

MACROECONOMICS I

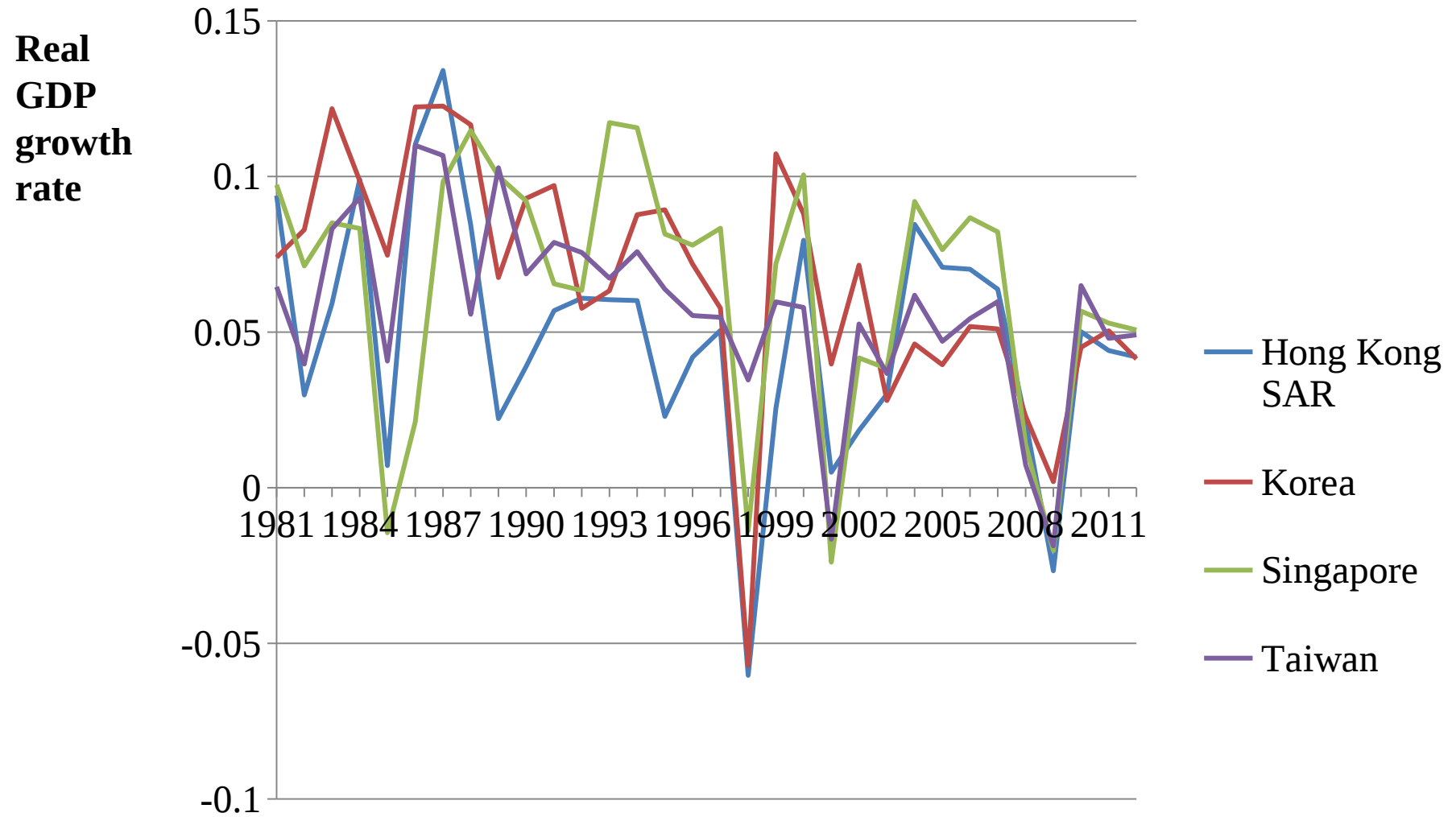
The Labor Market

March 20th, 2014

Class Outline

- Labor market indicators
- Categories of unemployment
- Wage rigidities

Asian Tigers: Performance After 1990s



Source: IMF World Economic Outlook Database

Asian Tigers: Performance After 1990s

Country	Period	Avg growth in per capita income (%)
Honk-Kong	1966-1991	5.7
Singapore	1966-1990	6.8
South Korea	1966-1990	6.8
Taiwan	1966-1990	6.7

Country	Average growth rate 1990-2012 (%)
Hong Kong	3.9
Singapore	5.9
South Korea	5
Taiwan	4.8

The Labor Market: Introduction

Goals of the Economy

- Economic growth
- **Low** unemployment rate (full employment)
- Price-level stability (low inflation)
- External balance (avoiding trade deficit)

