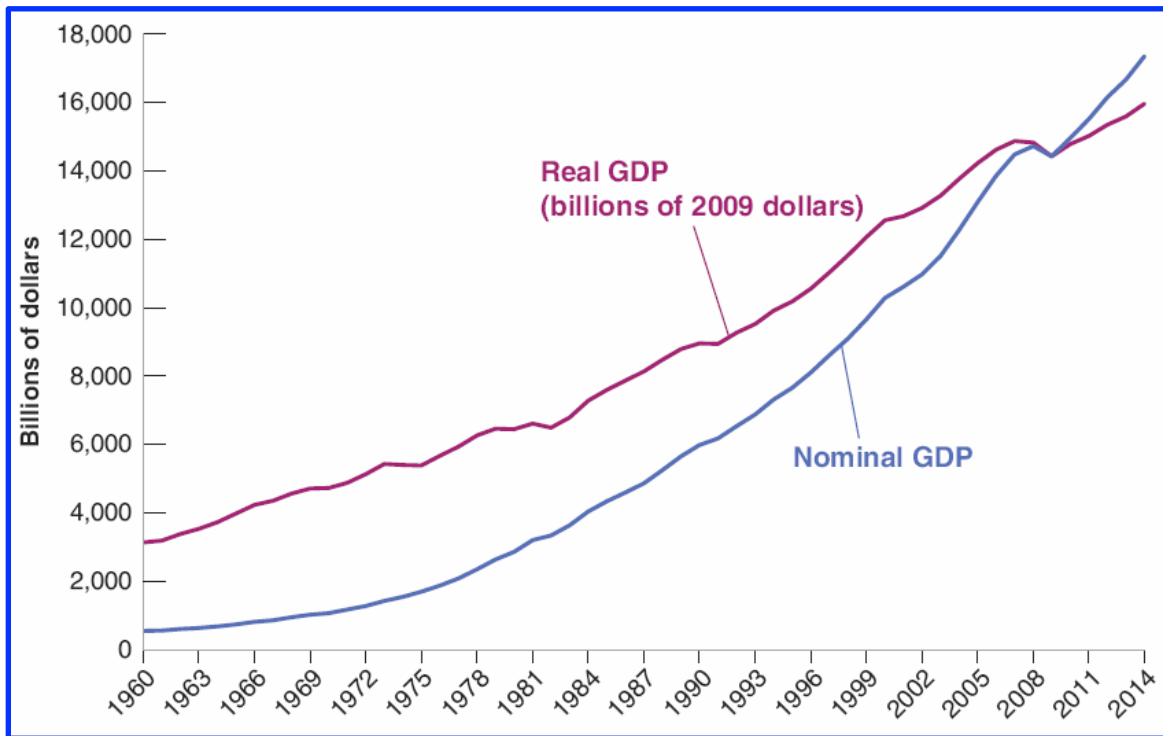


# Previously on Econ 204...

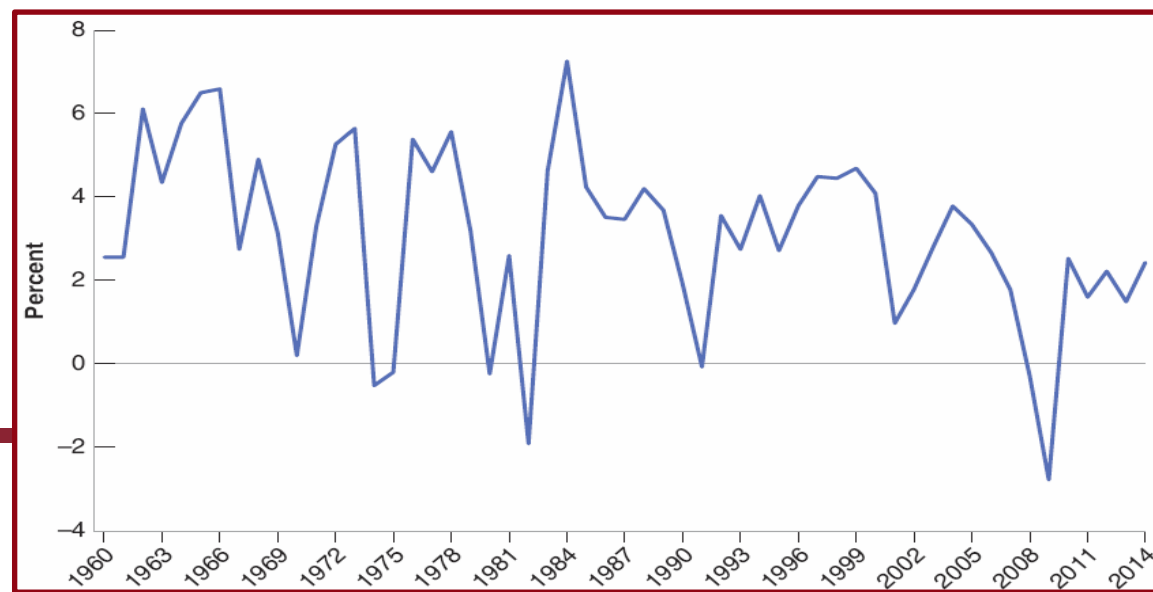
- A brief tour of the US economy and its recent dynamics.
- What is Macroeconomics and what it focuses on.
- Measuring aggregate output: GDP
  - Definitions of GDP
  - Real vs. Nominal GDP
  - Chained Real GDP





