

# Chapter 7

## Unemployment

# IN THIS CHAPTER, YOU WILL LEARN:

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...about the natural rate of unemployment:

- what it means
- what causes it
- understanding its behavior in the real world

# Natural rate of unemployment

- **Natural rate of unemployment:**  
The average rate of unemployment around which the economy fluctuates.
- In a recession, the actual unemployment rate \_\_\_\_\_ the natural rate.
- In a boom, the actual unemployment rate \_\_\_\_\_ the natural rate.

# Actual and natural rates of unemployment, U.S., 1960–2014



# A first model of the natural rate

Notation:

$L$  = # of workers in labor force

$E$  = # of employed workers

$U$  = # of unemployed

$U/L$  = unemployment rate

# Assumptions:

1.  $L$  is exogenously fixed.

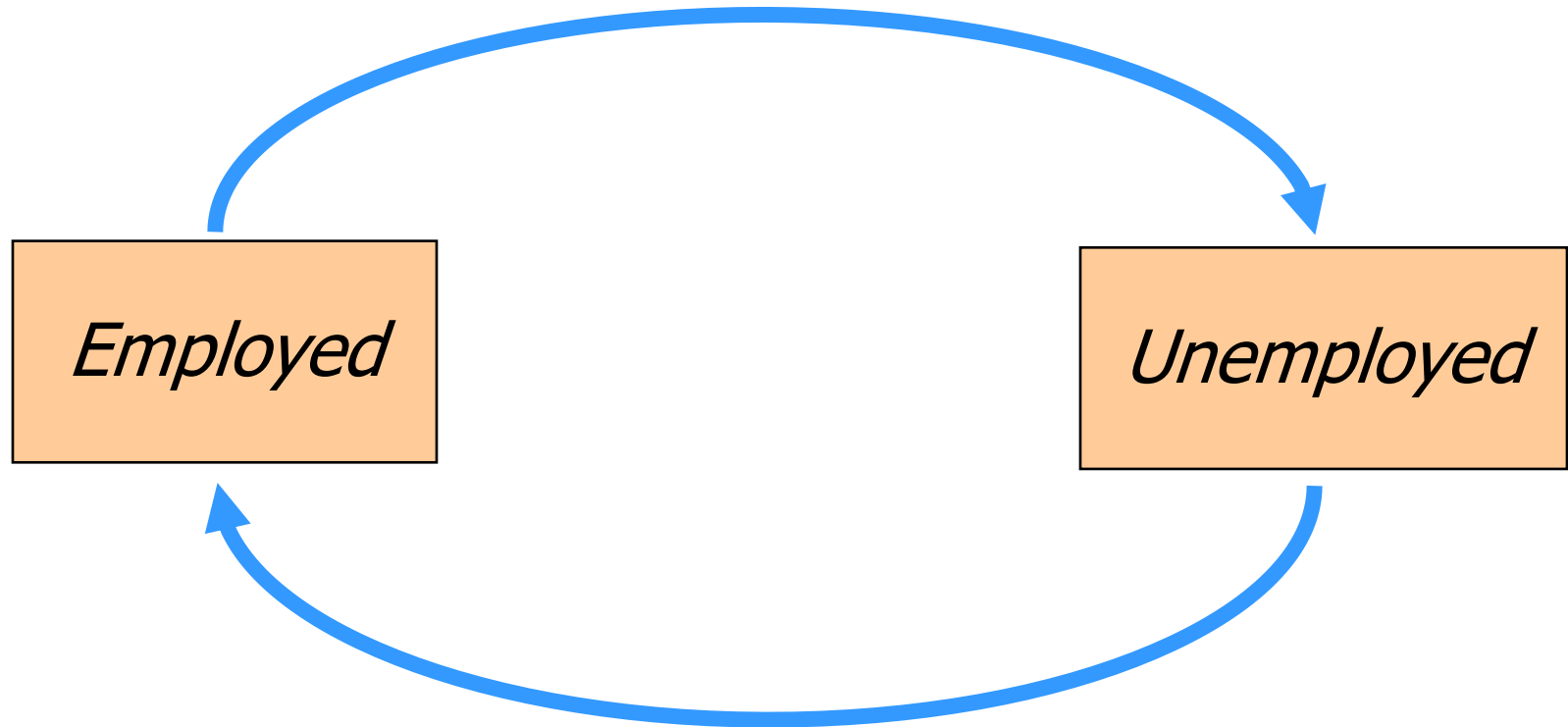
2. During any given month,

$s =$  \_\_\_\_\_,  
fraction of employed workers  
that become separated from their jobs

