

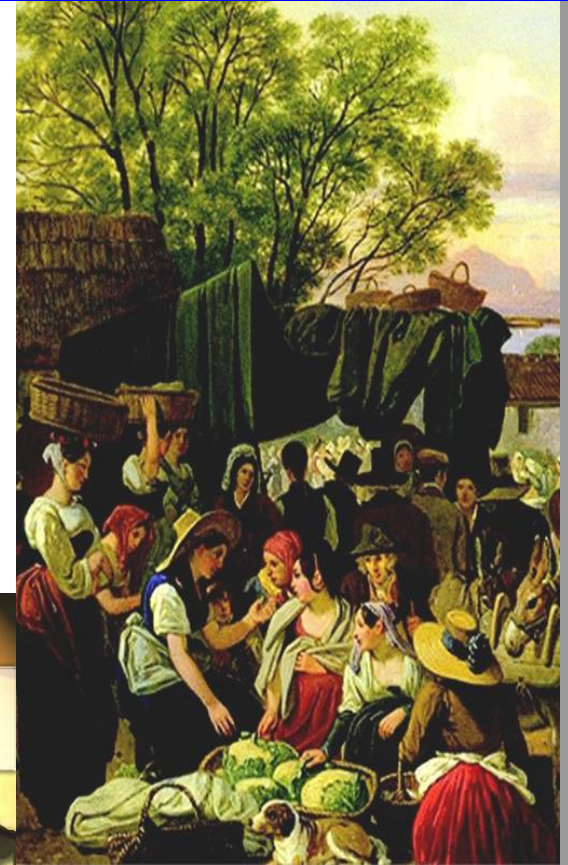
Ch:28



Principles of

ECONOMICS

6th Edition



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**In this chapter,
look for the answers to these questions:**

- How is unemployment measured?
- What is the “**N**atural **R**ate of **U**nemployment”?
- What are the determinants of an economy’s **N**atural **R**ate of **U**nemployment.
- Why are there always some people unemployed?
- How is unemployment affected by unions and minimum wage laws?
- What is the theory of efficiency wages, and how does it help explain unemployment?

Unemployment is a situation in which able-bodied persons (in the age group of 16 or older) willing to work at a prevailing wage rate, do not find the job.

Employment /Unemployment Model

ECONOMY	AGE GROUP	COMPRISED OF	INCLUDES	CATEGORIES
POPULATION (ALL AGE GROUP)	ADULT POPULATION (AGE GROUP OF 16 AND OLDER)	LABOR FORCE	EMPLOYED	PAID EMPLOYEES
				WORKED IN THEIR OWN BUSINESS
				WORKED AS UNPAID WORKERS IN FAMILY BUSINESS
				(Also includes those who were not working but who had jobs from which they were temporarily absent because of, for example, vacation, illness, or bad weather)
		NOT IN LABOR FORCE	UNEMPLOYED (not employed, were available for work, and had tried to find employment <i>during the previous four weeks</i> . Also includes those waiting to be called to a job from which they had been laid off)	FRICTONAL (JOB SEARCH)
				STRUCTURAL (SKILL MISMATCH)
				CYCLICAL (BUSINESS CYCLE)
	POPULATION LESS THAN 16 YEARS	Child labor is illegal		

Employment /Unemployment Model....

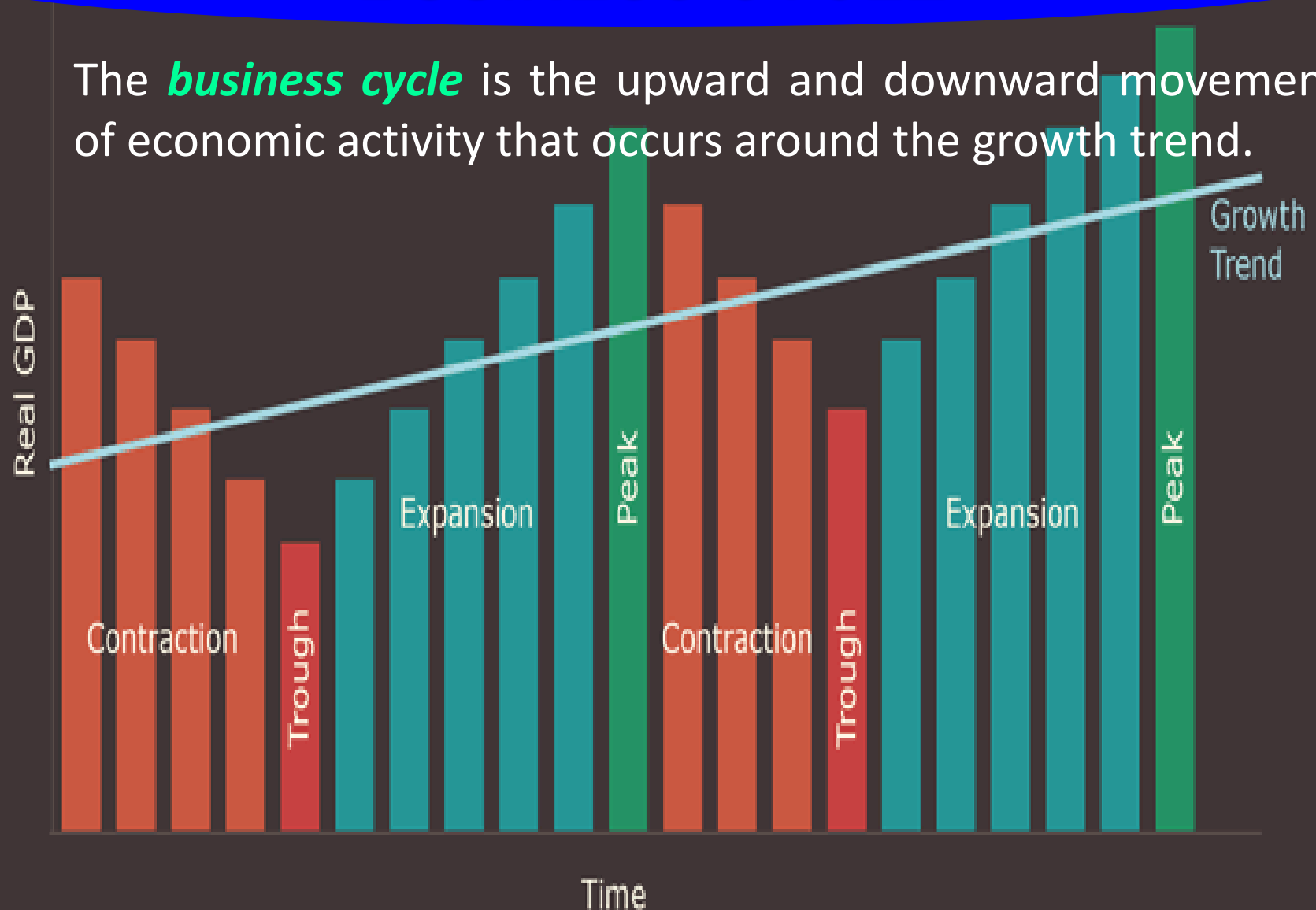
Frictional unemployment is defined as the unemployment that occurs because of *people moving or changing occupations*. Demographic change can also play a role in this type of unemployment since young or first-time workers tend to have higher-than-normal turnover rates as they settle into a long-term occupation.