The Labor Market: Major Players

DEMAND

Firms



Government

- Minimum wage
- Unemployment insurance
- Training programs

Labor



Wages



SUPPLY

Labor Force

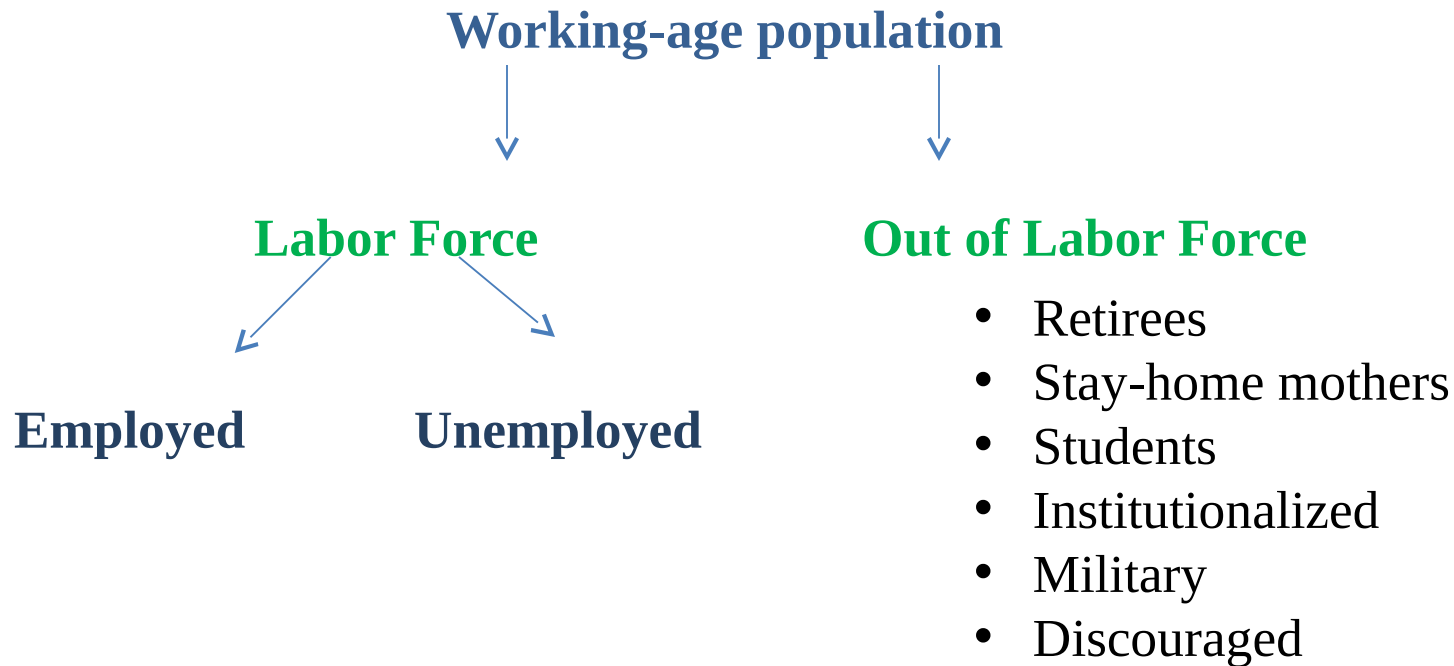


- Working age 15-65
- Employed + Unemployed
- Non-institutionalized

Labor unions

- Wage bargaining
- Protection of rights

Structure of the Labor Force



Participation rate: $\frac{\textit{Labor force}}{\textit{Working age population}} \times 100\%$

TE Participation rate in Czech Republic in January 2012 was 72.5 %

Males: 80.1 %

Females: 65.1 %

Structure of the Labor Force (Cont.)

TE Czech Republic in 2005

Total population: 10.2 mil

Working age population: 70.5 %

Out of labor force: 3.5

Working age population (mil): $10.2 \times 0.705 = 7.2$

Labor force (mil): $7.2 - 3.5 = 3.7$

Participation rate: $\frac{3.7}{7.2} = 0.51 = 51\%$

Labor Force: Unemployed Population

- A person without a job who puts efforts to find one

Unemployment rate: Percentage of the labor force not working **but looking**

$$UR = \frac{\#Unemployed}{Labor\ force} \times 100\%$$

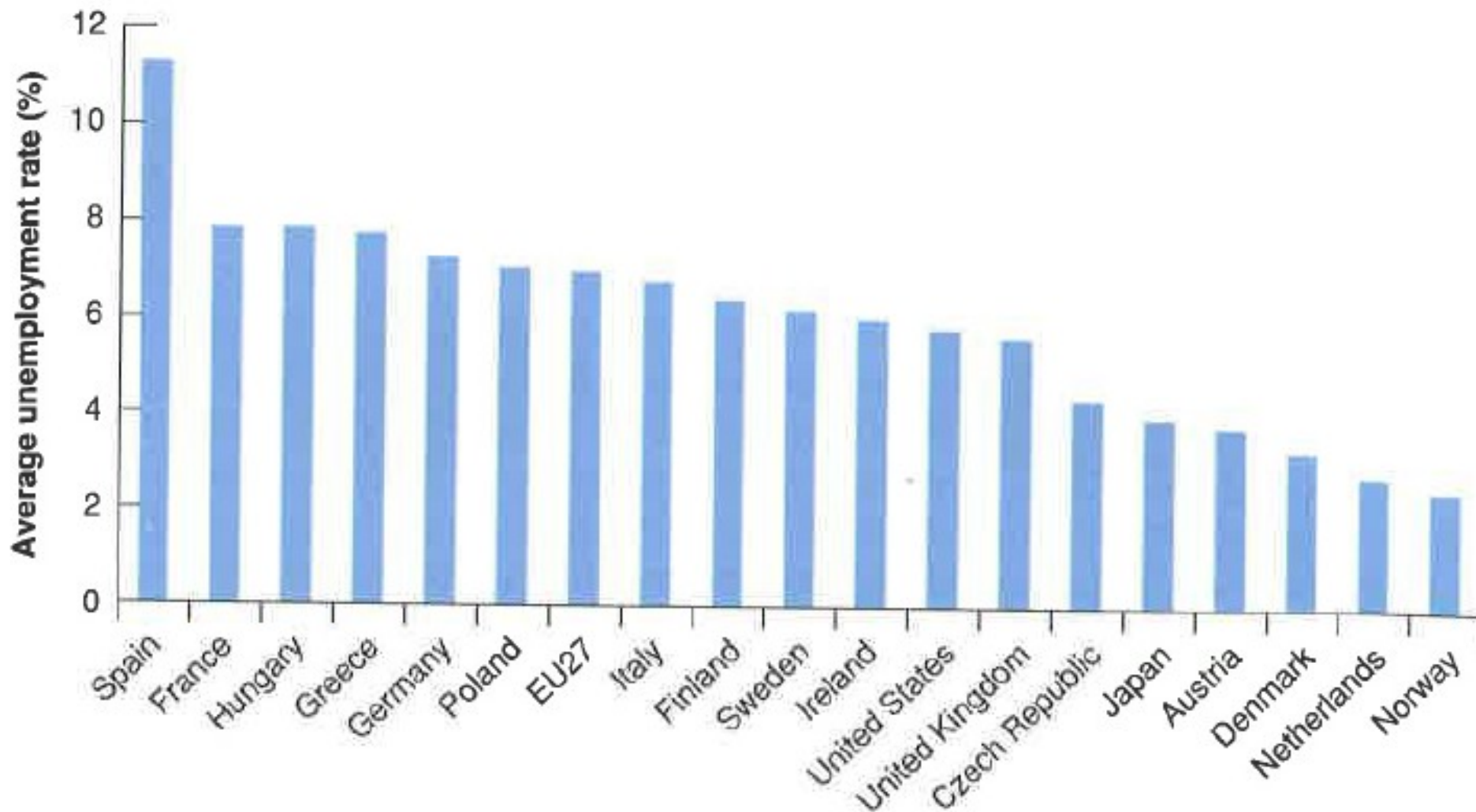
- A summary measure of the **health** of the labor market

Low unemployment rate => **Tight labor market** (more jobs than people)

