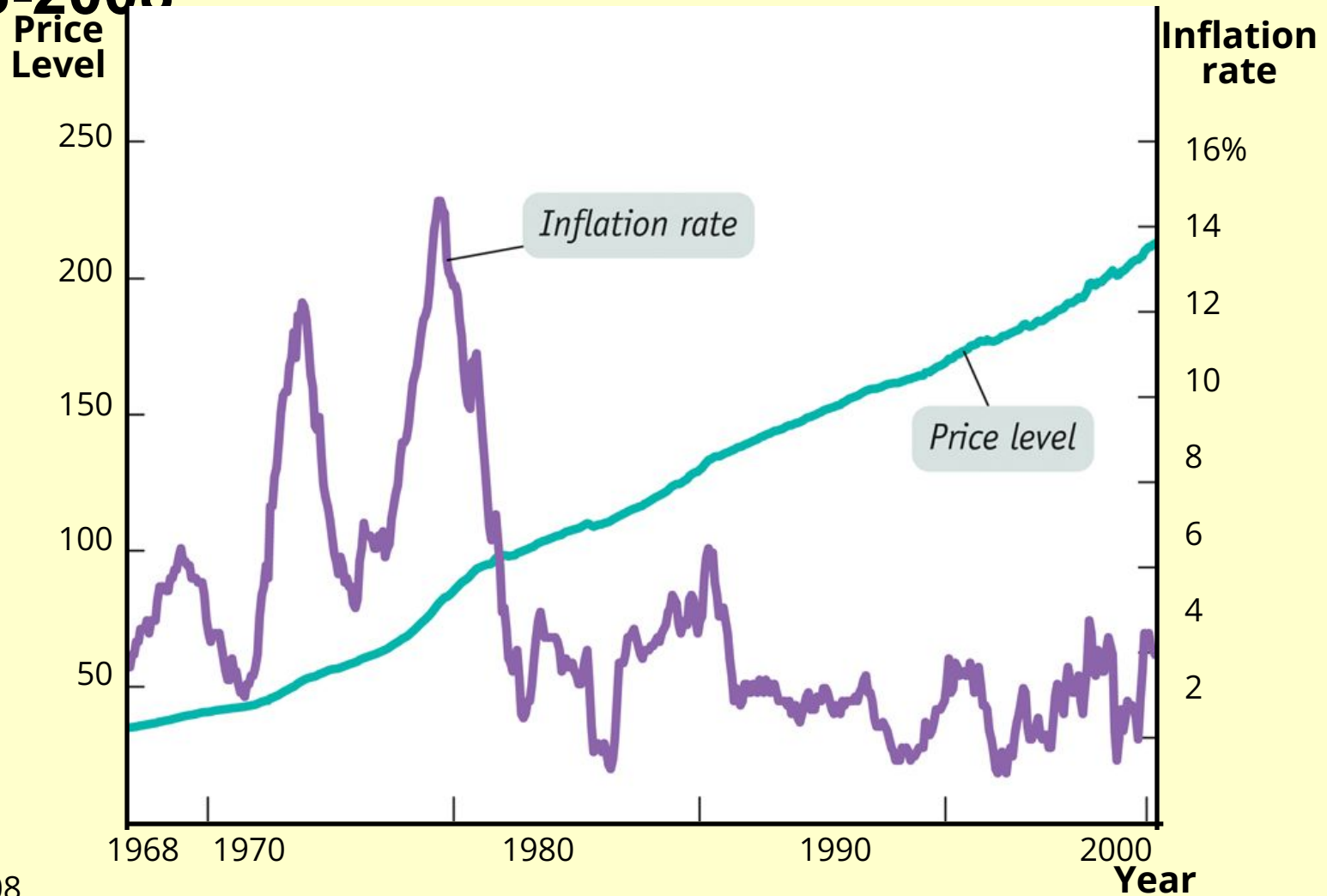
- A spontaneous popular uprising in 1989 overthrew the communist dictatorship in East Germany.
- After reunification, employment in East Germany plunged. The economy of the former East Germany has remained persistently depressed, with an unemployment rate of more than 16% in 2008.
- East Germany found itself suffering from severe structural unemployment.
- When Germany was reunified, it became clear that workers in East Germany were much ***less productive*** than their cousins in the west.
- The result has been a persistently large mismatch between the number of workers demanded and the number of those seeking jobs.