Structural unemployment is defined as unemployment arising from *technical change such as automation, or from changes in the composition of output due to variations in the types of products people demand*. For example, a decline in the demand for typewriters would lead to structurally unemployed workers in the typewriter industry.

Cyclical unemployment is defined as workers losing their jobs due to *short-run fluctuations in output (Business cycle)*, i.e. the normal up and down movements in the economy as it cycles through booms and recessions over time. During **recession**, **frictional unemployment** tends to drop since people become afraid of quitting the job they have due to the poor chances of finding another one.

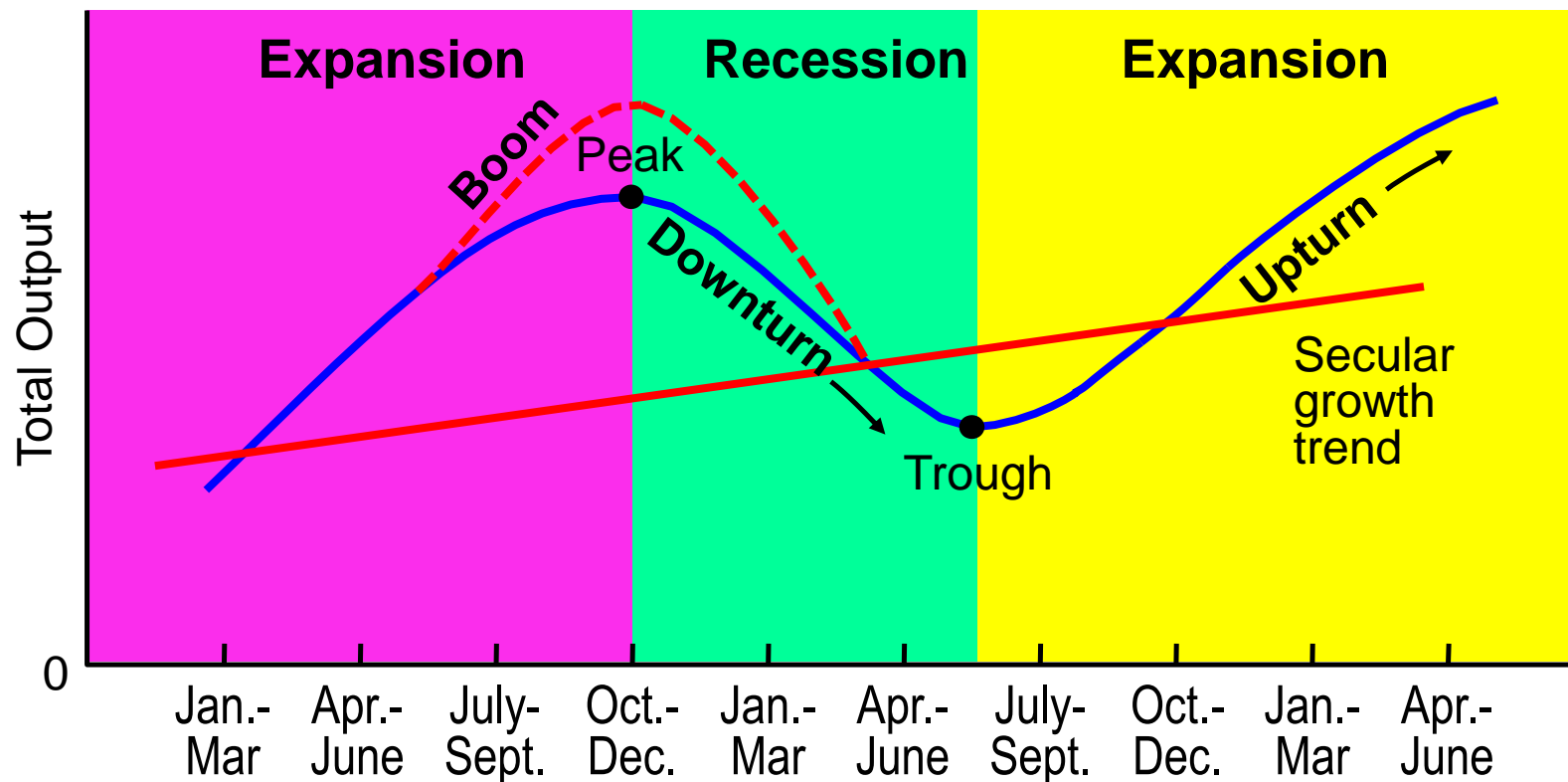
BUSINESS CYCLE

The *business cycle* is the upward and downward movement of economic activity that occurs around the growth trend.



