

# Unemployment

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# Unit II, section RE 5

- I. Measuring Unemployment
- II. Determinants of the Natural Rate of Unemployment
- III. Who Actually Earns the Minimum Wage?

Lindauer 2011

# LR or “ Natural” Unemployment

Frictional Unemployment = Workers taking time to search for jobs that match skills/tastes

Structural Unemployment = Number of jobs available is less than the number of jobseekers

# I. Measuring Unemployment

$$Y = AF(L, K)$$

- K side: Loanable Funds Market
  - Unit II, section RE 3
- L side: Unemployment in the Long Run
  - “Natural” Unemployment

# Useful Definitions

Potential GDP = GDP at which all factors of production are employed at their “natural” or “normal” levels

= Full Employment Output (NAIRU)

$\mu$  = Unemployment rate

# Adult Population (16 and older)

## Labor force

### Employed

Full-time workers

Part-time workers

### Unemployed

No job, but  
actively looking

## Not in labor force

Not actively looking and  
no job

E.g. Students, Retirees,  
Homemakers

$$\mu = \frac{U}{\text{Labor Force}} = \frac{U}{E + U}$$

Issues:

Black-market workers,  
Discouraged workers,  
Underemployed workers

# SR Unemployment

Cyclical Unemployment = Deviations of the actual unemployment rate from its natural rate

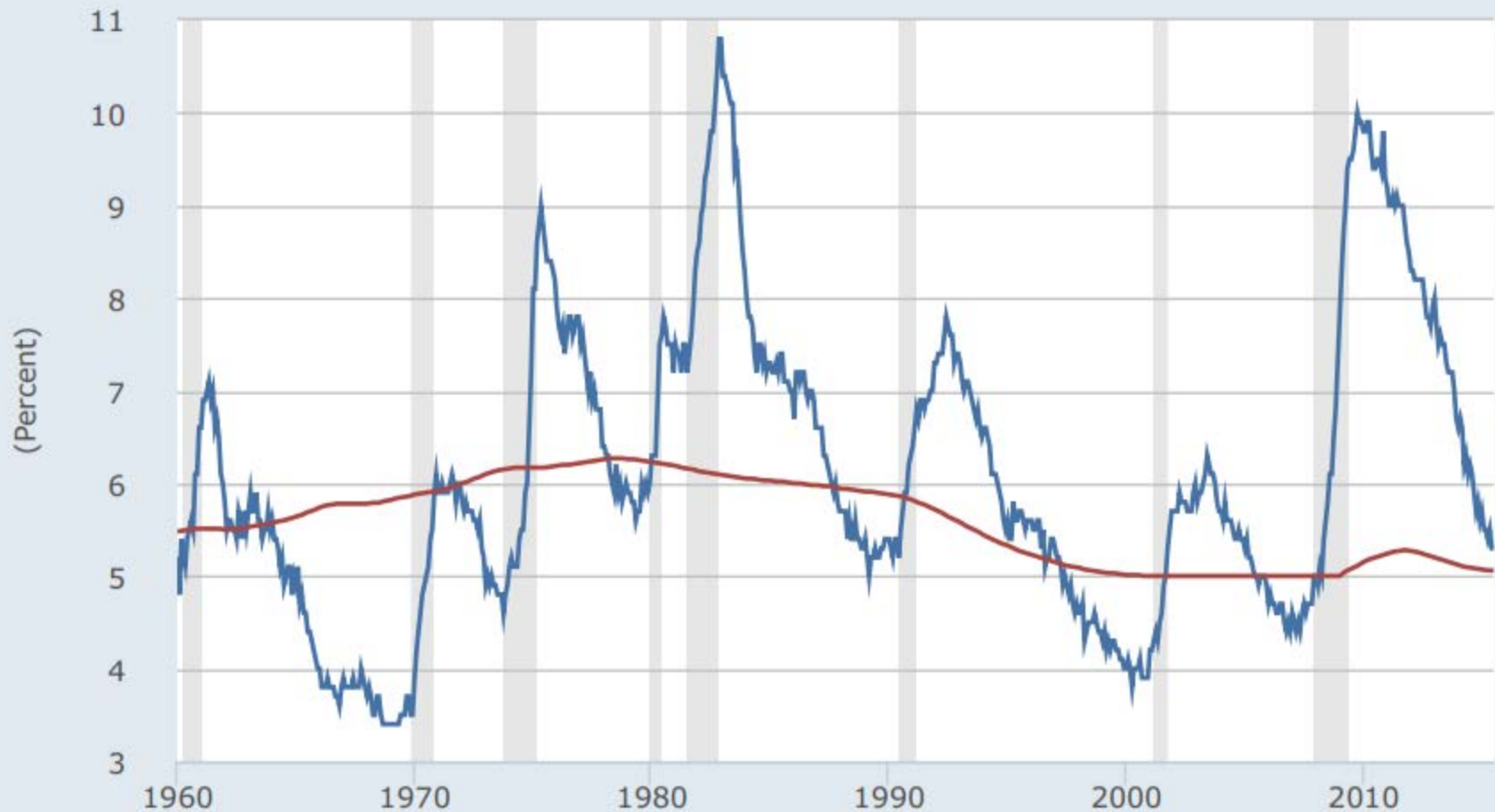
Recession:

Boom:

## Actual & Natural Unemployment Rate

**FRED** 

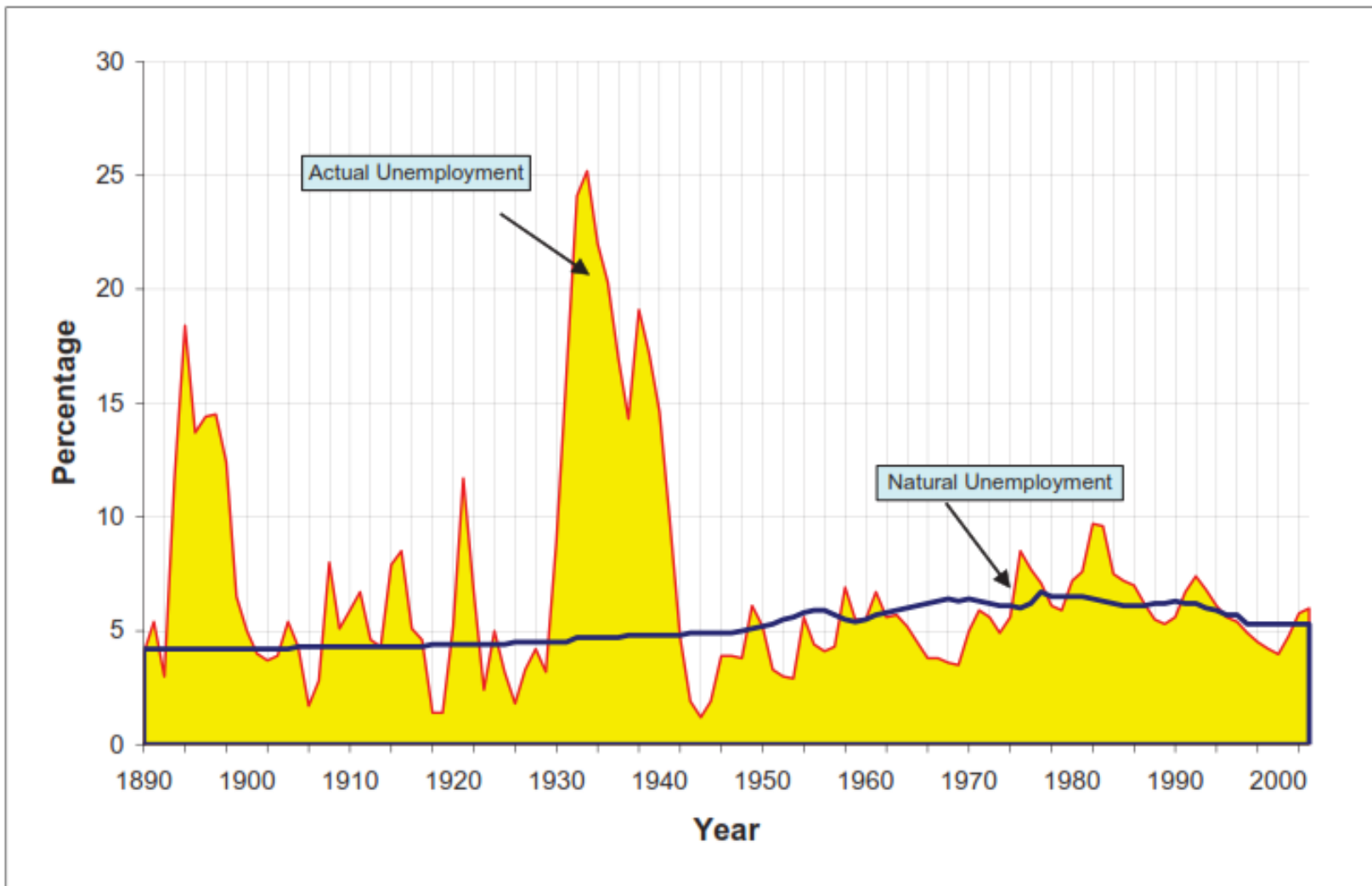
— Civilian Unemployment Rate  
— Natural Rate of Unemployment (Long-Term)



Shaded areas indicate US recessions - 2015 research.stlouisfed.org



## Actual & Natural Unemployment Rates 1890-2003

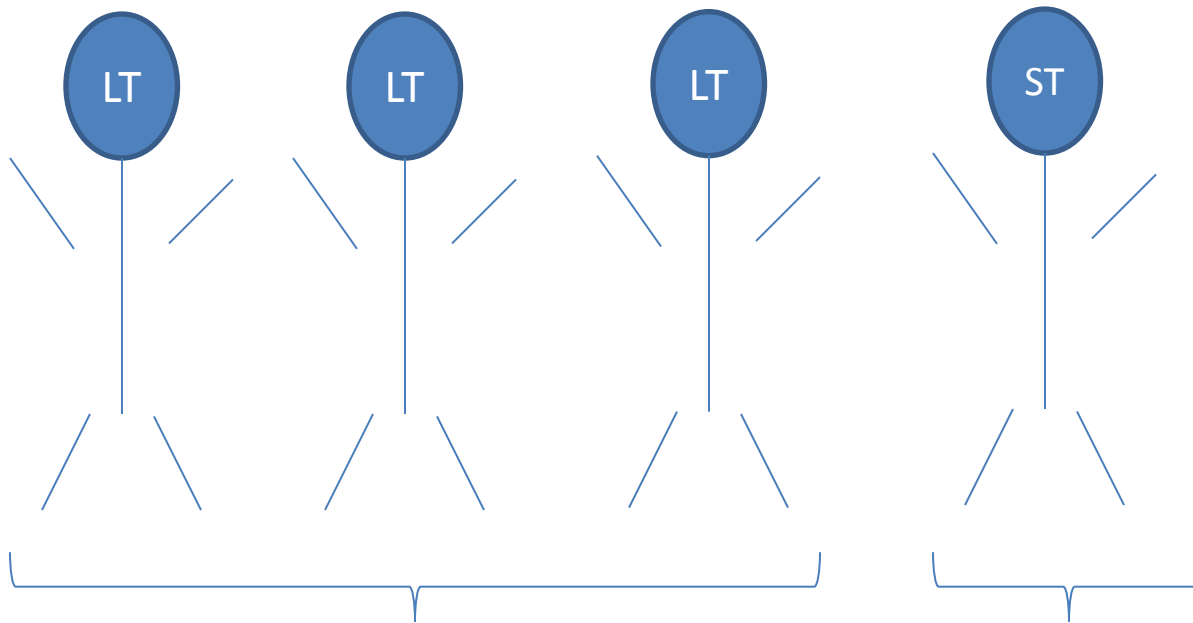


Sources: BLS, data series LNS 14000000

Robert Gordon, *Macroeconomics*, 8<sup>th</sup> Edition

# Duration of Unemployment

- Most spells of unemployment are short-term
- Most total weeks of unemployment are long-term (# of checks)