Can the unemployment rate be equal to 0? **Generally NO**

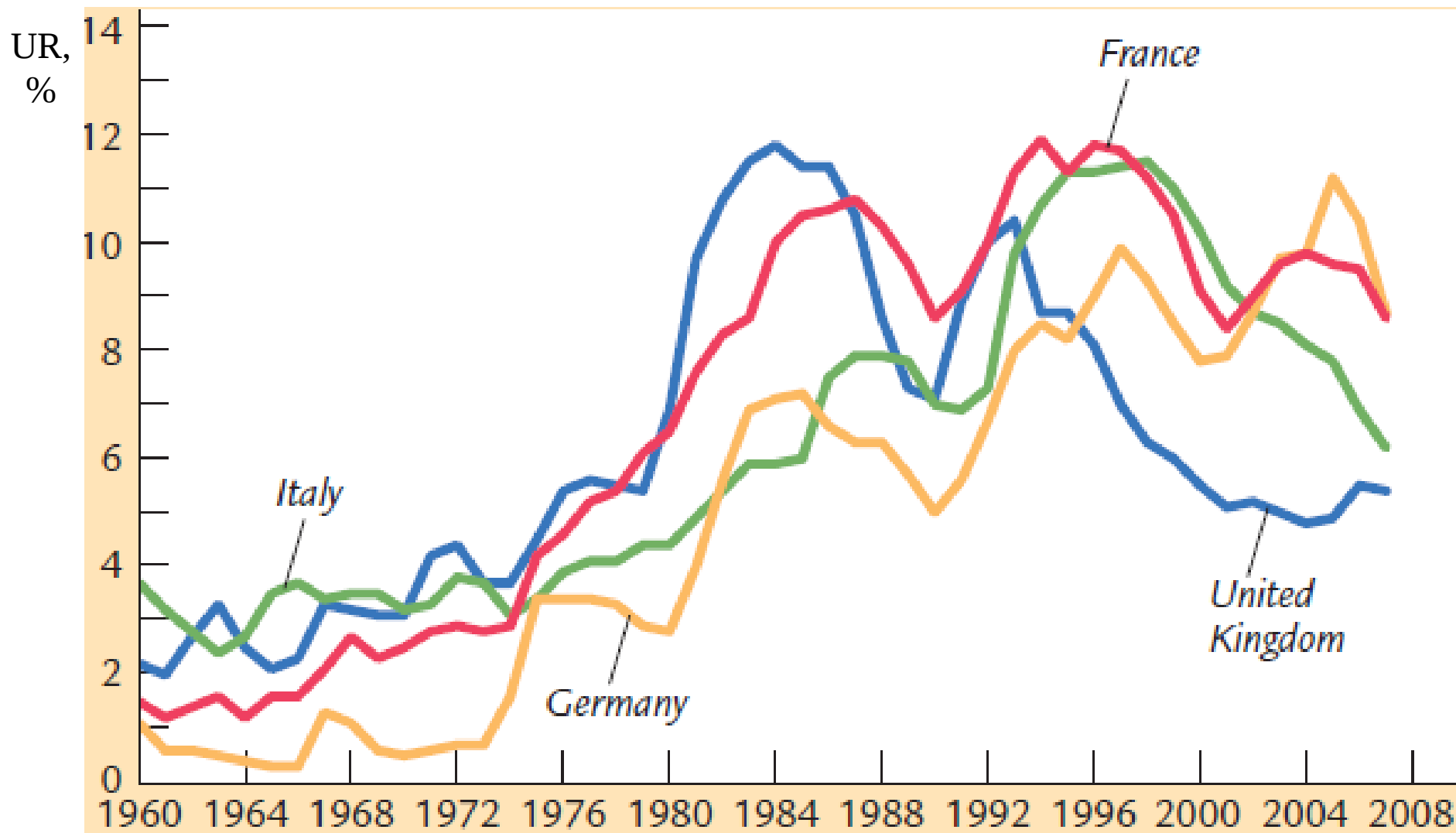
TE The average unemployment rate in European countries in 2008

Which country had a tight labor market in 2008?



Source: Blanchard et al, 2010

TE Evolution of unemployment in four major EU economies



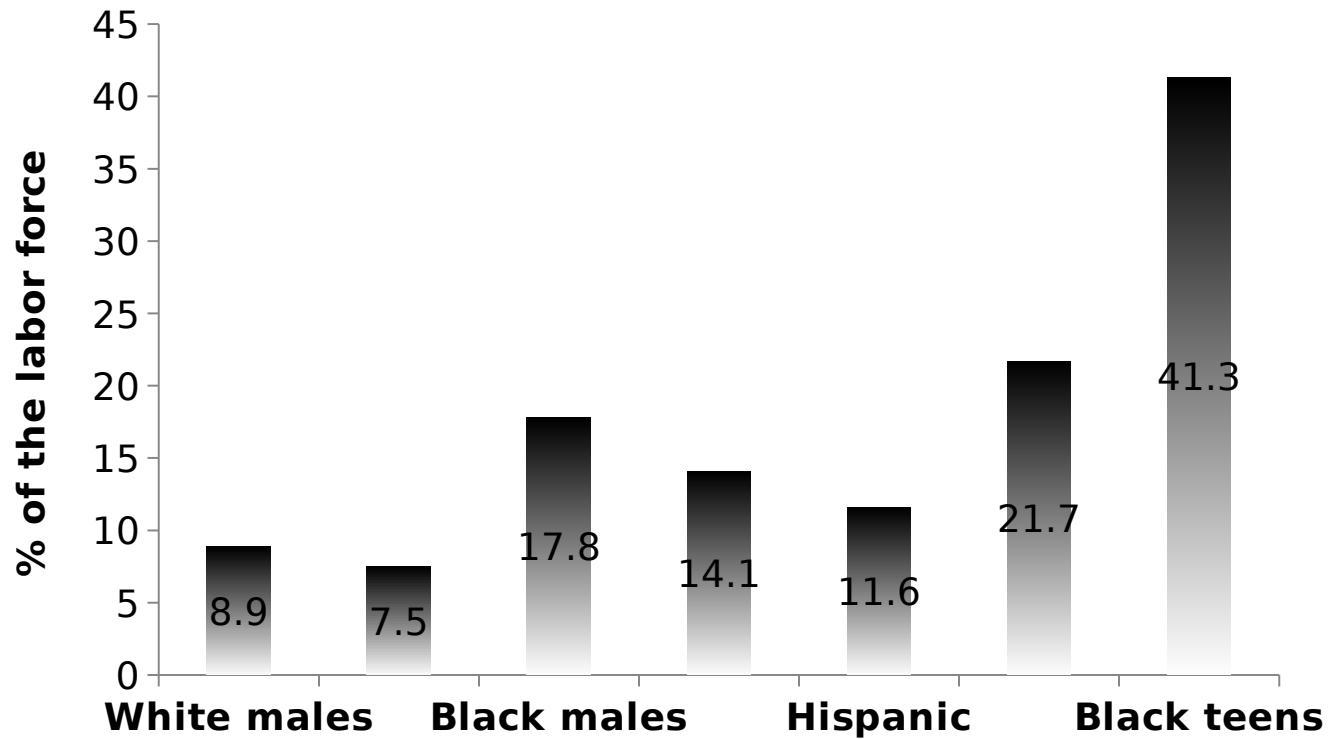
TE Evolution of unemployment in the USA



Source: BEA

UR Breakdown Across Gender, Race, and Age

The US unemployment rates in 2011



Source: BLS

Unemployment Rate (Cont.)