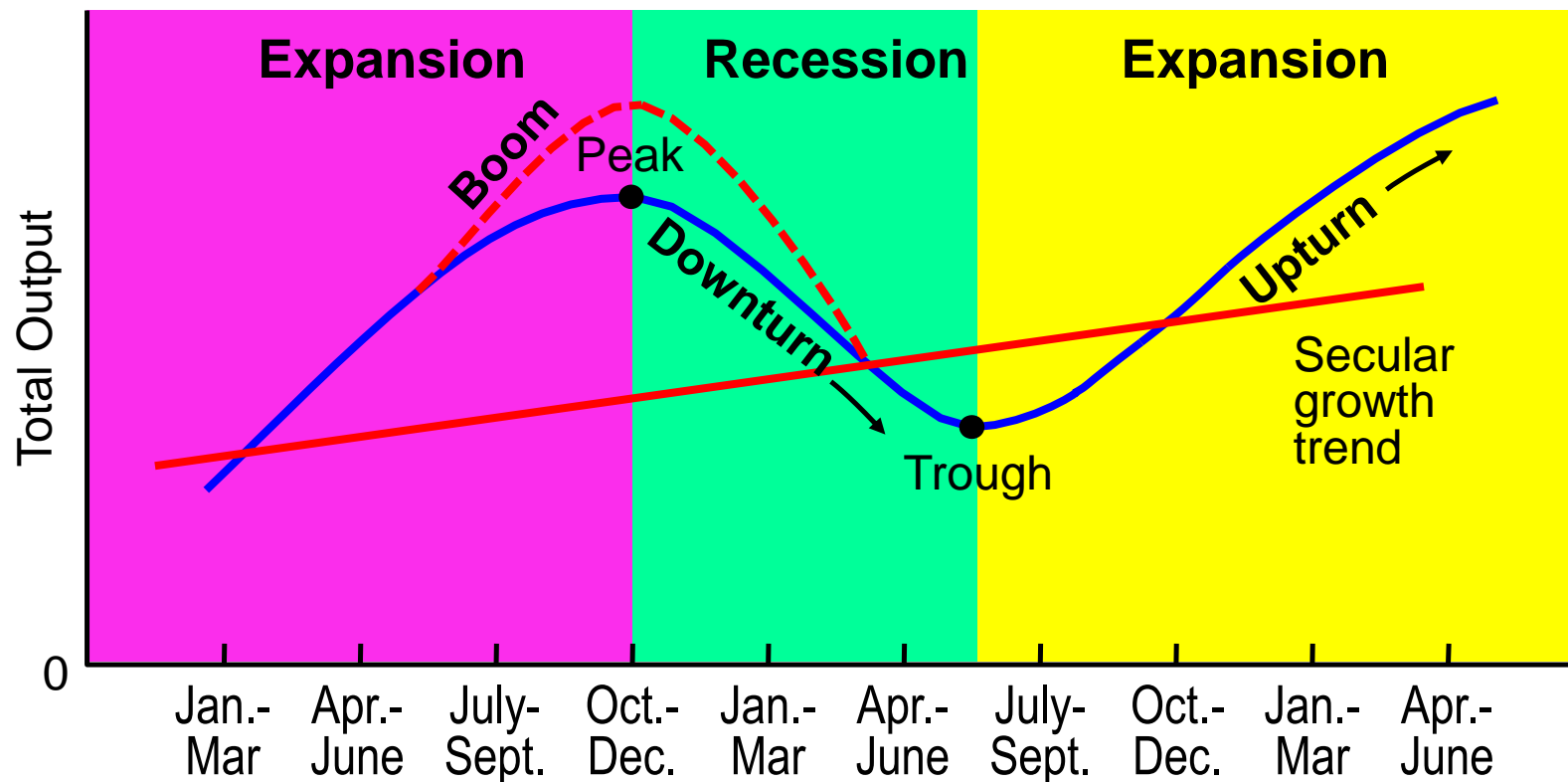
The Phases of the Business Cycle

- The **peak** is the top of the business cycle.
- A **boom** is a very high peak, representing a big jump in output.
- The **downturn** is the phenomenon of economic activity starting to fall from a peak.



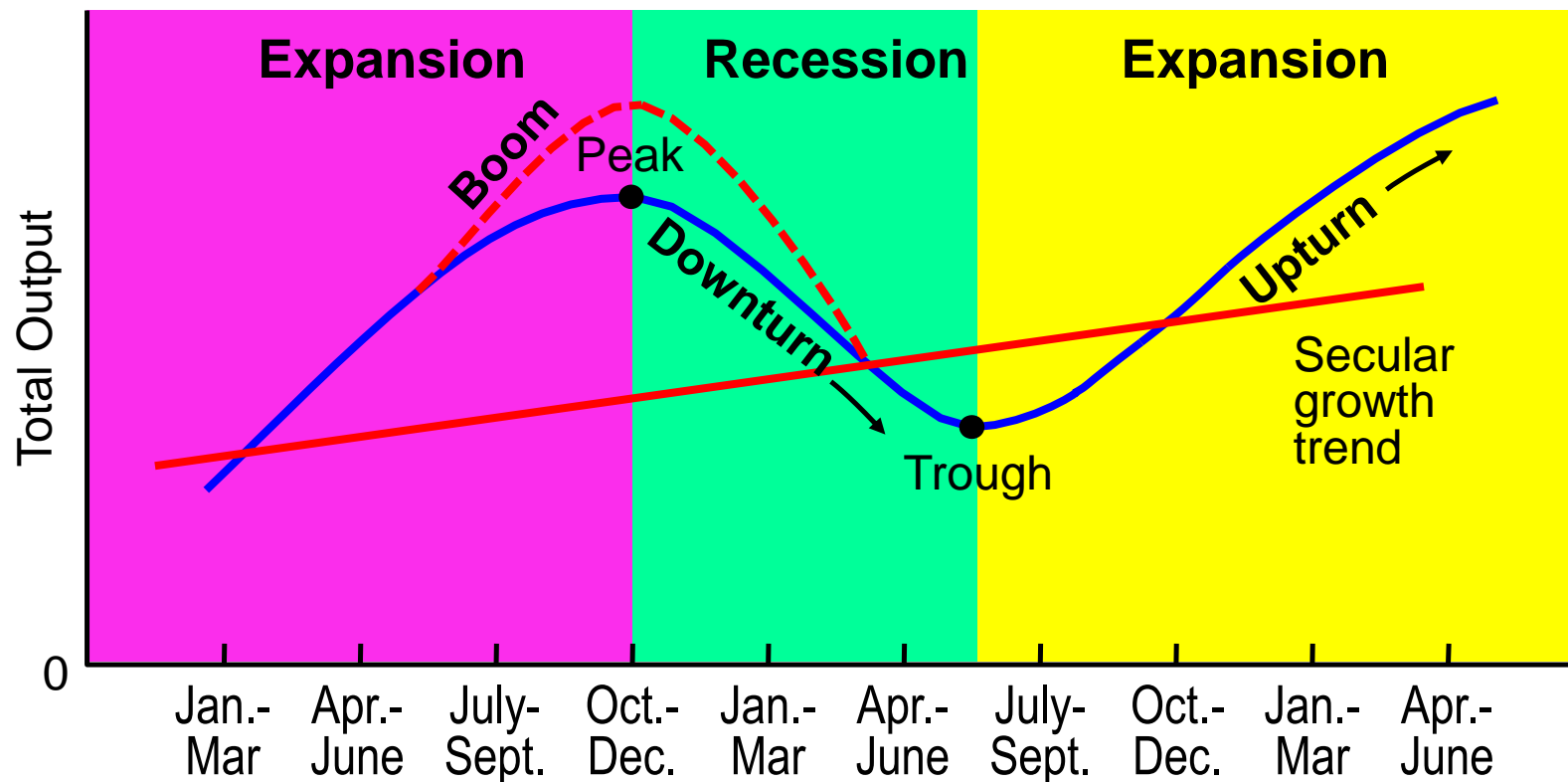
The Phases of the Business Cycle...

- A **recession** is a decline in real output and rising unemployment that persists for more than two consecutive quarters in a year.
- A **depression** is a large recession.
- The bottom of the recession or depression is called the **trough**.