Cannot find job in the long term

Recently unemployed,  
But finds job next week

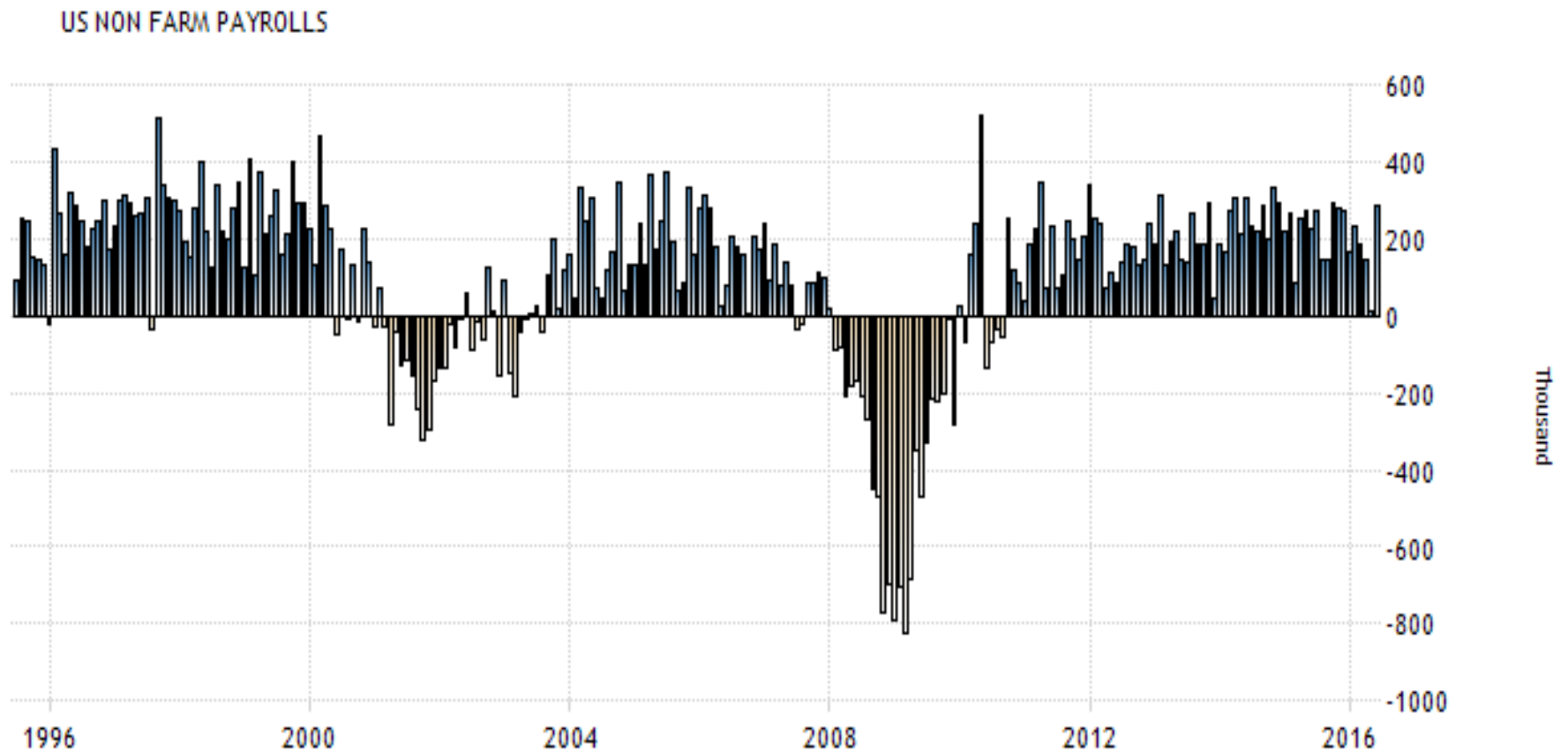
# Illustrative Example

- 55 spells of unemployment ( $52/55 = 95\%$ )
- 4 x 52 weeks = 208 weeks of unemployment
  - LT unemployment ( $156/208 = 75\%$ )
- Policy Relevance

# Unemployment Recently

- June 2016 jobs report (BLS):
  - 287,000 seasonally adjusted jobs added
    - Establishment survey data = business data
  - Unemployment rate 4.9%
    - Household survey data = household data
- July 2016, 255,000 jobs added
- August 2016, 151,000 jobs added
- Unemployment rate steady at 4.9%