← Nominal and Real US GDP (*level*)

Yearly *growth rate* of Real US GDP



# Get your iClicker working

- Press the start button
- It should say "ECON 204"
  - If it doesn't, try to change frequency: press the start button for some seconds and then write AA.

## 1<sup>st</sup> Clicker question

Does your clicker work?

- A. Yes
- B. Yeah!



## Clicker question

Which of the following is *not* a correct definition of GDP?

- A. The value of final goods and services produced in the economy.
- B. The sum of value added by all firms in the economy.
- C. The sum of the profits obtained by all firms in the economy.
- D. The sum of all incomes earned in the economy.

# 1.3 MEASURING THE LABOR MARKET



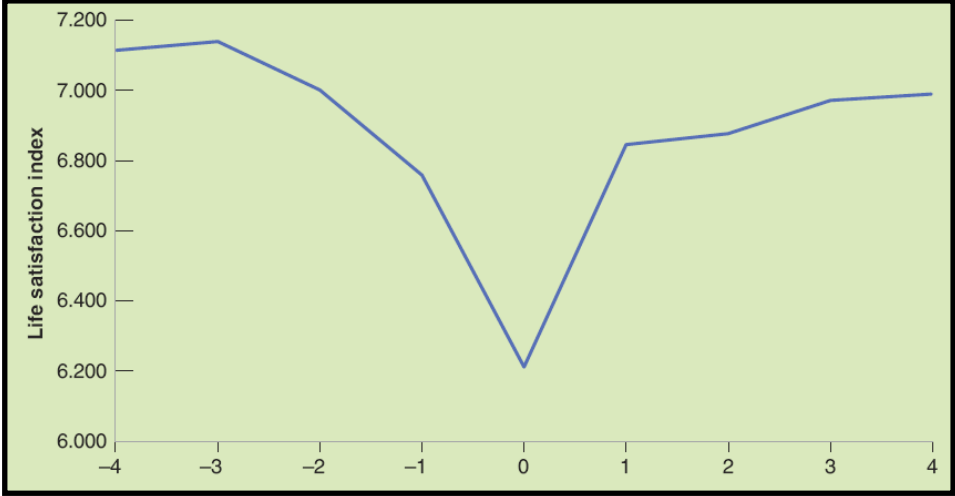
# Measuring the labor market: The key numbers

- Employment (N).
- Unemployment (U).
- Labor force ( $L = N + U$ ).
- Working-age population (Pop).

# Measuring the labor market: The key rates

- Unemployment rate =  $\frac{\text{unemployment}}{\text{labor force}}$ 
  - $u = \frac{U}{L}$
- Employment rate =  $\frac{\text{employment}}{\text{working-age population}}$
- Participation rate =  $\frac{\text{labor force}}{\text{working-age population}}$

# Why we care about unemployment?

- Unemployment generates poverty and unhappiness.
  - Unemployment is a waste of economic potential.
- 
- | Unemployment Rate (%) | Life satisfaction index |
|-----------------------|-------------------------|
| -4                    | 7.100                   |
| -3                    | 7.150                   |
| -2                    | 7.000                   |
| -1                    | 6.750                   |
| 0                     | 6.200                   |
| 1                     | 6.850                   |
| 2                     | 6.900                   |
| 3                     | 6.950                   |
| 4                     | 6.980                   |
- Too low unemployment can also cause problems.
    - Labor shortages → shortages of goods/inflation.
    - Workers' bargaining power may become so strong that firms stop making profits.