Inflation and Deflation

- The **real wage** is the wage rate divided by the price level.
- **Real income** is income divided by the price level.

Inflation and Deflation

The Price Level versus the Inflation Rate, 1968-2008



Inflation and Deflation

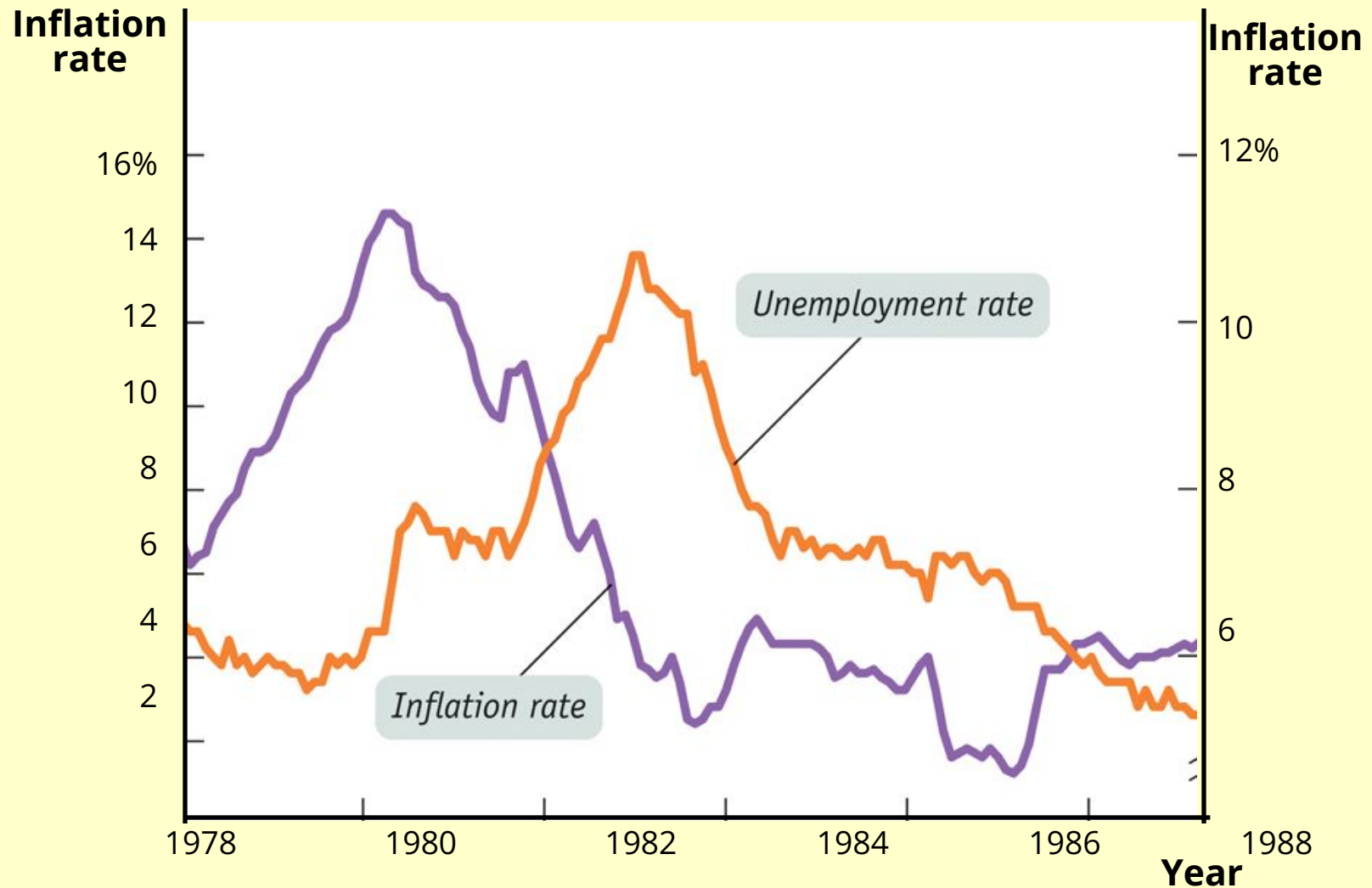
- **Shoe-leather costs** are the increased costs of transactions caused by inflation.
- **Menu cost** is the real cost of changing a listed price.