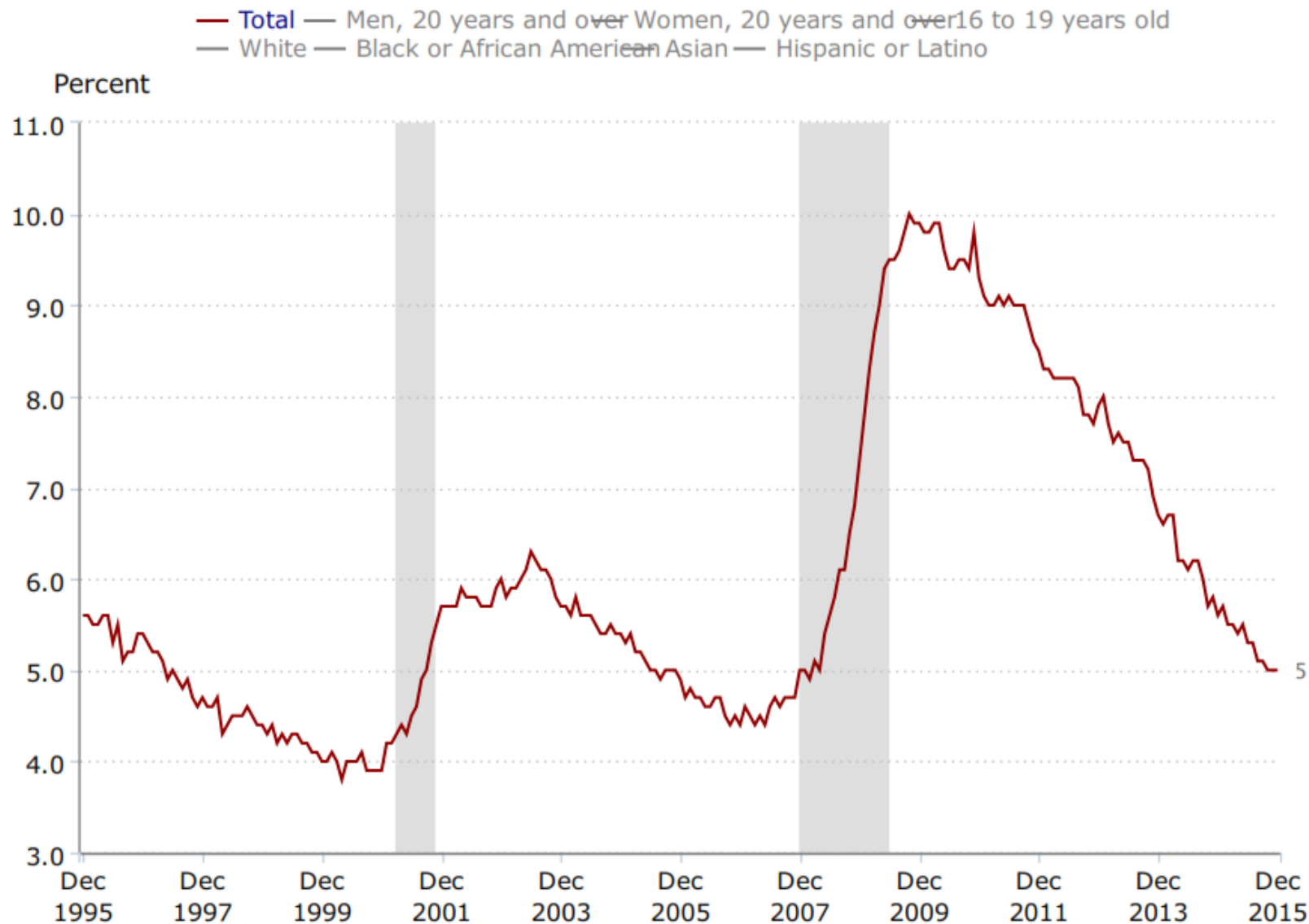
# US Non Farm Payrolls 1995-2016



SOURCE: [WWW.TRADINGECONOMICS.COM](http://WWW.TRADINGECONOMICS.COM) | U.S. BUREAU OF LABOR STATISTICS

# Civilian unemployment rate, seasonally adjusted

Click and drag within the chart to zoom in on time periods



Hover over chart to view data.

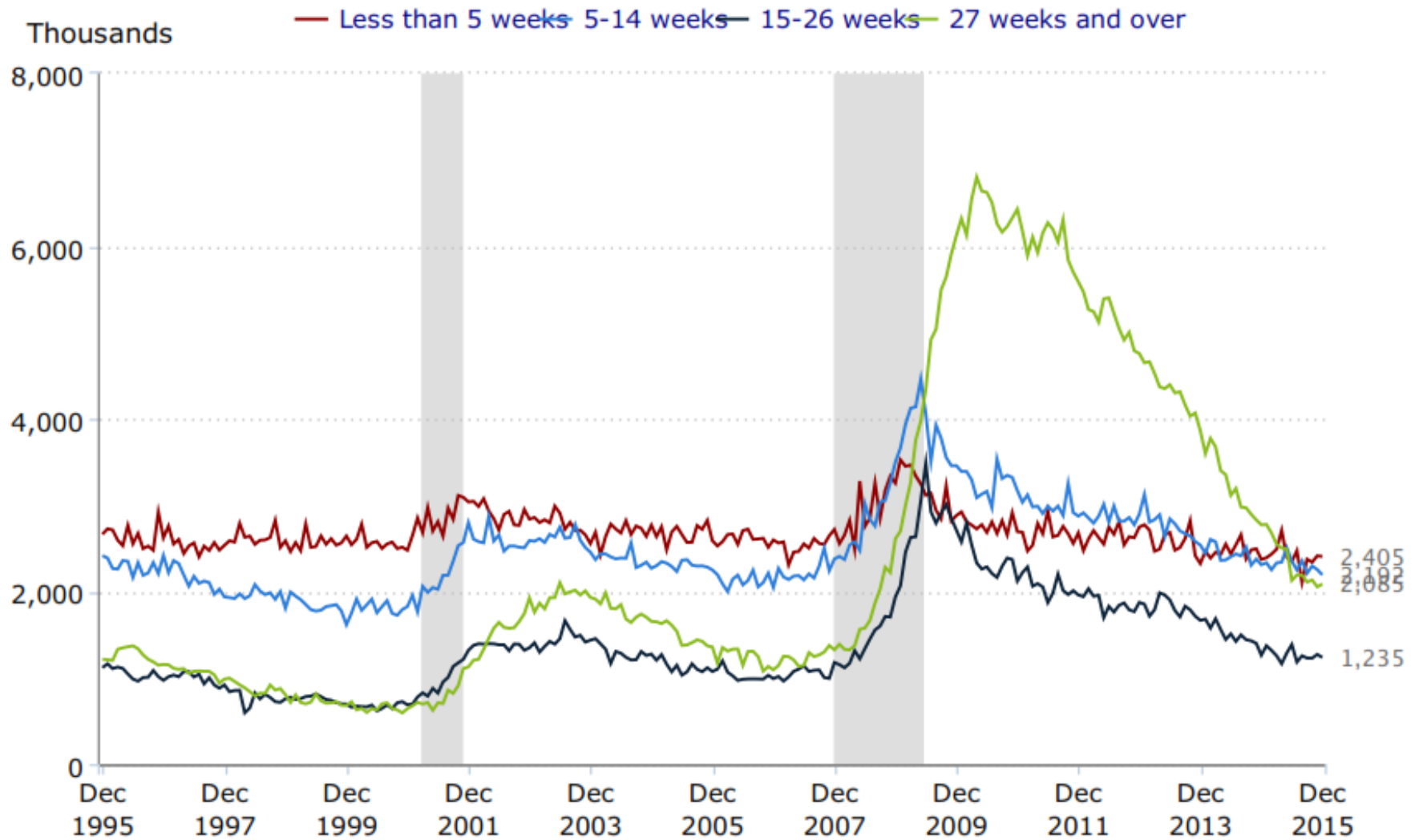
Note: Shaded area represents recession, as determined by the National Bureau of Economic Research.