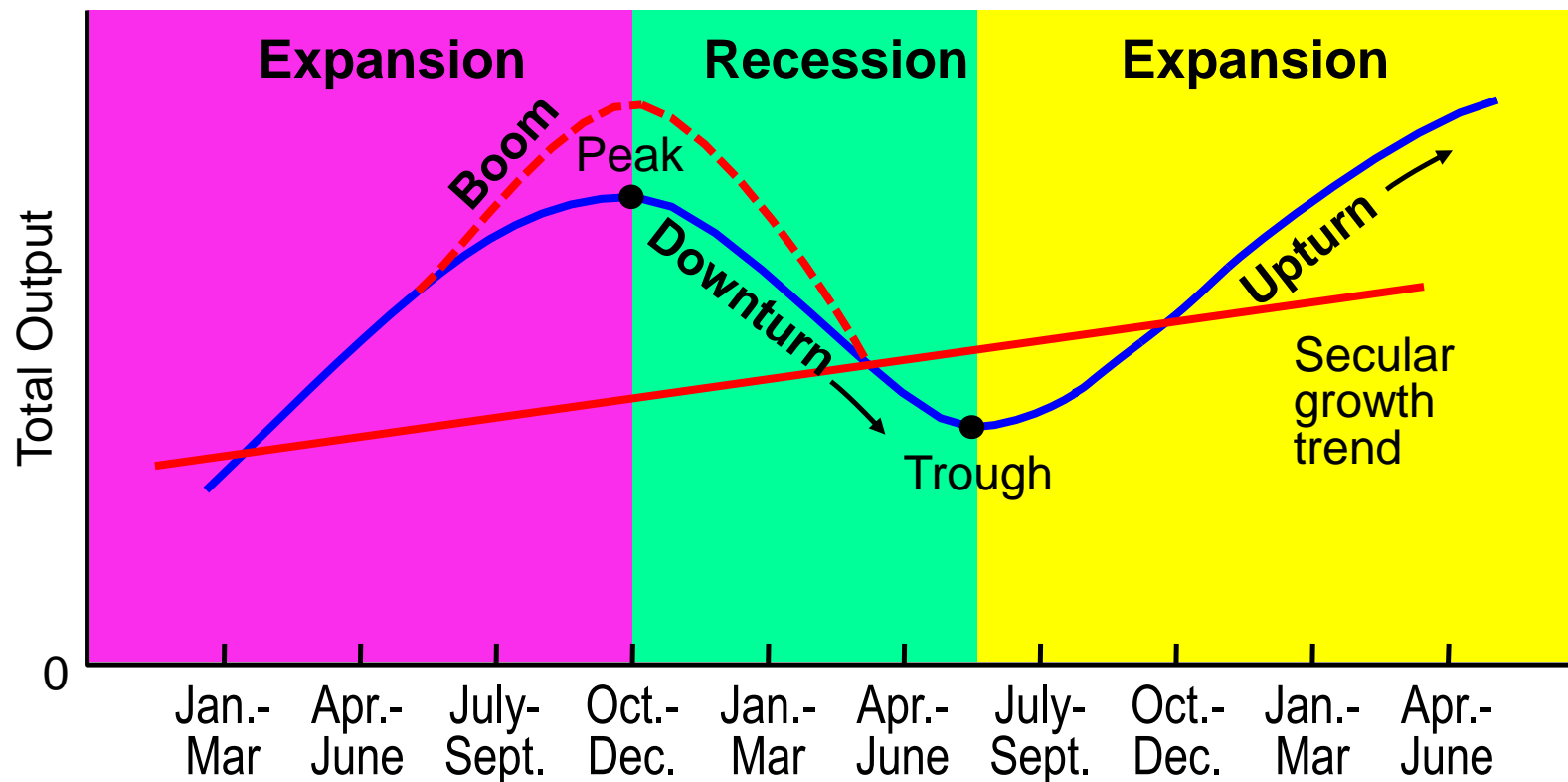
The Phases of the Business Cycle...

- As total output starts to expand, the economy comes out of the trough into an **upturn**, which may turn into an expansion.
- An **expansion** is an upturn that lasts at least two consecutive quarters of a year.



The Phases of the Business Cycle...

Thus, Cyclical unemployment is defined as workers losing their jobs due to short-run fluctuations in output (Business cycle), i.e. the normal up and down movements in the economy as it cycles through booms and recessions over time. In a **recession**, frictional unemployment tends to drop since people become afraid of quitting the job they have due to the poor chances of finding another one.



Recession: When Bad Times Prevail



<https://www.imf.org/external/pubs/ft/fandd/basics/recess.htm>

There were 122 completed recessions in 21 advanced economies over the 1960–2007 period.

Source: IMF

Labor Force Statistics.....

- Produced by Bureau of Labor Statistics (BLS), in the U.S. Dept. of Labor, based on regular survey of 60,000 households called the *Current Population Survey (CPS)*

Labor Force Statistics

BLS divides adult population into 3 groups:

- Based on *“adult population” (Age group of 16 yrs or older)*
 - **Employed:** *Paid employees, self-employed and unpaid workers in a family business*
 - **Unemployed:** *People not working who have looked for work during previous 4 weeks*
 - **Not in the labor force:** *Everyone else*

The **labor force** is the total number of workers, including the *employed and unemployed*.

Labor Force Statistics

Unemployment rate (“U-rate”):

% of the labor force that is unemployed

$$\text{Unemployment Rate (U-rate)} = 100 \times \frac{\text{No of unemployed}}{\text{Labor Force (LF)}}$$

Labor force participation rate:

% of the adult population that is in the labor force

$$\text{Labor Force participation rate} = 100 \times \frac{\text{Labor Force (LF)}}{\text{Adult Population}}$$

ACTIVE LEARNING

Calculate labor force statistics

Compute the labor force, u-rate, adult population, and labor force participation rate using this data:

Adult population of the U.S. by group, January 2006	
employed	143.1 million
unemployed	7.0 million
not in labor force	77.4 million

ACTIVE LEARNING

Answers

$$\begin{aligned}\text{Labor force} &= \text{employed} + \text{unemployed} \\ &= 143.1 \text{ million} + 7.0 \text{ million} \\ &= \underline{\mathbf{150.1 \text{ million}}}\end{aligned}$$

$$\begin{aligned}\text{U-rate} &= 100 \times \{(\text{unemployed})/(\text{labor force})\} \\ &= 100 \times \{7.0 \text{ million}/150.1 \text{ million}\} \\ &= \underline{\mathbf{4.7\%}}\end{aligned}$$

ACTIVE LEARNING

Answers

Adult Population= labor force + not in labor force

$$= 150.1\text{million} + 77.4 \text{ million}$$

$$= \underline{\text{227.5 million}}$$

LF participation rate

$$= 100 \times \{(\text{labor force})/(\text{Adult population})\}$$

$$= 100 \times \{150.1 \text{ million}/227.5 \text{ million}\}$$

$$= \underline{\text{66.0\%}}$$

ACTIVE LEARNING

Calculate labor force statistics

Compute the labor force, u-rate, adult population, and labor force participation rate using this data:

Adult population of the U.S. by group, April 2011	
No of employed	139.7 million
No of unemployed	13.7 million
not in labor force	85.7 million

ACTIVE LEARNING

Answers

$$\begin{aligned}\text{Labor force} &= \text{employed} + \text{unemployed} \\ &= 139.7 \text{ million} + 13.7 \text{ million} \\ &= \underline{\underline{153.4 \text{ million}}}\end{aligned}$$

$$\begin{aligned}\text{U-rate} &= 100 \times \{(\text{unemployed})/(\text{labor force})\} \\ &= 100 \times \{13.7 \text{ million}/153.4 \text{ million}\} \\ &= \underline{\underline{8.9\%}}\end{aligned}$$

ACTIVE LEARNING

Answers.....

Adult Population

$$\begin{aligned} &= \text{labor force} + \text{not in labor force} \\ &= 153.4 \text{ million} + 85.7 \text{ million} \\ &= \textbf{239.1 million} \end{aligned}$$

Labor force participation rate

$$\begin{aligned} &= 100 \times \{(\text{labor force})/(\text{population})\} \\ &= 100 \times \{153.4\text{million}/239.1\text{million}\} \\ &= \textbf{64.2\%} \end{aligned}$$



Discouraged Workers

- Former job seekers who have given up and no longer actively seek employment.
 - They drop out of the labor force.
 - They are no longer counted in unemployment statistics.