# How do we actually measure unemployment?

- Surveys of households.
- In the US: The Current Population Survey (CPS)
  - 60,000 US households interviewed each month.
- Unemployed = does not have a job *and* has been looking for a job in the last four weeks.



# Shortcomings of the unemployment rate

- It usually underestimates unemployment.
  - *discouraged* workers.
  - *underemployment*.
    - ...and the problem gets worse in bad times.
- Does not tell good jobs from bad jobs.
- Bottom line: look at a broader set of indicators!

# The US labor market: Unemployment rate



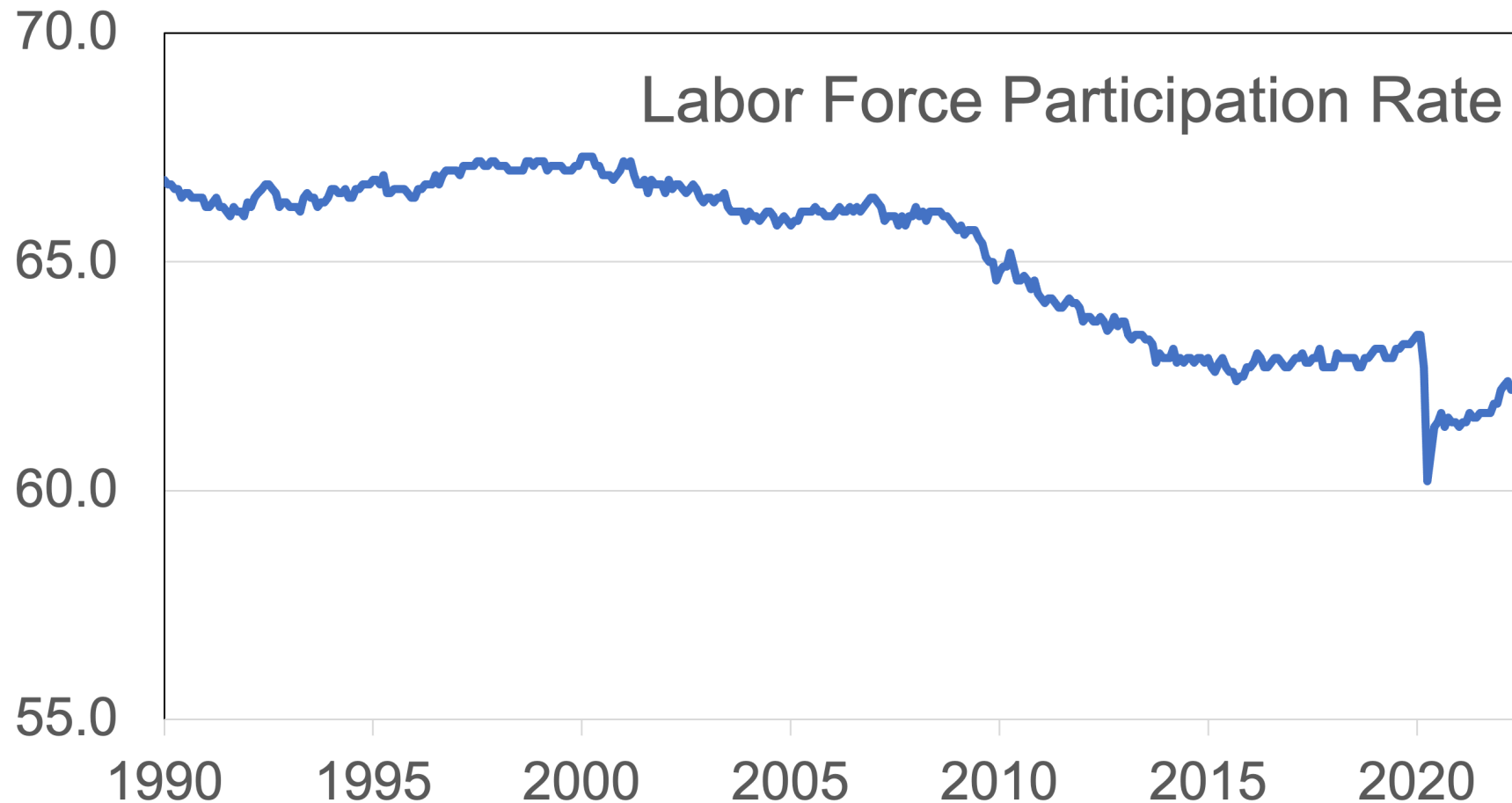
- Goes up in recessions.
- Goes down during expansions.
- Currently at a historical low: best labor market in recent history?