Persons whose ethnicity is identified as Hispanic or Latino may be of any race.

Source: U.S. Bureau of Labor Statistics.

## Duration of unemployment, seasonally adjusted

Click and drag within the chart to zoom in on time periods



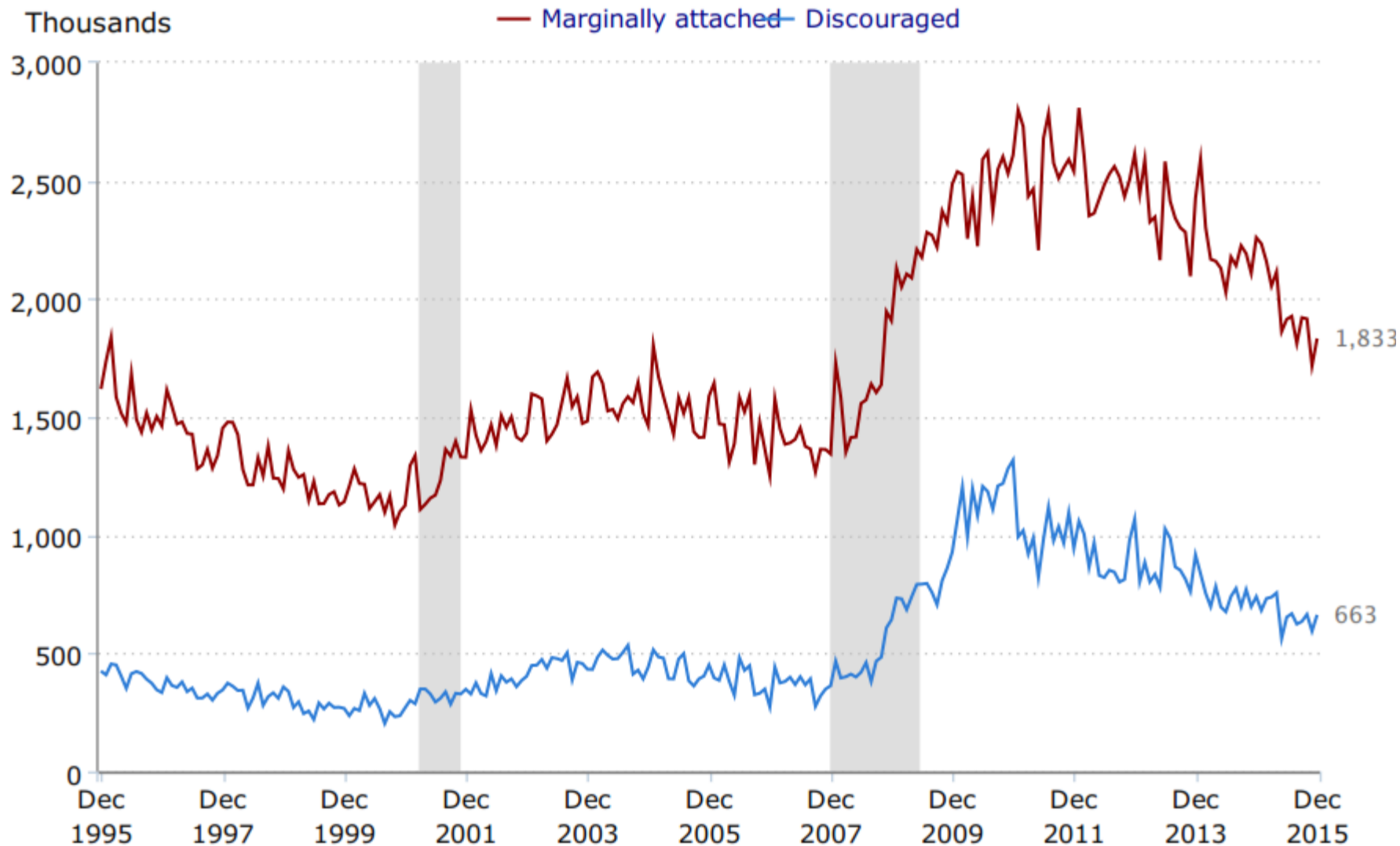
Hover over chart to view data.

Note: Shaded area represents recession, as determined by the National Bureau of Economic Research.