Natural Rate of Unemployment

There's always some unemployment observed in an economy, though the u-rate fluctuates from year to year.

Natural rate of unemployment

– *the normal rate of unemployment around which the actual unemployment rate fluctuates.*



Natural Rate of Unemployment is the
Full Employment Level Of Unemployment

FULL EMPLOYMENT DOES NOT MEAN ZERO UNEMPLOYMENT

Explaining the Natural Rate: An Overview....

Even when the economy is doing well, there is always some unemployment observed in an economy, including:

(i) Frictional unemployment

- occurs when workers spend time searching for the jobs that best suit their skills and tastes
- **short-term** for most workers

(ii) Structural unemployment

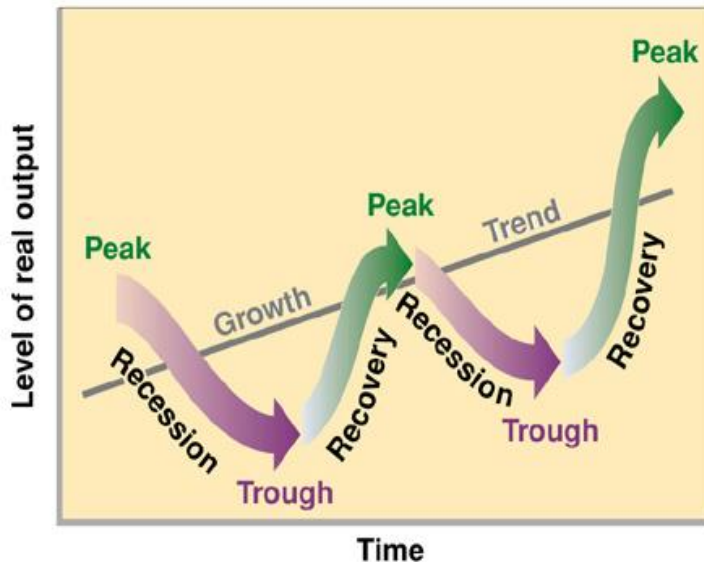
- occurs when there are fewer jobs than workers
- When the labor market is out of equilibrium

Cyclical Unemployment vs. the Natural Rate

There's always some unemployment, though the u-rate fluctuates from year to year.

Natural rate of unemployment

- the normal rate of unemployment around which the actual unemployment rate fluctuates. It is the full employment level of unemployment

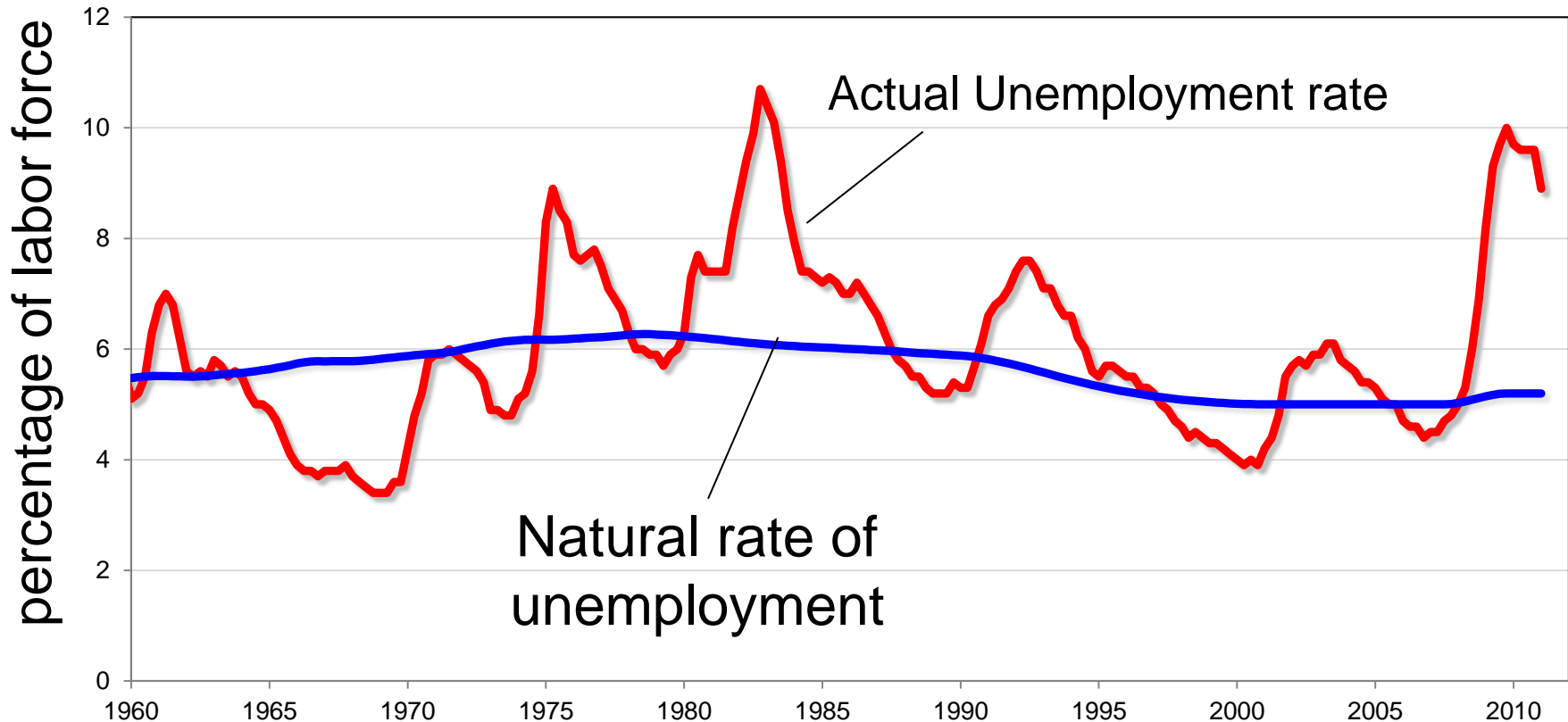


Cyclical unemployment

The deviation of unemployment from its natural rate associated with business cycles.

U.S. Unemployment, 1960–2011

Economists, including the late Arthur Okun, have estimated that for every one percentage point increase in the unemployment rate above the natural rate, output falls by 2 to 3 percentage points. This is called Okun's law.



The natural rate of unemployment (NRU) corresponds to a cyclical unemployment rate of **zero**.

Explaining.....

the Natural Rate of Unemployment (NRU):

Four explanations for the economy's natural rate of unemployment:

Determinants of NRU:-

- ✓ Job search
- ✓ Minimum-wage laws
- ✓ Unions
- ✓ Efficiency wages

1 - Job Search

- Workers have different tastes & skills, and jobs have different requirements.
- **Job search** is the process of matching workers with appropriate jobs.
- **Sectoral shifts** are changes in the composition of demand across industries or regions of the country.
- Such shifts displace some workers, who must search for new jobs appropriate for their skills & tastes.
- The economy is always changing, so some **frictional unemployment is inevitable.**

WHY FRICTIONAL UNEMPLOYMENT IS INEVITABLE?