Active or stagnant labor market?

- Average duration of unemployment and its type

Unemployment Rate

Limitations

- Does not say anything about unemployment **duration**

Long-term unemployment – more than 1 year

- Does not distinguish between **full-time** and **part-time** employment
- Very difficult to distinguish between unemployed and those out of labor force

Discouraged workers: people who report being out of labor force, but in fact may be willing to work (gave up after unsuccessful search)

- **Underemployment** (skill waste)

Unemployment and Long-Term Unemployment Rates

- Average for the period 1991-2001

	U rate	LTU rate
Czech Republic	8.2	4.3
Hungary	5.8	2.7
Poland	18.2	7.8
Slovak Republic	18.6	10.2
Lithuania	12.6	3.5
Denmark	6.7	1.7
Finland	12.8	3.4
France	11.2	4.5
Germany	8.2	3.9
Portugal	5.6	2.6
Spain	19.3	10.1
Sweden	7.9	1.7
United Kingdom	7.7	2.9
United States	5.4	0.5

Average duration of unemployment in 2010

- **The US** – 5 month (**the lowest!**)
- **EU** – 27 months
- **France** – 40 month
- **Czech Republic** – 16 months
- **Slovakia** – 29 months

Source: OECD.StatExtracts

Measuring Labor

TE In the US: Bureau of Labor Statistics (BLS)

Current Population Survey (monthly): 60,000 households

- People who are working
- People who are not working but looking
- People who are not working and not looking (out of labor force)

In Czech Republic: National Statistical Office (CZSO)

Quarterly Labor Force Sample Survey: 26,500 households

THE GATHERING OF GOVERNMENT LABOR STATISTICS...



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Categories of Unemployment

Why there is unemployment in the economy?

- **Short term**

- 1. **Frictional Unemployment**

- Creation and destruction of jobs requires that unemployed search for new jobs
- Qualified individuals with transferable skills that move between jobs/careers
- Outcome of the labor market turnover
- A sign of healthy economy
- It takes time for workers to find jobs that are best suited for them

Special case: *Seasonal unemployment:* move b/w jobs that change with seasons

- Increases with an increase in **unemployment benefits**

Unemployment Insurance

Country	Initial phase of unemployment		Long-term unemployment	
	Single person	Married with 2 children	Single person	Married with 2 children
Czech Republic	50	54	31	71
France	71	76	41	70
Germany	61	78	61	68
Greece	46	50	0	3
Italy	52	60	0	0
Netherlands	71	78	58	72
Norway	66	73	42	64
Slovak Republic	62	72	42	91
Spain	70	75	27	41
Sweden	81	83	51	78
UK	45	46	45	73
USA	56	53	7	41

Average duration

- 1 year in general
- 4-5 years in Netherlands and Denmark
- **Unlimited** in Belgium

Categories of Unemployment (Cont.)

- Long term

2. Structural Unemployment- changes in the technology and foreign competition

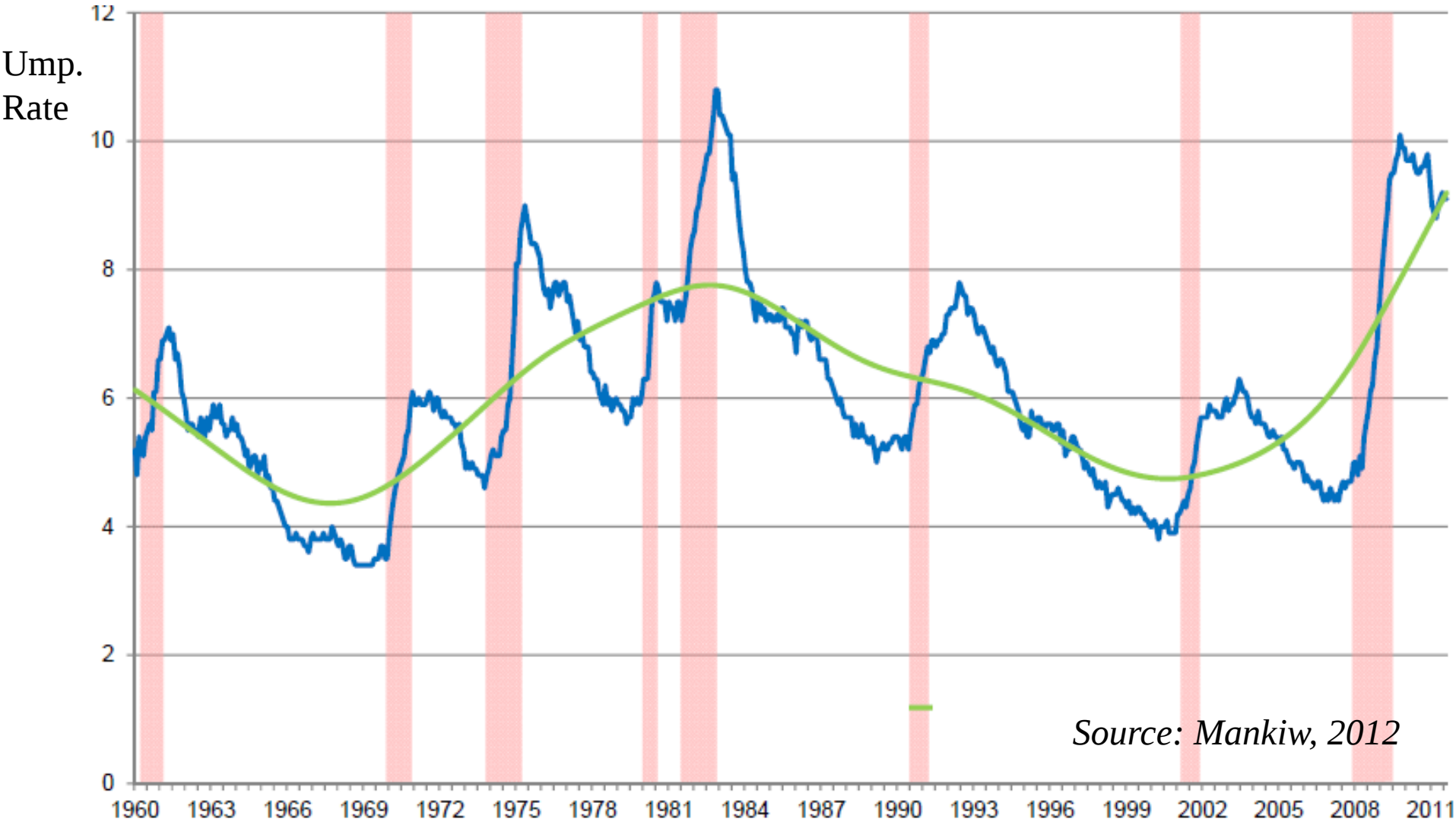
- A whole industry dies
- A mismatch between necessary skills and skills of the labor force
- A sign of innovative society
- Back to school (re-training)