Inflation and Deflation

- **Unit-of-account costs** arise from the way inflation makes money a less reliable unit of measurement.
- The **nominal interest rate** is the interest rate expressed in dollar terms.
- The **real interest rate** is the nominal interest rate minus the rate of inflation.
- **Disinflation** is the process of bringing the inflation rate down.

Inflation and Deflation

The Cost of Disinflation



Israel's Experience with Inflation

- In the mid-1980s, Israel experienced a “clean” inflation: there was no war, the government was stable, and there was order in the streets.
- But policy errors led to very high inflation.
- The shoe-leather costs of inflation were substantial. Israelis spent a lot of time moving money in and out of bank accounts that provided high enough interest rates to offset inflation.
- Businesses made efforts to minimize menu costs. For example, restaurant menus often didn't list prices.
- It was hard for Israelis to make decisions because prices changed so much and so often.

SUMMARY

1. Inflation and unemployment are the main concerns of macroeconomic policy.
2. **Employment** is the number of people employed; **unemployment** is the number of people unemployed and actively looking for work. Their sum is equal to the **labor force**, and the **labor force participation rate** is the percentage of the population age 16 or older that is in the labor force.
3. The **unemployment rate** can overstate because it counts as unemployed those who are continuing to search for a job despite having been offered one (that is, workers who are frictionally unemployed). It can understate because it ignores frustrated workers, such as **discouraged workers**, **marginally attached workers**, and the **underemployed**.

4. The unemployment rate is affected by the business cycle. The unemployment rate generally falls when the growth rate of real GDP is above average and generally increases when the growth rate of real GDP is below average.
5. Job creation and destruction, as well as voluntary job separations, lead to **job search** and **frictional unemployment**. In addition, a variety of factors such as minimum wages, unions, **efficiency wages**, and government policies designed to help laid-off workers result in a situation in which there is a surplus of labor at the market wage rate, creating **structural unemployment**. As a result, the **natural rate of unemployment**, the sum of frictional and structural unemployment, is well above zero, even when jobs are plentiful.

6. The actual unemployment rate is equal to the natural rate of unemployment plus **cyclical unemployment**.
7. The natural rate of unemployment changes over time.
8. Policy makers worry about inflation as well as unemployment.
9. Inflation does not, as many assume, make everyone poorer by raising the level of prices. That's because wages and incomes are adjusted to take into account a rising price level, leaving **real wages** and **real income** unaffected. However, a high inflation rate imposes overall costs on the economy: **shoe-leather costs**, **menu costs**, and **unit-of-account costs**.

10. Inflation can produce winners and losers within the economy, because long-term contracts are generally written in dollar terms. Loans typically specify a **nominal interest rate**, which differs from the **real interest rate** due to inflation. A higher-than-expected inflation rate is good for borrowers and bad for lenders. A lower-than expected inflation rate is good for lenders and bad for borrowers.
11. **Disinflation** is very costly, so policy makers try to prevent inflation from becoming excessive in the first place.

The End of Chapter 8

coming attraction:

Chapter 9: Long-Run Economic Growth