- ❖ Economy of any country is always changing.
- ❖ Some firms are **shrinking** while others are **expanding**.
 - When consumers decide to stop buying a good produced by Firm-A and instead start buying a good produced by Firm-B, some workers at Firm-A will likely lose their jobs.
 - New jobs will be created at Firm-B, but it will take some time to move the displaced workers from Firm-A to Firm-B.
 - The result of this transition is temporary unemployment.
- ❖ The same situation can occur across industries and regions as well.
- ❖ Workers in declining industries (regions) will find themselves looking for new jobs, and firms in growing industries (regions) will be seeking new workers.
- ❖ Transitions of workers between firms and between regions are accompanied by temporary unemployment.
- ❖ Therefore, **frictional unemployment is inevitable**.

Public Policy and Job Search

- **Govt. employment agencies**
provide information about job vacancies to speed up the matching of workers with jobs.
- **Public training programs**
aim to equip workers displaced from declining industries with the skills needed in growing industries.

Unemployment Insurance (UI)

- Unemployment insurance (UI): A Govt. program that partially protects workers' incomes when they become unemployed.
Benefits are paid only to the unemployed who were laid off because their previous employers no longer needed their skills
 - A typical worker covered by unemployment insurance in the United States receives 50 percent of his or her former wages for twenty-six (26) weeks
- UI increases frictional unemployment
To see why, recall one of the Ten Principles of Economics: *People respond to incentives.*

Unemployment Insurance benefits end, when a worker takes a job. So workers have less incentive to search or take jobs while eligible to receive benefits.

Unemployment Insurance.....

Benefits of UI:

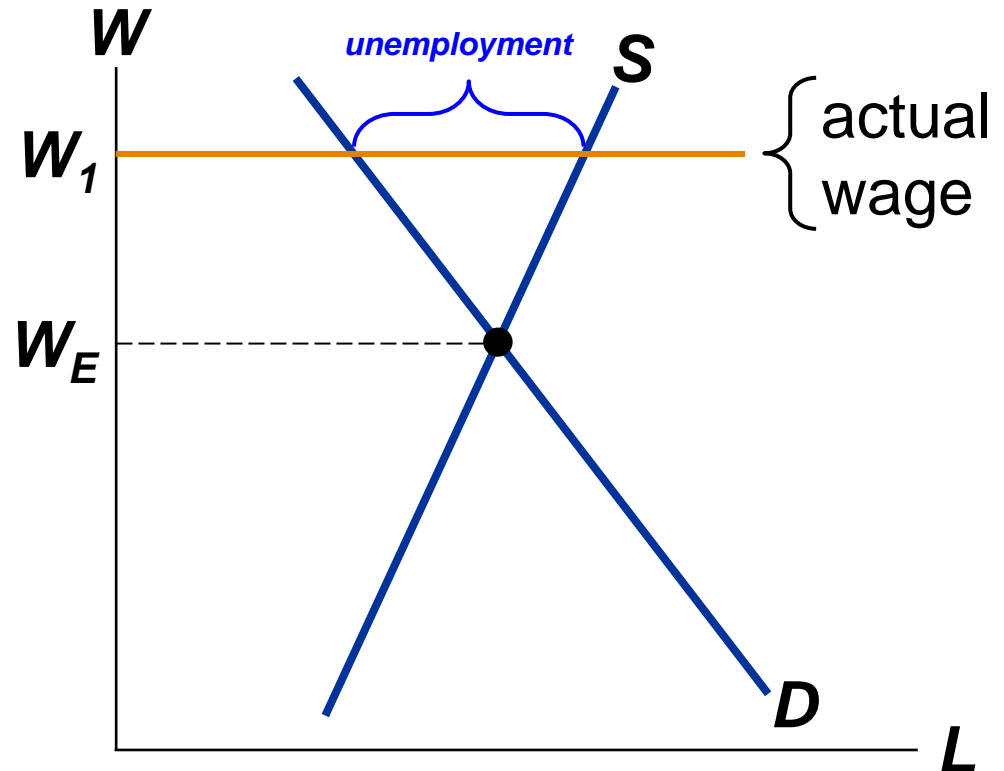
- Reduces uncertainty over incomes
- Gives the unemployed persons more time to search, resulting in better job matches and thus higher productivity

Explaining Structural Unemployment

Structural unemployment occurs when not enough jobs to go around.

Occurs when **wage is kept above equilibrium**. There are three reasons for this...

1. *Minimum –wage Laws*
2. *Unions & collective Bargaining*
3. *Theory of Efficiency Wage*