3. Cyclical Unemployment - follows the business cycle

- Economic contractions
- Difficult to predict when jobs would come back (all cycles are different)

Business Cycle and Unemployment

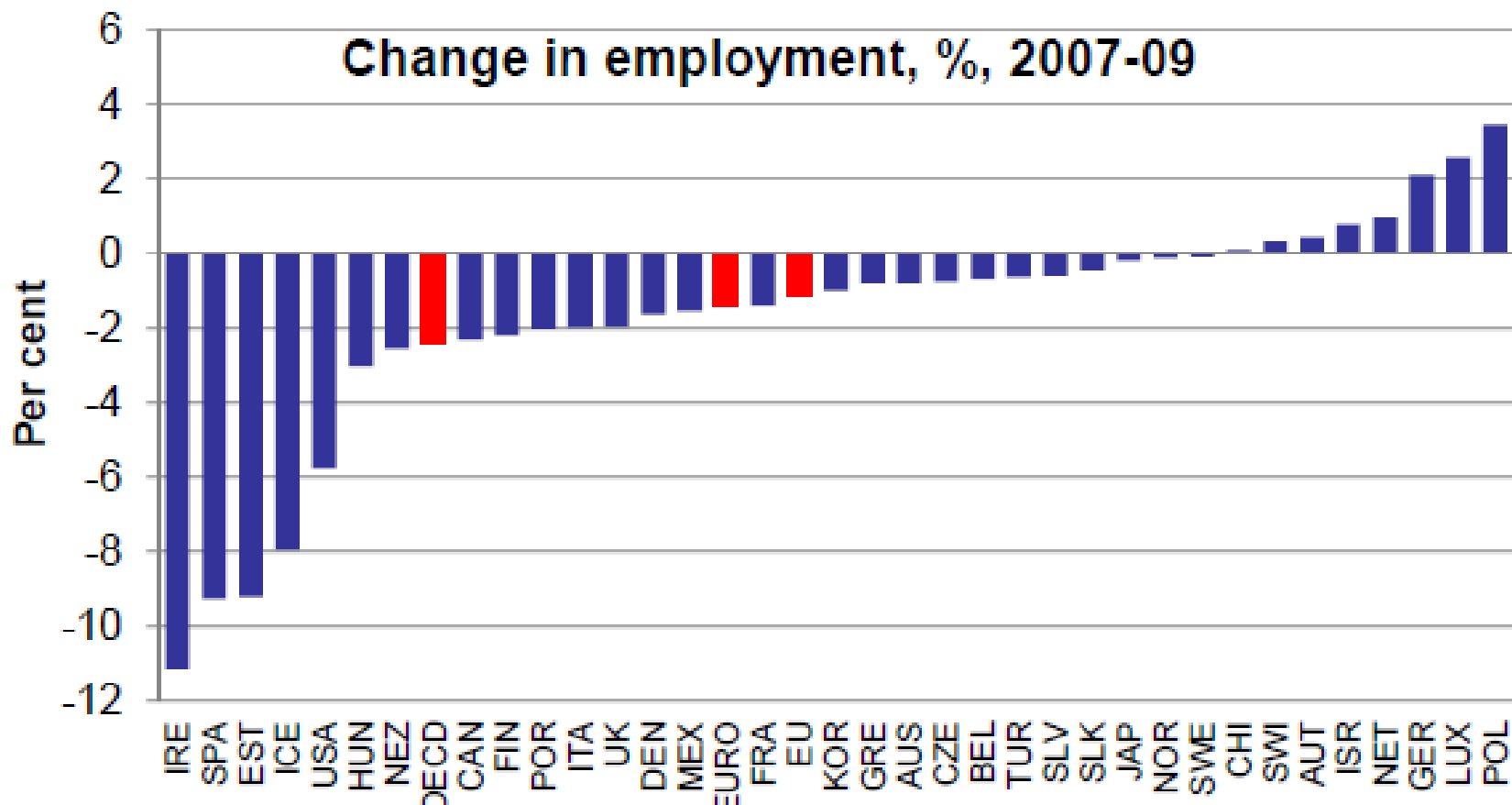
TE The US Unemployment rate during 1948-2008



Source: Mankiw, 2012

Recession of 2007-2009

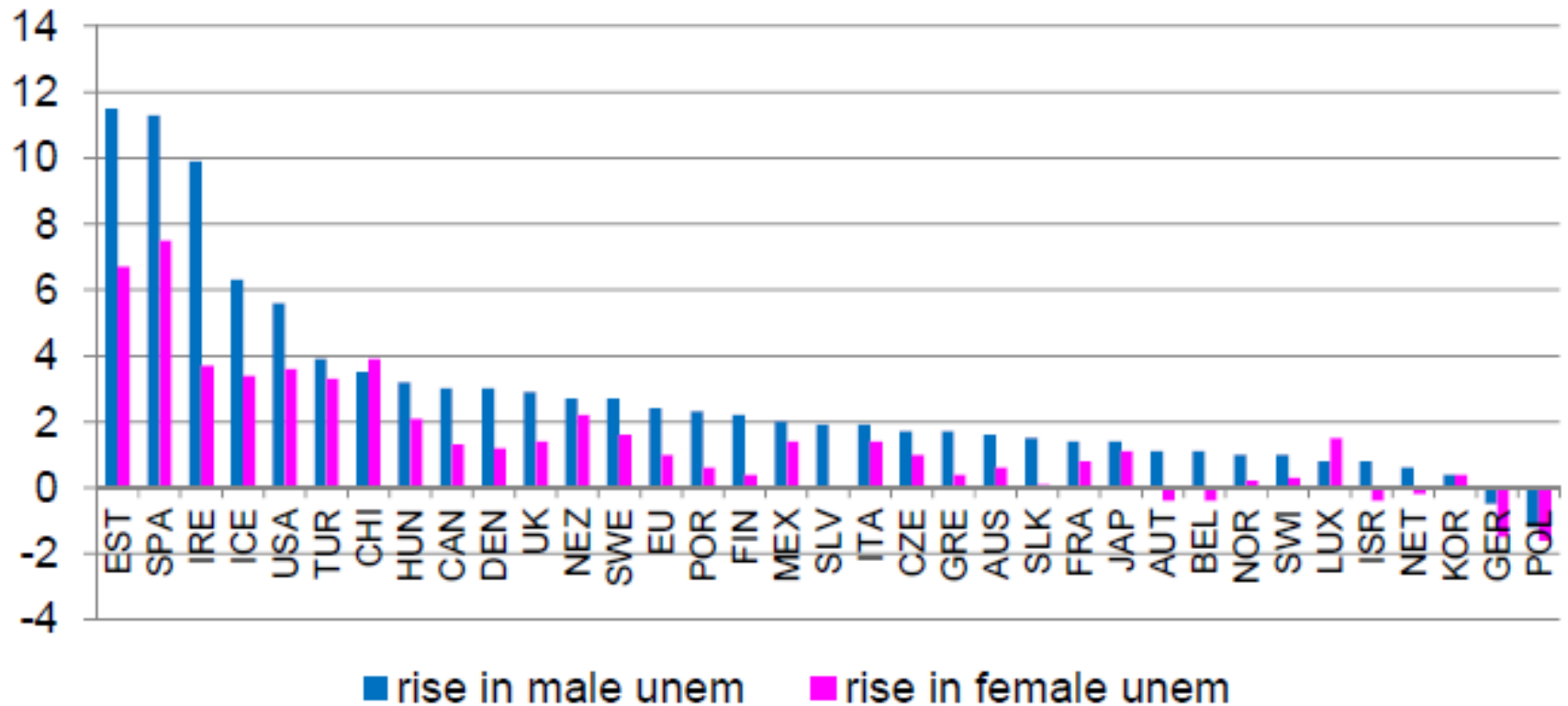
Employment response varied across countries