# The US labor market: Employment rate



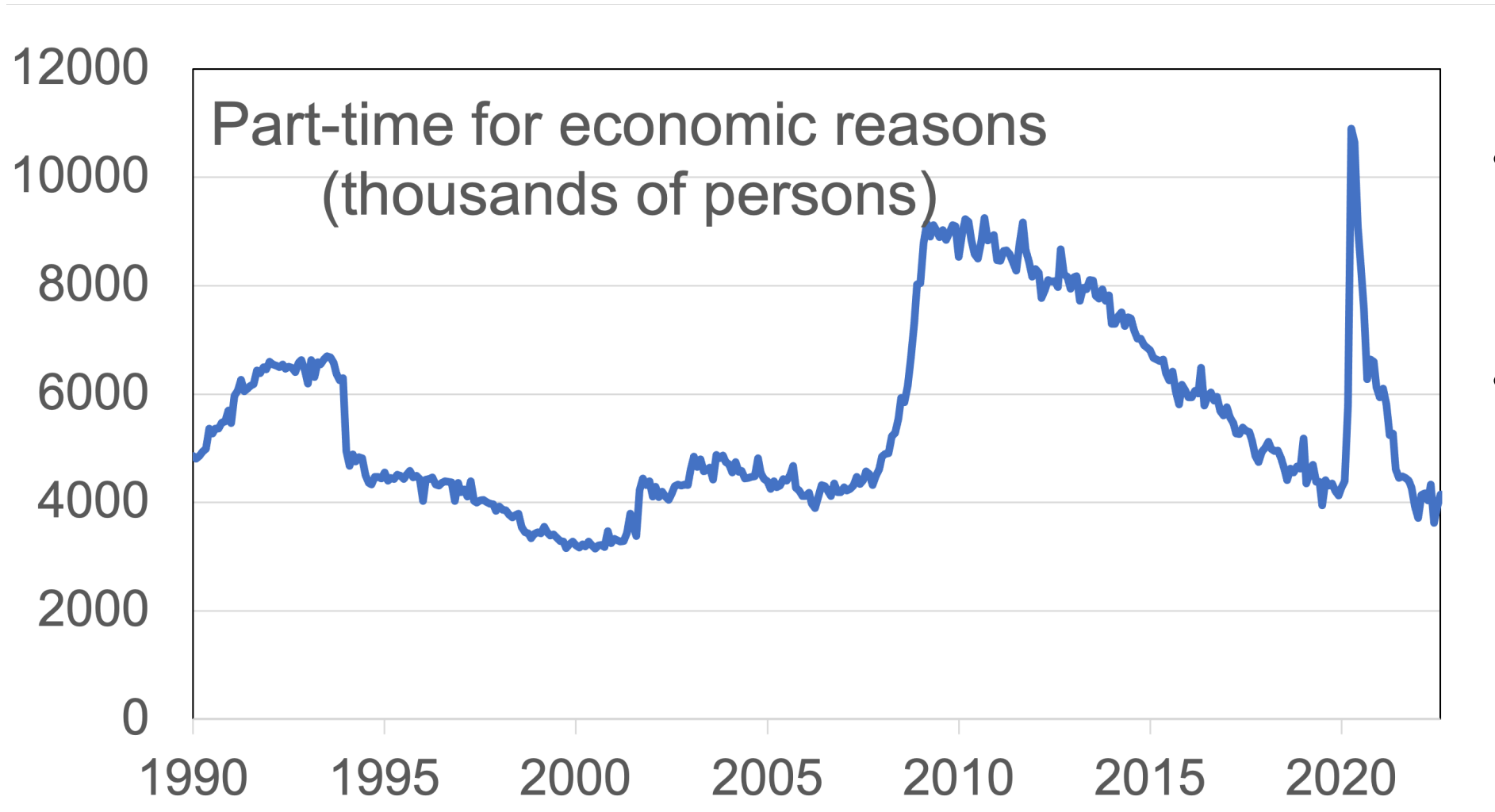
- Down in recessions, up in expansions
- Tells a partially different story:
- Has almost fully recovered from Covid-shock
- But below the 1990-2007 levels.