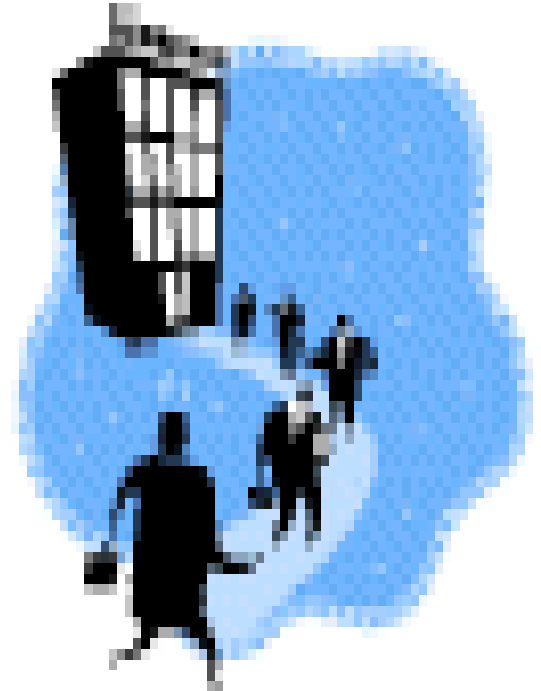


1 - Minimum-Wage Laws

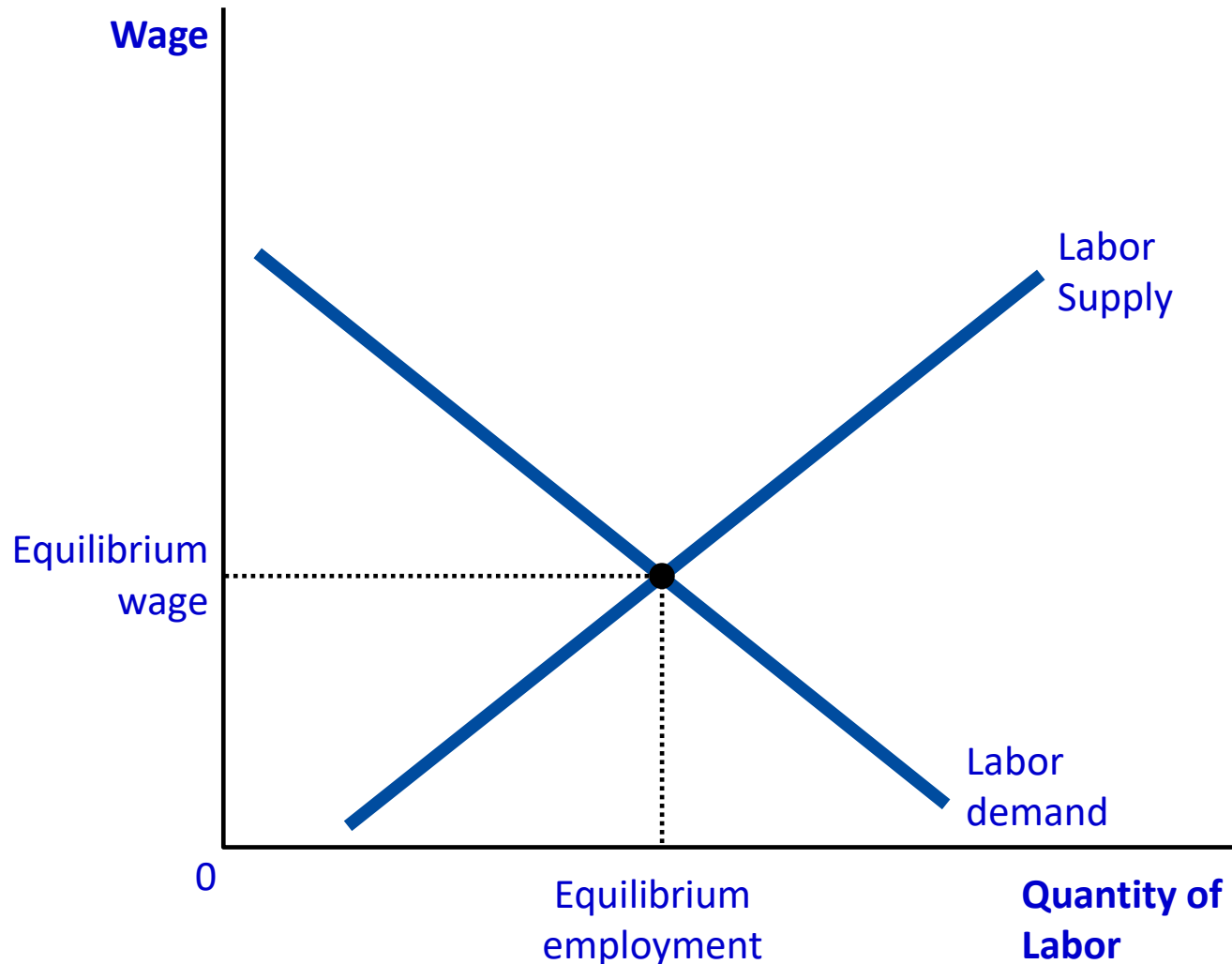
- The minimum wage may exceed the equilibrium wage for the least skilled or experienced workers, causing structural unemployment.
- But this group is a small part of the labor force.

Minimum-Wage Laws....

- Minimum wage laws dictate the lowest price possible for labor that any employer may pay.

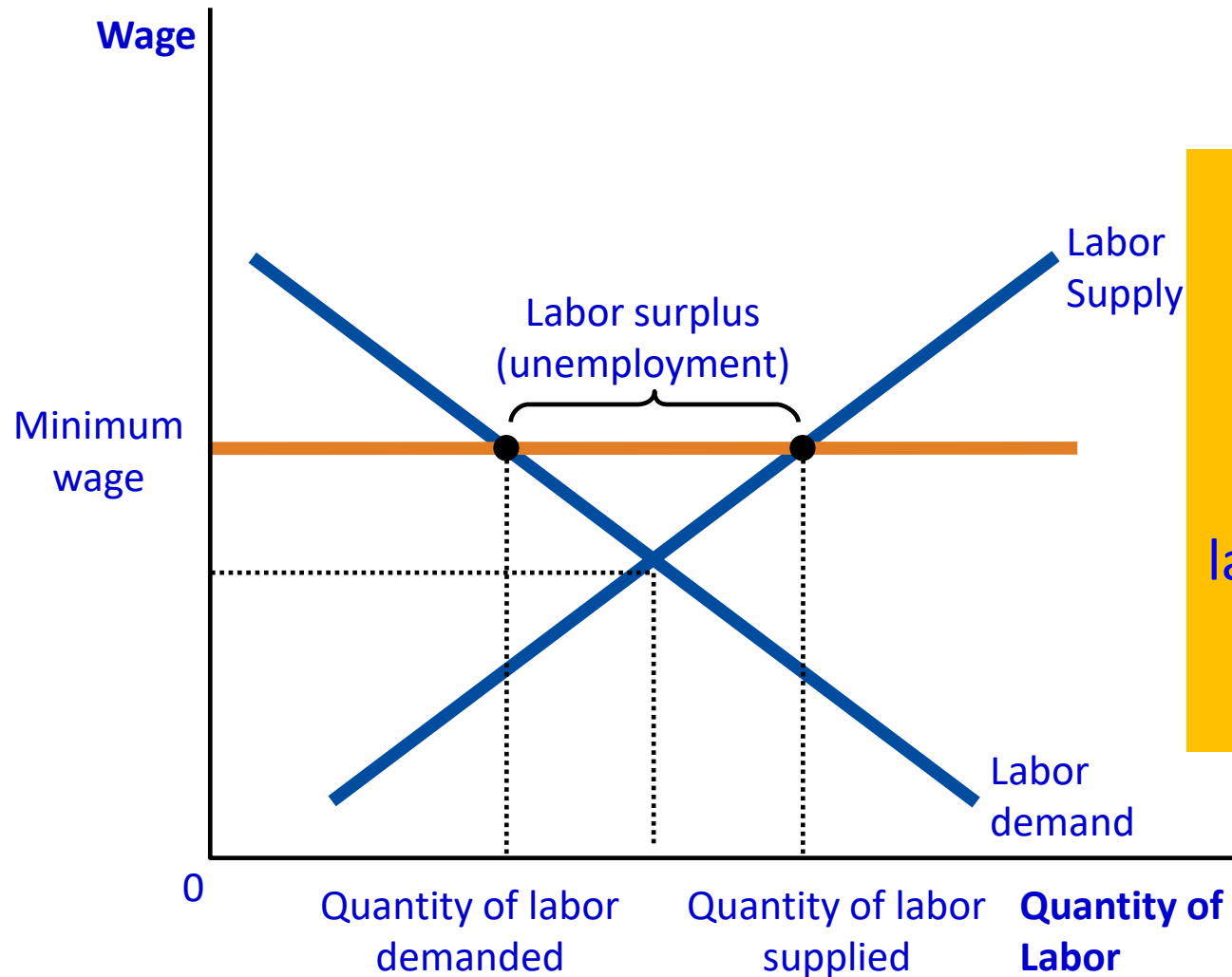


How the Minimum Wage Affects the Labor Market ?



Minimum wage laws dictate the lowest price possible for labor that any employer may pay.