$f =$  \_\_\_\_\_,  
fraction of unemployed workers  
that find jobs

$s$  and  $f$  are \_\_\_\_\_. (endogenous?,  
exogenous?)

# The transitions between employment and unemployment



**$s \times E ?$     $f \times U ?$**

# The steady state condition

- Definition: the labor market is in **steady state**, or long-run equilibrium, if the unemployment rate is \_\_\_\_\_.
- The steady-state condition is:  
\_\_\_\_\_



Finding the “equilibrium” U rate

# Example:

- Each month,
  - 1% of employed workers lose their jobs  
( $s = 0.01$ )
  - 20% of unemployed workers find jobs  
( $f = 0.20$ )
- Find the steady-state rate of unemployment:

# Policy implication

- A policy will reduce the natural rate of unemployment only if it lowers   s   or increases   f   (s? f? ).

# Why is there unemployment?

- If job finding were instantaneous ( $f = 1$ ), then all spells of unemployment would be brief, and the natural rate would be near zero.
- There are two reasons why  $f < 1$ :
  1. job search
  2. wage rigidity

# Job search & frictional unemployment

- **frictional unemployment:**
- occurs even when wages are flexible and there are enough jobs to go around
- occurs because

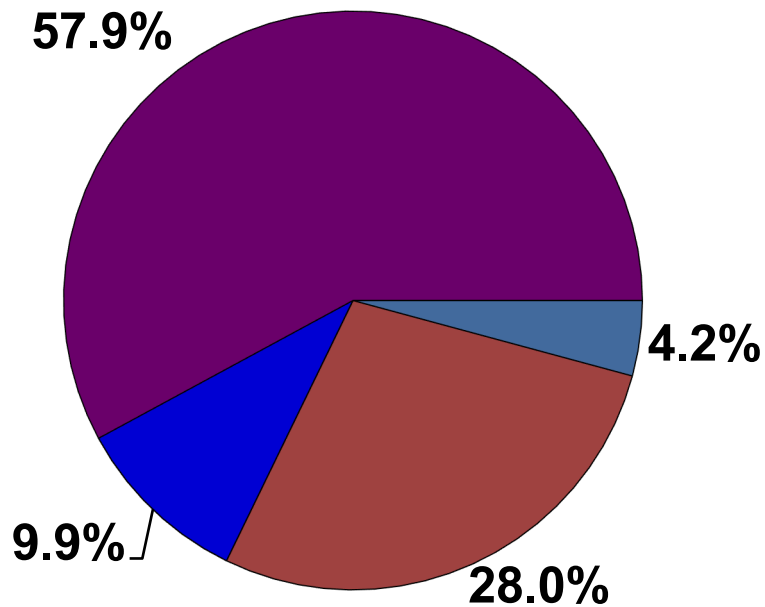
# Sectoral shifts

- def: Changes in the composition of demand among industries or regions.
- These scenarios result in frictional unemployment