Source: U.S. Bureau of Labor Statistics.

## Persons not in the labor force, selected indicators, not seasonally adjusted

Click and drag within the chart to zoom in on time periods



Hover over chart to view data.

Note: Shaded area represents recession, as determined by the National Bureau of Economic Research.

Source: U.S. Bureau of Labor Statistics.



# III. Determinants of the Natural Rate of Unemployment

- Frictional Unemployment
- Structural Unemployment
  - Minimum wage laws
  - Unions
  - Efficiency wages

# Labor Market Graph

# Unions

- Wages for insiders increase (see previous graph)
- Ben:
  - Coordinate worker preferences
  - Fight monopsony power
- Cost:
  - Unemployment increases
  - Outsiders move to a different industry
  - Potentially more inequality

# Efficiency Wages

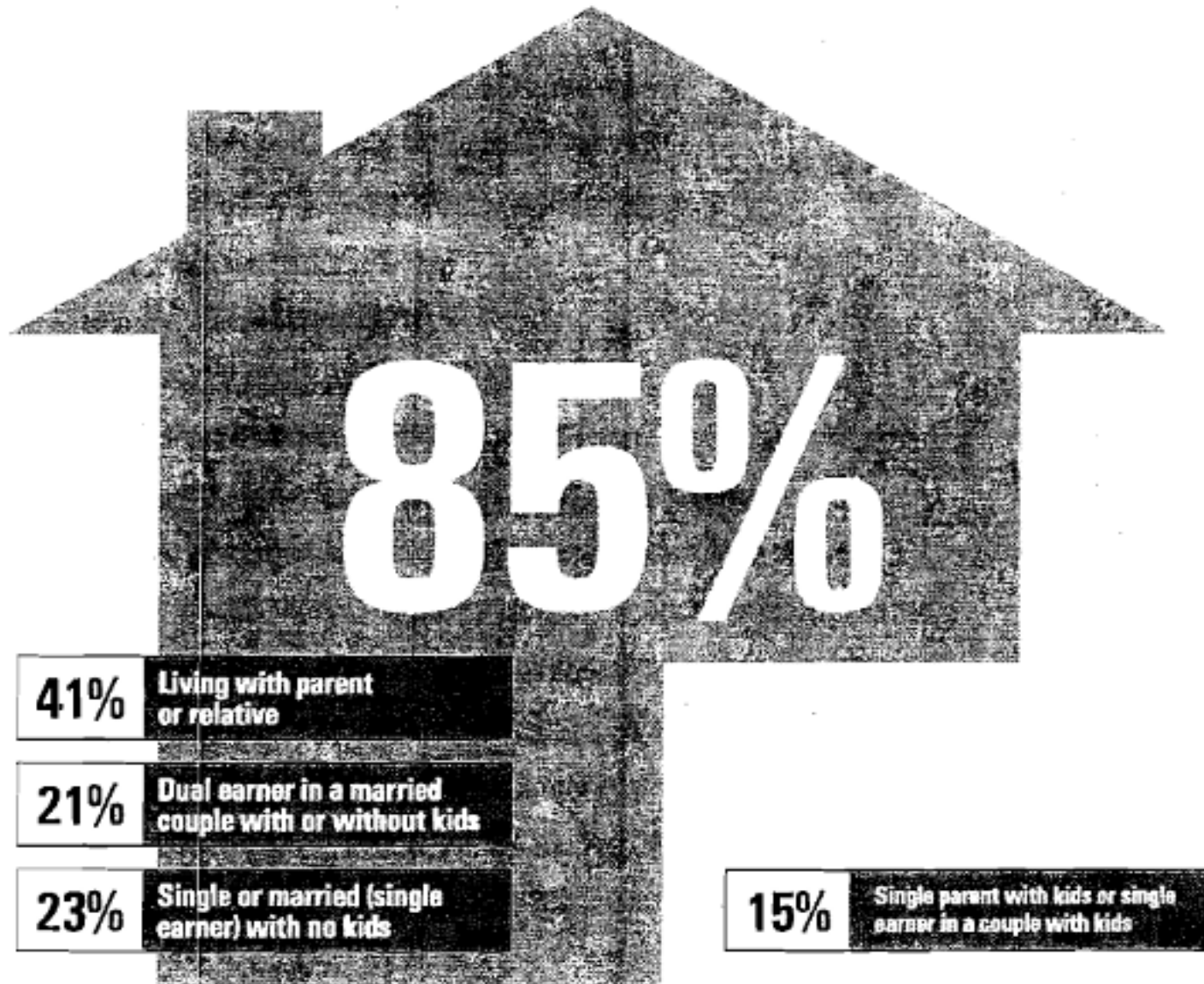
E.g. Ford model T, assembly line (1908). \$5/day

- Worker Health
- Reduced Turnover
- Worker Effort
- Worker Quality
- Worker Moral