How the Minimum Wage Affects the Labor Market



Minimum wage laws dictate the lowest price possible for labor that any employer may pay.

2 - Unions

- **Union:** a worker association that bargain **collectively** with employers over wages, benefits, and working conditions
- Unions exert their market power to negotiate higher wages for workers.
- The typical union worker **earns 20% higher** wages and gets more benefits than a non-union worker for the same type of work.



Unions.....

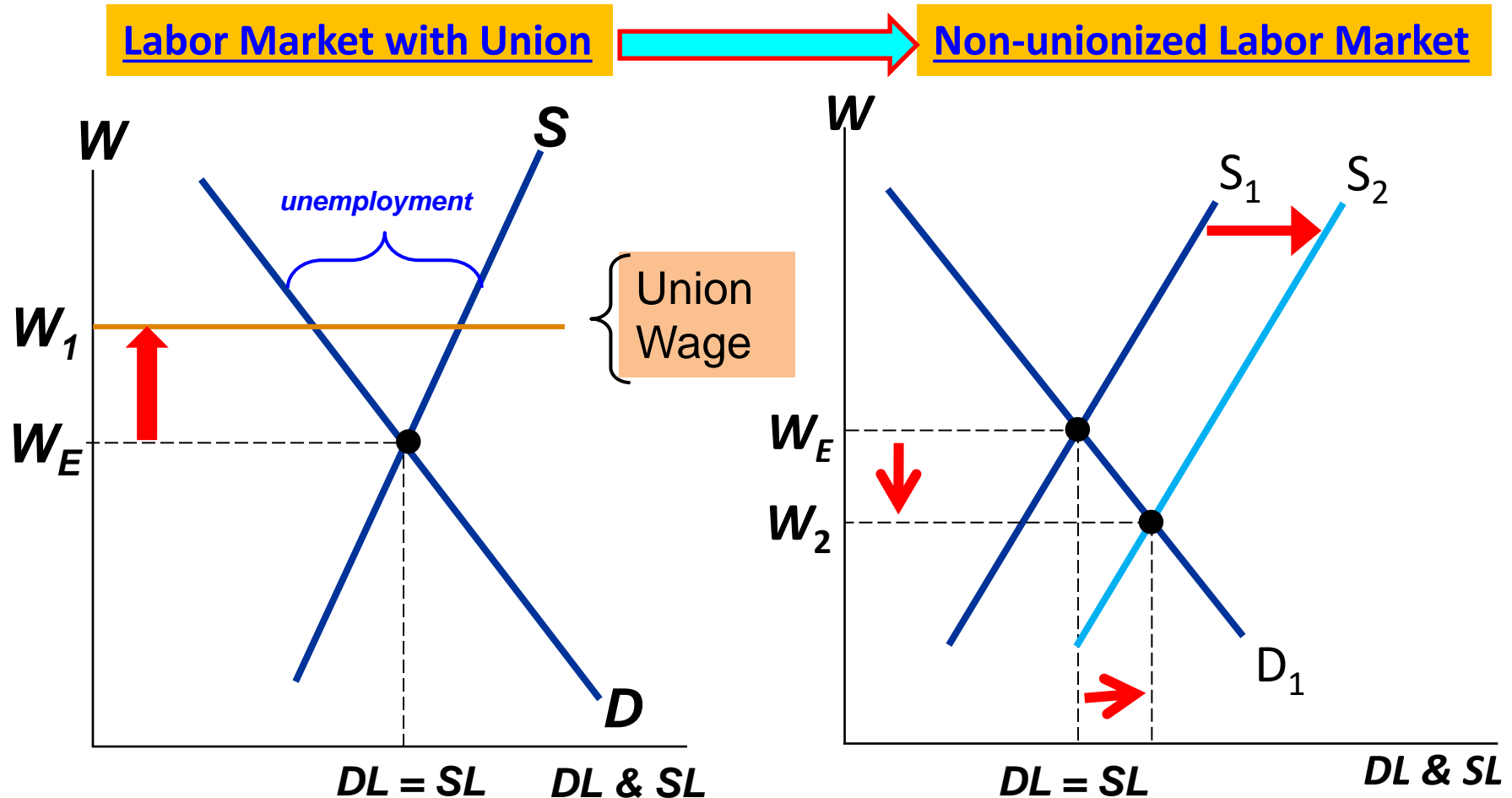
- The typical union worker in the U.S. earns 20% higher wages and gets more benefits than a nonunion worker for the same type of work.
- The typical union worker in the U.S. is also about 20% more productive than a nonunion worker doing the same type of work.

These comparisons might not hold for public sector workers or for unions in other countries

Unions....

- If unions raise the wage above equilibrium, quantity of labor demanded falls and unemployment results.
- **“Insiders”** – workers who remain employed, are **better off**
- **“Outsiders”** – workers who lose their jobs, are **worse off**
- Some outsiders go to non-unionized labor markets, which increases labor supply and reduces wages in those markets.

Effect of rise in wage rate in Labor market due to Labor Union in Non-unionized Labor Market.....



Some outsiders go to non-unionized labor markets from union labor market, which increases labor supply and reduces wages in those markets.

Are Unions Good or Bad ???



- Critics:

Unions are cartels. They raise wages above equilibrium, which *causes unemployment and/or depresses (lower) wages in non-union labor markets.*

- Advocates:

Advocates of unions argue that *unions are an answer to the problems* that occur when a firm has too much power in the labor market (*for example, if it is the only major employer in the City*)



3 - Efficiency Wages

- The theory of **efficiency wages**:
Firms voluntarily pay above-equilibrium wages to **boost** worker productivity.
- Different versions of efficiency wage theory suggest different reasons why firms pay high wages.

Efficiency Wages.....

Four basic reasons why firms might pay efficiency wages:

1. Worker health

In less developed countries, poor nutrition is a common problem. Paying higher wages allows workers to eat better, makes them healthier, more productive.

2. Worker turnover

Hiring & training new workers is costly. Paying high wages gives workers more incentive to stay, reduces turnover.

Efficiency Wages.....

3. Worker quality

Offering higher wages attracts better job applicants, increases quality of the firm's workforce.

4. Worker effort

Workers can work hard or shirk. Shirkers are fired if caught. Is being fired a good deterrent?

Depends on how hard it is to find another job.

If market wage is above equilibrium wage, there aren't enough jobs to go around, so workers have more incentive to work not shirk.

CHAPTER SUMMARY:

- The unemployment rate is the percentage of the labor force who would like to work and do not have jobs.
- Unemployment and labor force participation vary widely across demographic groups.
- The natural rate of unemployment is the normal rate of unemployment around which the actual rate fluctuates
- Cyclical unemployment is the deviation of unemployment from its natural rate and is connected to short-term economic fluctuations.

CHAPTER SUMMARY:

- The natural rate includes frictional unemployment and structural unemployment.
- Frictional unemployment occurs when workers take time to search for the right jobs.
- Structural unemployment occurs when labor market is out of equilibrium and actual wage kept above- equilibrium wage, that result in a surplus of labor.
- Three reasons for Structural unemployment is minimum wage laws, unions, and efficiency wages.