Source: Pissarides, 2012

Recession of 2007-2009

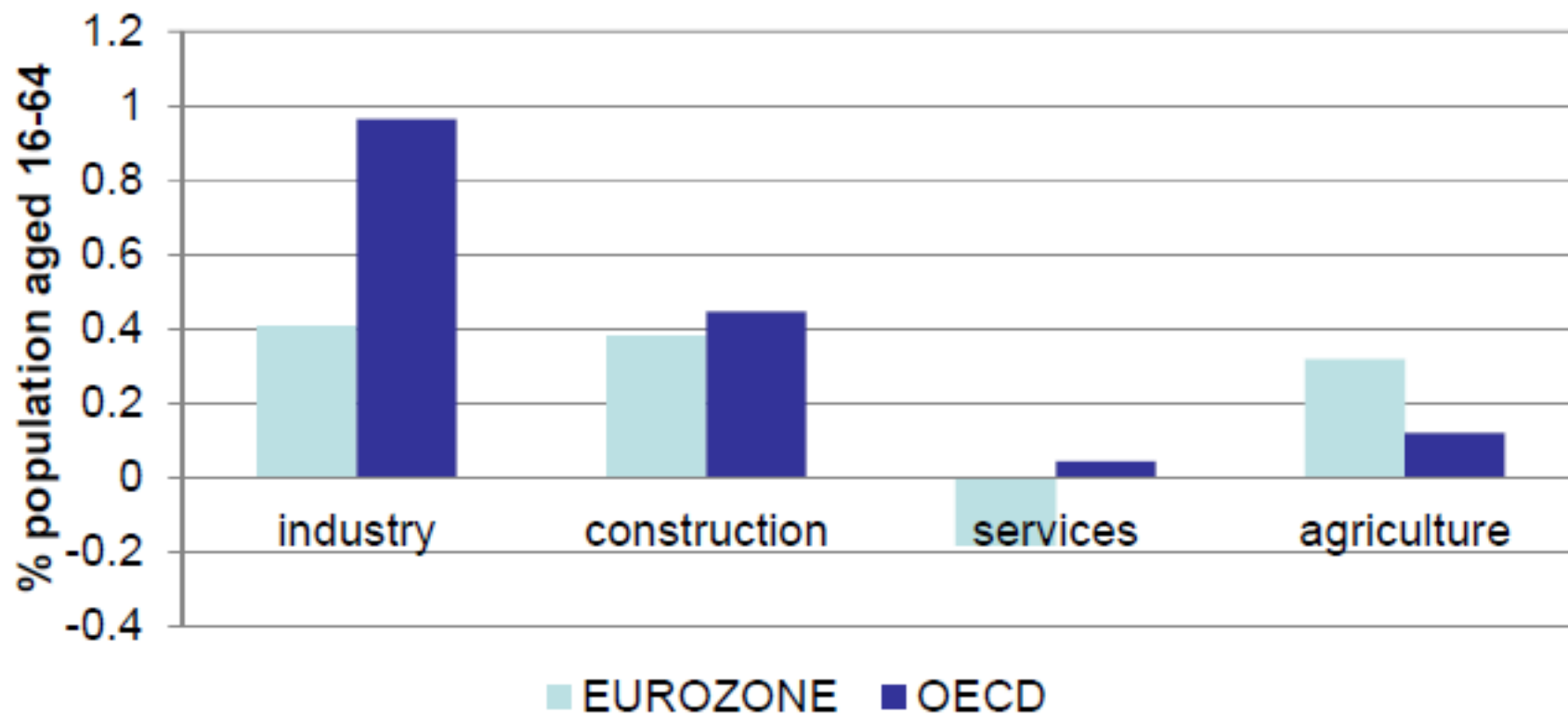
Men suffered more unemployment than women



Recession of 2007-2009

Most job losses in industry

Job losses, 2007-2009



Natural Rate of Unemployment

- Unemployment rate when the business cycle component is eliminated
- Only **frictional** and **structural** unemployment
- Always positive in dynamic economies, when the free movement of labor is allowed