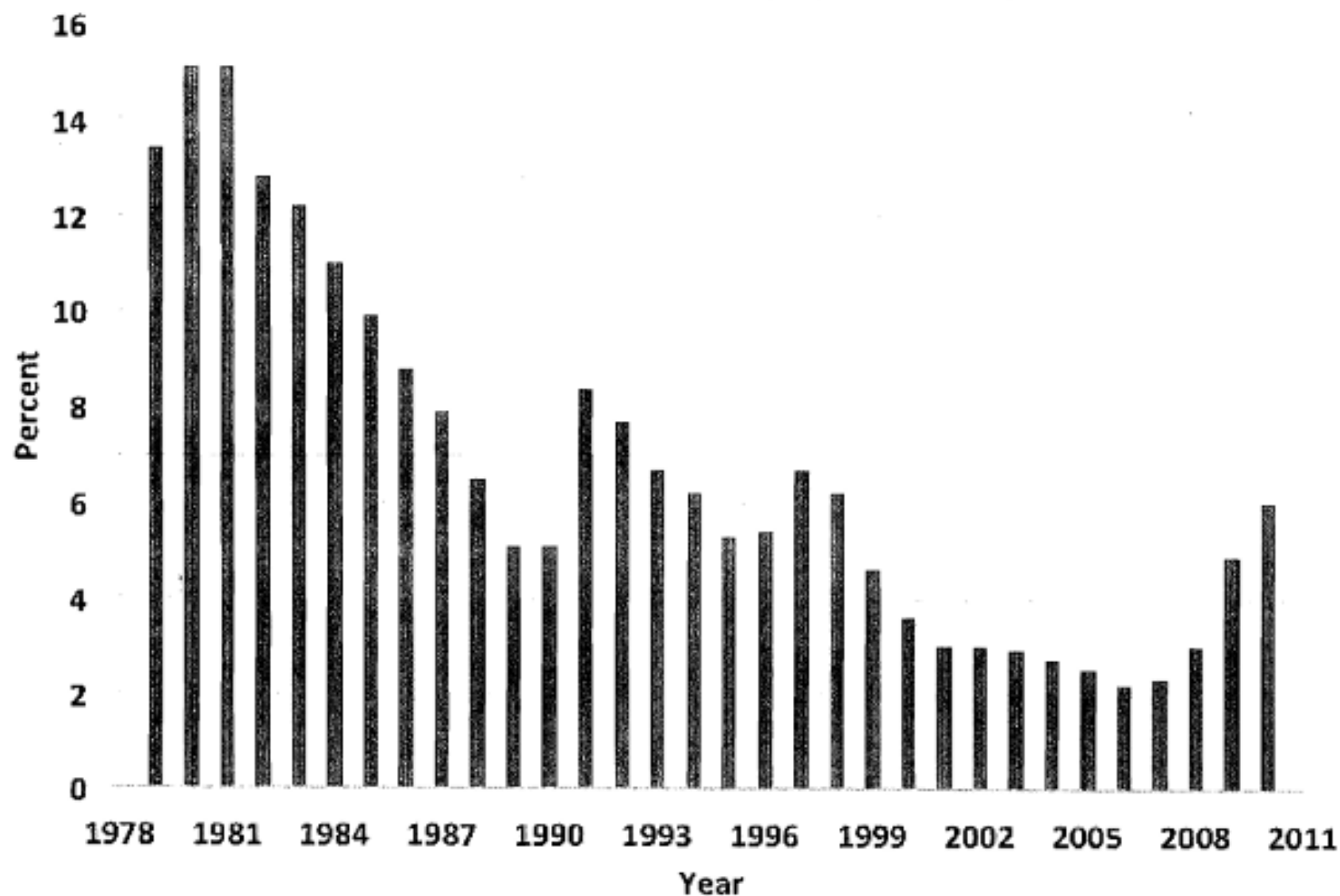
### III. Who Actually Earns the Minimum Wage?

- Evidence on minimum wages (Lindauer 2011)
- Separate Question: Do minimum wages increase unemployment?
  - Card, Krueger (92) New Jersey \$4.25/hr to \$5.05/hr fast food restaurants. [1992 dollars]
  - Other economists disagree
  - Currently \$15/hr federal minimum wage proposed