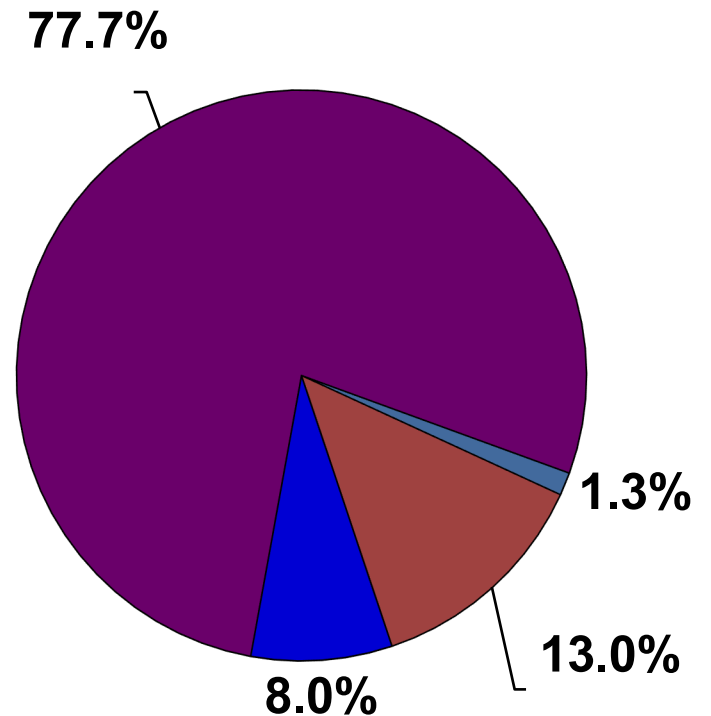
# CASE STUDY: Structural change over the long run

- Agriculture
- Manufacturing
- Other industry
- Services

**1960**



**2012**



# Unemployment insurance (UI)

- UI pays part of a worker's former wages for a limited time after the worker loses his/her job.
- Studies: The longer a worker is eligible for UI, the \_\_\_\_\_ the average spell of unemployment.



# Labor unions

- Unions exercise monopoly power to secure \_\_\_\_\_ wages for their members.
- When the union wage exceeds the eq'm wage, \_\_\_\_\_ results.
- **Insiders:** Employed union workers whose interest is to keep wages \_\_\_\_\_.
- **Outsiders:** Unemployed non-union workers who prefer \_\_\_\_\_ wages, so there would be enough jobs for them.

## Union membership and wage ratios by industry, 2013

<i>industry</i>	<i># employed (1000s)</i>	<i>U % of total</i>	<i>wage ratio</i>
Private sector (total)	104,737	6.9	122.6
Government (total)	20,450	37.0	121.1
Construction	6,244	14.0	151.7
Mining	780	7.2	96.4
Manufacturing	13,599	10.5	107.2
Retail trade	14,582	4.9	102.4
Transportation	4,355	20.4	123.5
Finance, insurance	6,111	1.1	90.2
Professional services	12,171	2.1	99.1
Education	4,020	13.0	112.6
Health care	15,835	7.5	114.9

$$\text{wage ratio} = 100 \times (\text{union wage}) / (\text{nonunion wage})$$

## EXPLAINING THE TREND: Union membership

<b>Union membership</b> selected years	
year	percent of labor force
1930	12.0
1945	35.0
1954	35.0
1970	27.0
1983	20.1
2013	11.3

Since early 1980s, the natural rate and union membership have both fallen.

But, from 1950s to about 1980, the natural rate rose while union membership fell.

Percent of workers covered by collective bargaining, selected countries (source: 2009 working paper)

United States	13%
United Kingdom	31
Switzerland	49
Spain	73
Sweden	91
Germany	61
France	92
Greece	65

# Recent high unemployment in Europe

- *Eurozone debt crisis:*
- *Effect in Europe:*  
*In general, higher unemployment, due to generous govt benefits for unemployed workers and strong union presence. But debt crisis .....*

# Debt Crisis: 2010

- 2010 April: Greek gov bond was downgraded to junk bond.
- 2010 May: Euro zone and IMF agreed €110 billion bailout conditioning on
  - \* austerity measure
  - \* privatizing of government assets: lower D
  - \* implement structural reform

# 2010

- Spain: cut the salaries of public employees  
Decreased pension and government funding.

# France

- French labor laws are designed to protect the worker and provide \_\_\_\_\_. The primary feature is the contract of indeterminate duration - or CDI.
- Under the CDI, workers are essentially guaranteed a job for \_\_\_\_\_.
- this dilemma is resolved by the employer making the decision \_\_\_\_\_.



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# Greece and Spain