=> **Full employment => Potential GDP**
Determinants

- Demographics

Older labor force => Less frictions => Lower natural rate

- Government unemployment insurance

More generous benefits => Higher natural rate

- Wage rigidity: Minimum-wage laws
- Efficiency wage

Minimum Wage

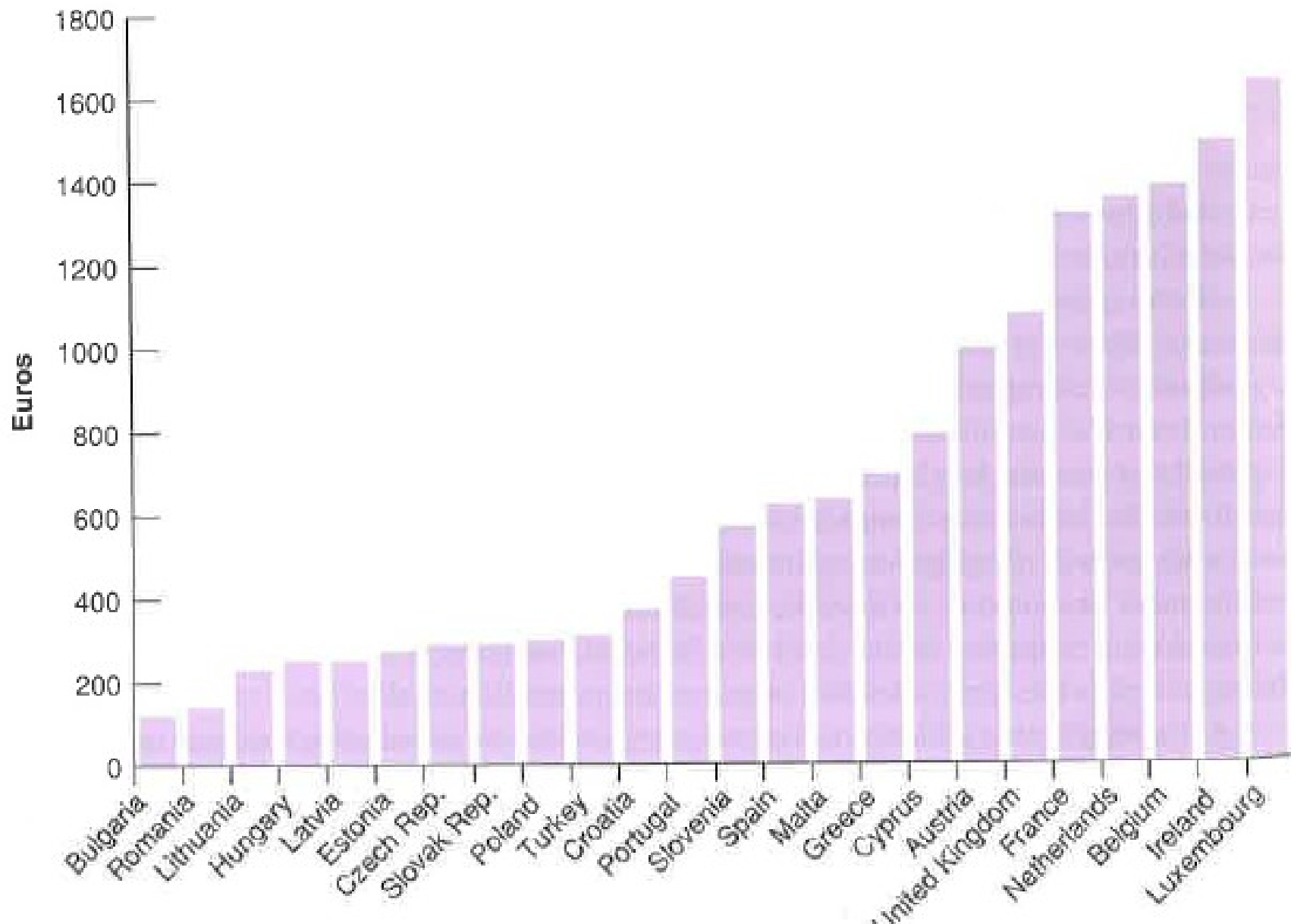
- **Wage rigidity** – the failure of wages to adjust to the equilibrium level
 - A legal minimum on wages set by the law
 - In the range of 30-50% of the average wage in manufacturing

Objective: Rising the income of working poor

Major criticism: Increases unemployment

- Causes teenagers to drop out of school
- Prevent low skilled workers from the participation in training programs

Gross minimum wages Euros per month, 2009



Source: Blanchard et al (2010)

Labor Supply and Labor Demand

Aggregate supply: the sum of individuals' labor supply

Extensive margin: Whether or not participate in the labor market?

Intensive margin: For participants, how many hours of labor to supply

- Most variations in labor supply is due the **extensive** margin (new entries)

Two goods: Consumption and leisure

- Wage is the opportunity cost of leisure

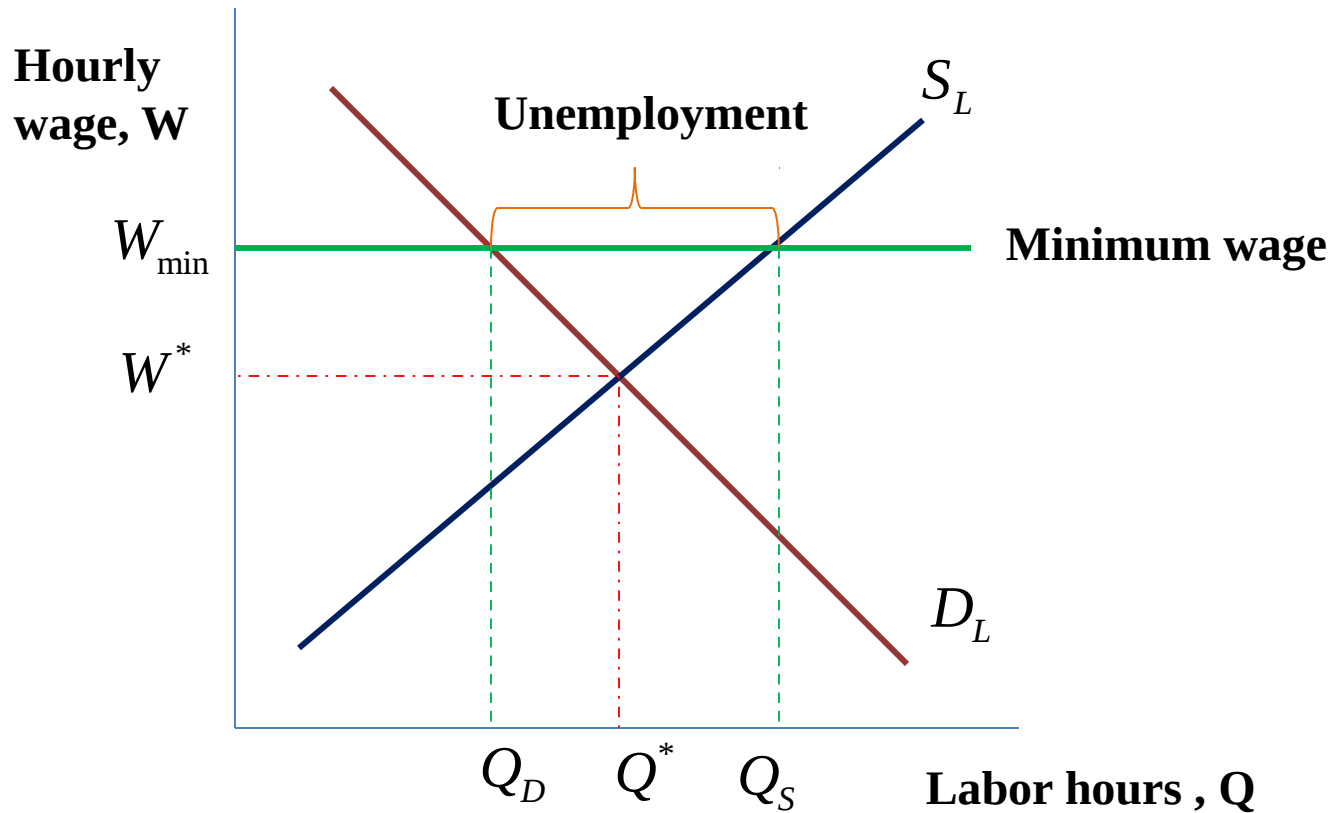
Reservation wage – the wage such that the agent participates in the labor market