# Who Earns the Minimum Wage?

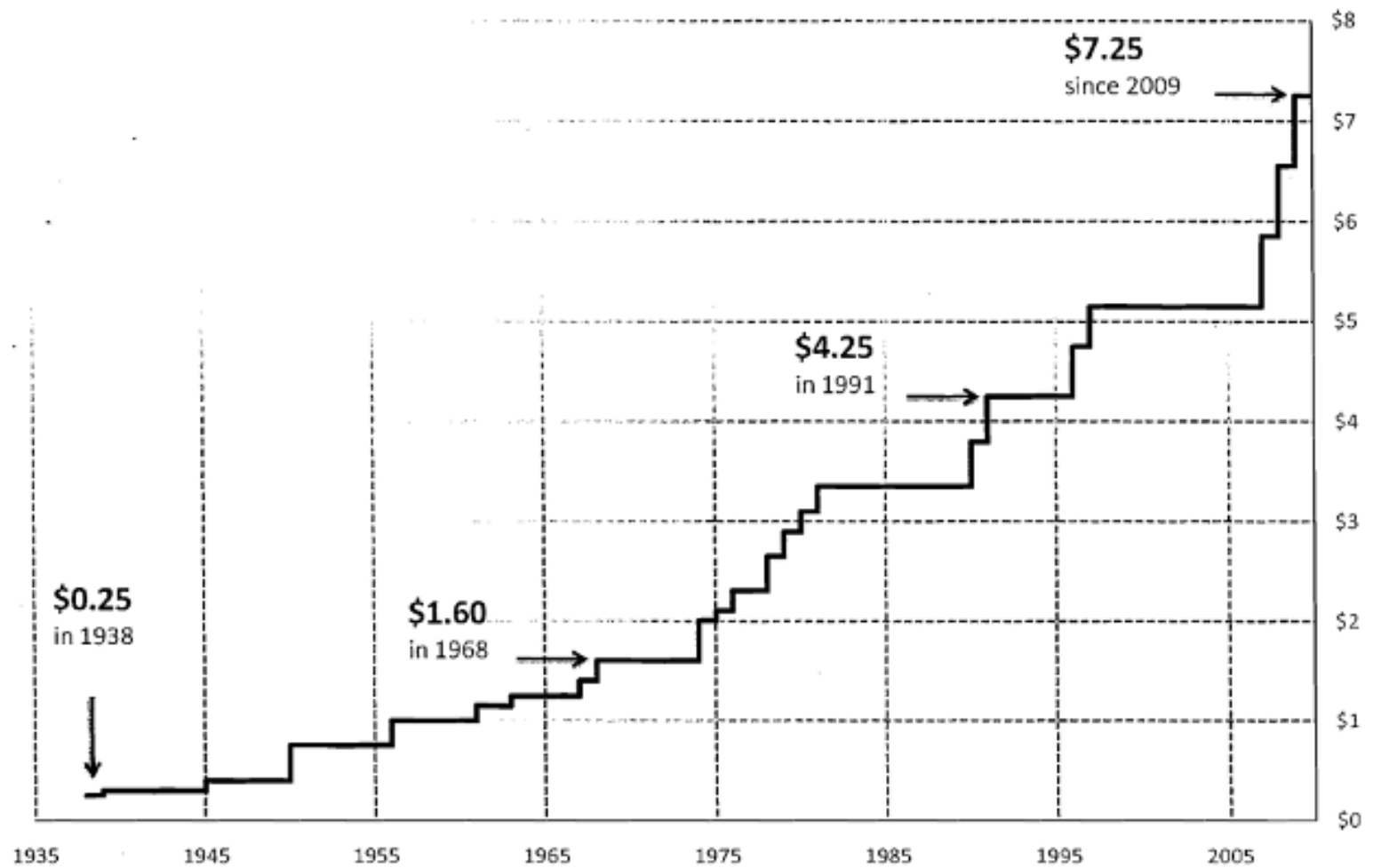


## Minimum Wage Coverage (1979-2011)



Source: U.S. Bureau of Labor Statistics (<http://www.bls.gov/cps/minwage2010bls.htm#10>)

## History of the Minimum Wage

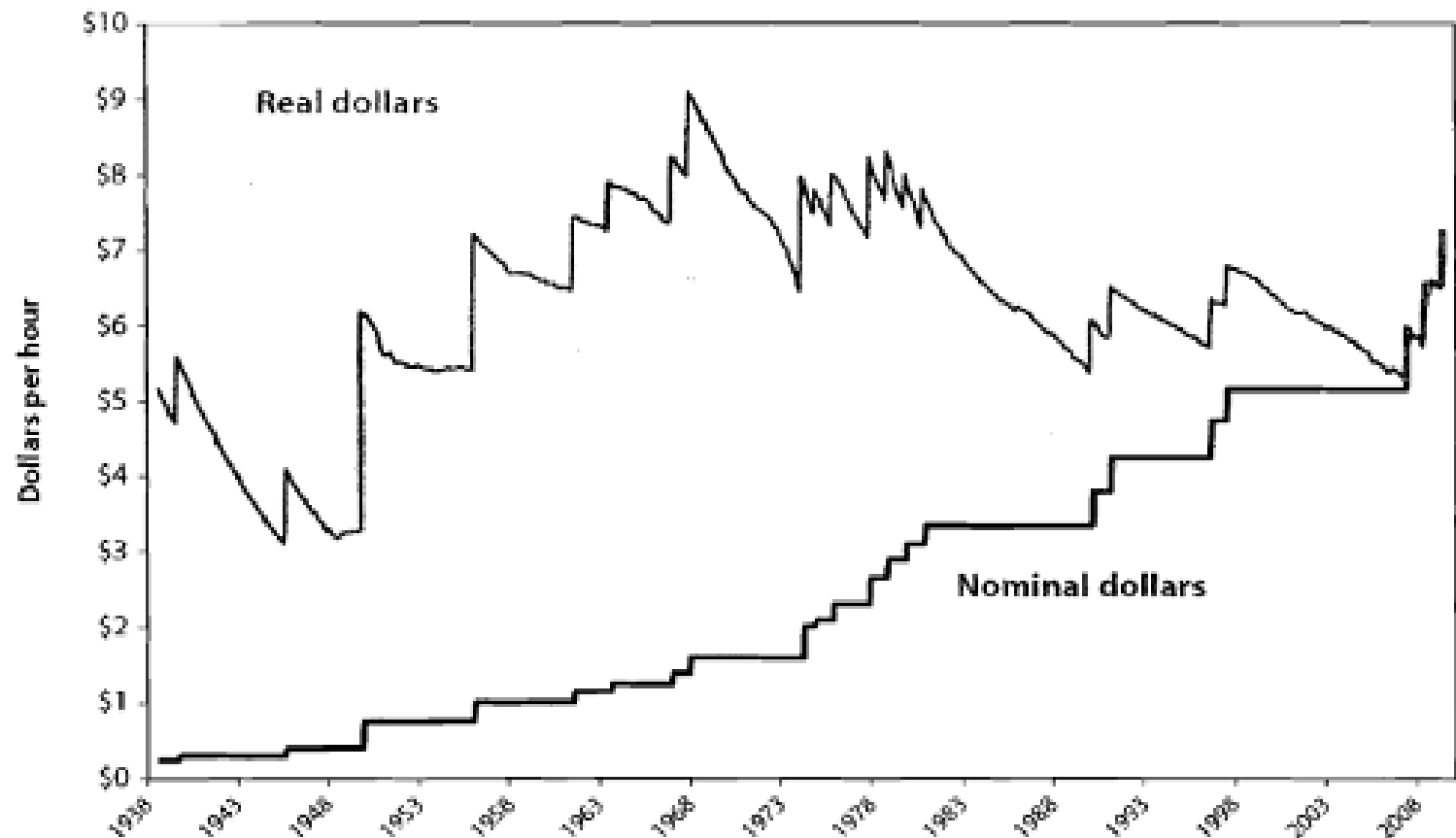


Source: U.S. Department of Labor (<http://www.dol.gov/esa/minwage/chart.htm>)



**FIGURE A**

**The Federal minimum wage, nominal and real value, 1938-2009**



SOURCE: U.S. Department of Labor Wage and Hour Division. Real value deflated using the CPI-U-RS.