- At the reservation wage workers are indifferent b/w staying on the job or

A famous supermodel once said that she would not get out of bed for less than \$10 000 (presumably per day)

Labor Demand: maximization of profits/ minimization of costs

The Labor Market: Equilibrium



N!B! Minimum wage results in the unemployment increase

- Different markets for different skills types
- The most affected are the least skilled whom the policy is intended to help

Increase in Minimum Wage

Assume the government raises the minimum wage.

- What does this do to the natural rate of unemployment?
- Do these effects arise by changing the amount of frictional unemployment or by changing the amount of structural unemployment?

Unionization

- Organization of workers in some industry that bargains with firms about wages and working conditions
 - The wages of union workers are determined by the bargaining between union leaders and firm management
- ⇒ Higher than equilibrium wages

Wage effect

- Union status increases wages of workers by 10-20 %
- Outsiders are hurt by low fewer job offerings

The Importance of Labor Unions

Percent of Workers Covered by Collective Bargaining

United States	18%
Japan	23
Canada	38
United Kingdom	47
Switzerland	53
New Zealand	67
Spain	68
Netherlands	71
Norway	75
Portugal	79
Australia	80
Sweden	83
Belgium	90
Germany	90
France	92
Finland	95
Austria	98

The Role of Labor Unions (Cont.)

1. *Unions in the US have become considerably weaker and less prevalent since the 1950s. What did this do to the natural rate of unemployment?*
2. *Did these effects arise by changing the amount of frictional unemployment or by changing the amount of structural unemployment?*

Wage Distortion: Efficiency Wage

- Improve workers productivity and effort
- Reduce labor turn-over
- Improves average quality of the firm's work force

TE Ford Motor Company

- In 1914 the company started paying workers \$5 per day

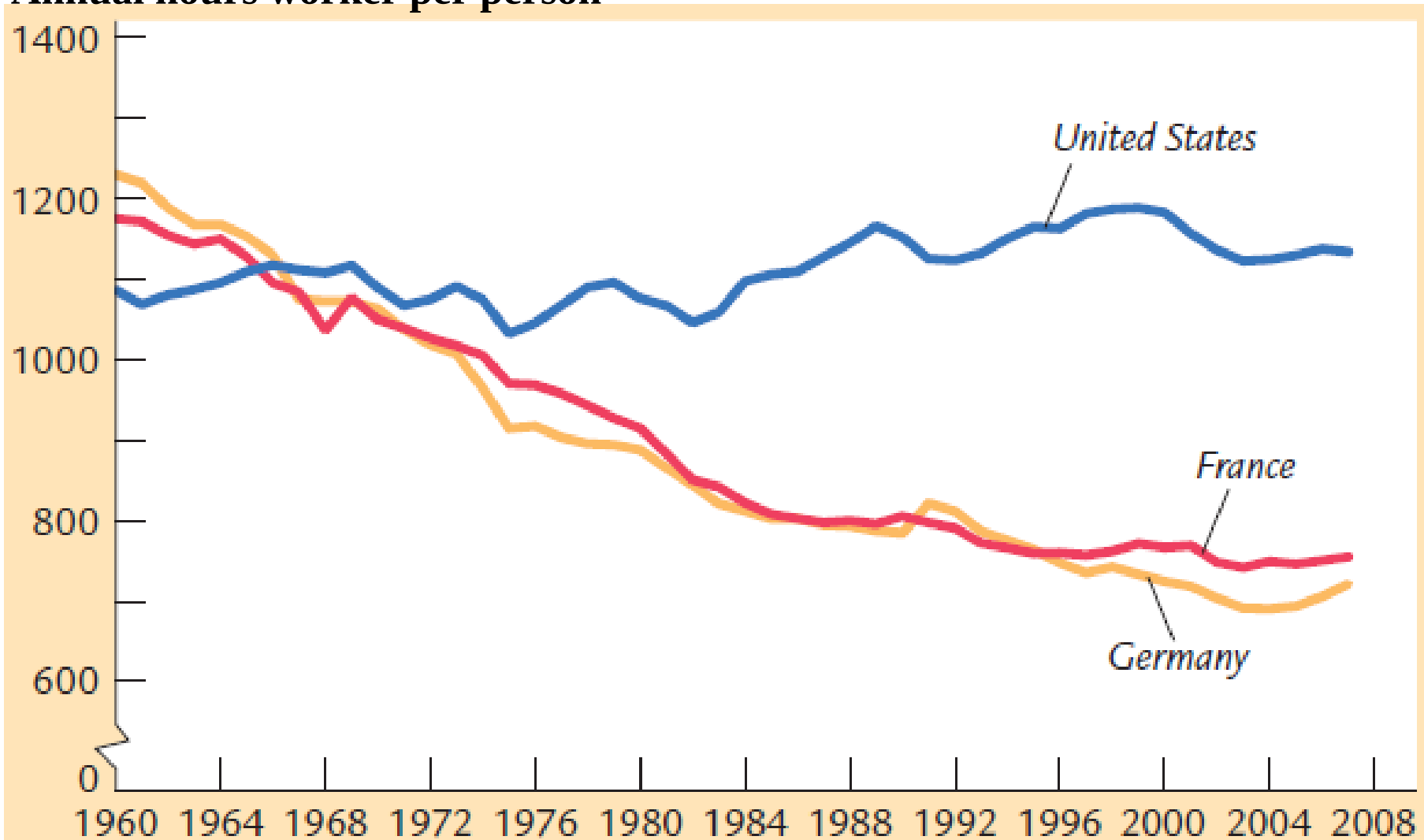
“We wanted to pay these wages so that business would be on a lasting

foundation... The payment of \$5 per day was one of the finest costs cutting

mover we ever made” Henry Ford

American vs. European Labor Markets

Annual hours worker per person



Source: Mankiw, 2009