# The US labor market: Labor force participation rate



- Underlying decreasing trend (demographic factors).
- But also influenced by the economy.
- Has not recovered fully from the covid shock.

# The US labor market: Underemployment



- Around 4 million Americans are underemployed.
- Can increase to 8-10 millions during a recession!

## Clicker question

“When the unemployment rate is high, the participation rate is also likely to be high”

- A. True.
- B. False.
- C. Not possible to say.

# 1.3 MEASURING INFLATION





# Inflation: Key concepts

- Price level (P).
- Inflation rate ( $\pi_t$ )
  - $\pi_t = (P_t - P_{t-1}) / P_{t-1}$
- Deflation



# How do we measure inflation?

Two main empirical measures of  $P_t$ :

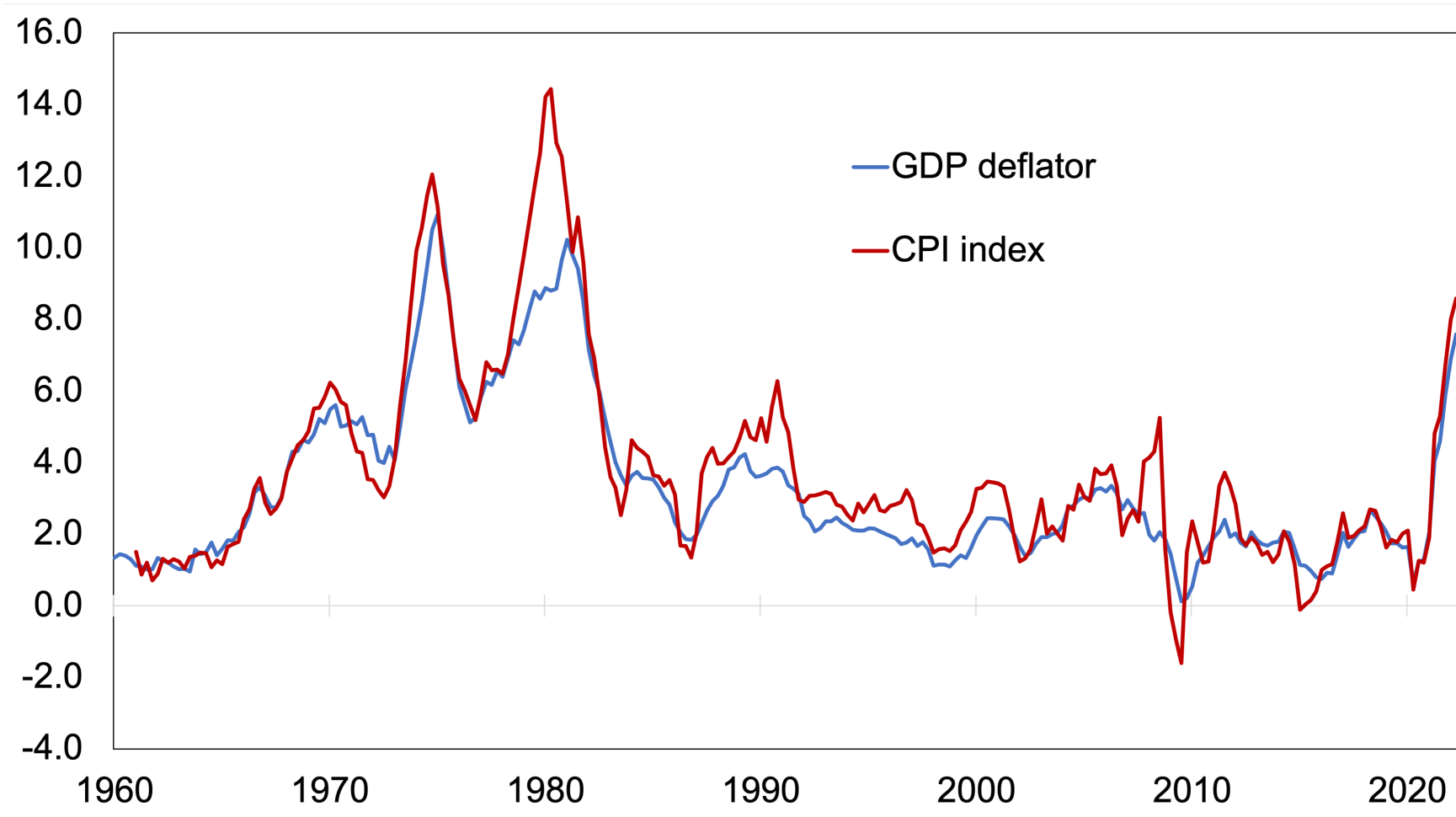
## 1. GDP deflator

- Measures  $P_t$  of domestically produced goods & services.
- $$= \frac{\text{Nominal GDP}_t}{\text{Real GDP}_t} = \frac{\$Y_t}{Y_t}$$

## 2. Consumer price index (CPI)

- Measures  $P_t$  of goods & services bought by consumers.
- = dollar cost of a 'typical' basket of goods & services.

# Inflation in the US

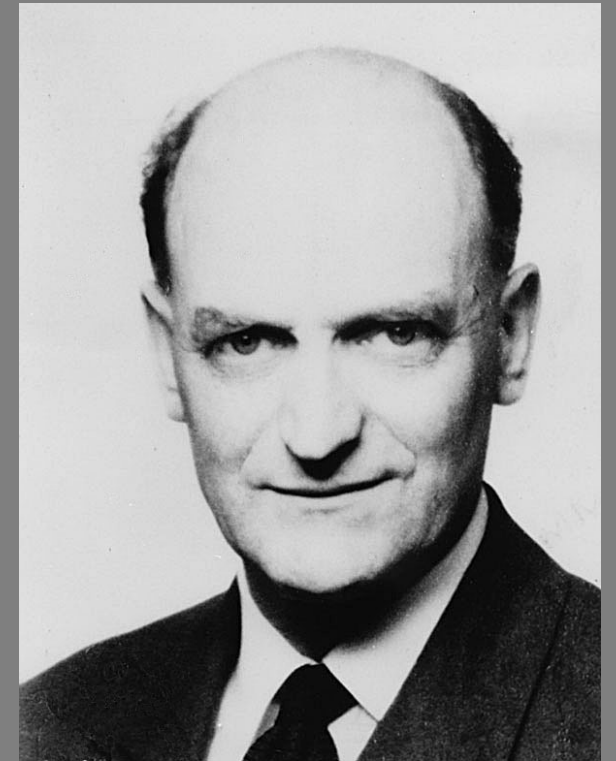
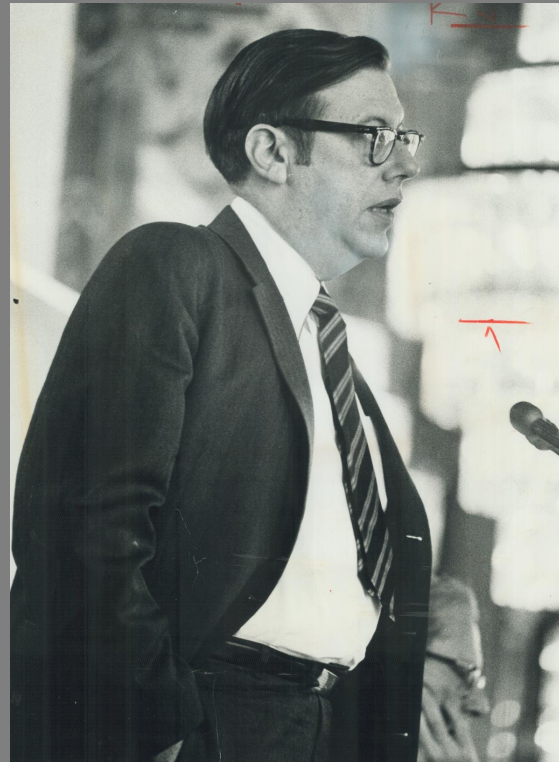


- CPI and GDP deflator have generally moved together.
- Exception: when the price of imported goods rises much faster than that of domestically produced goods.
- In the current inflation surge, CPI and GDP deflator are behaving similarly.

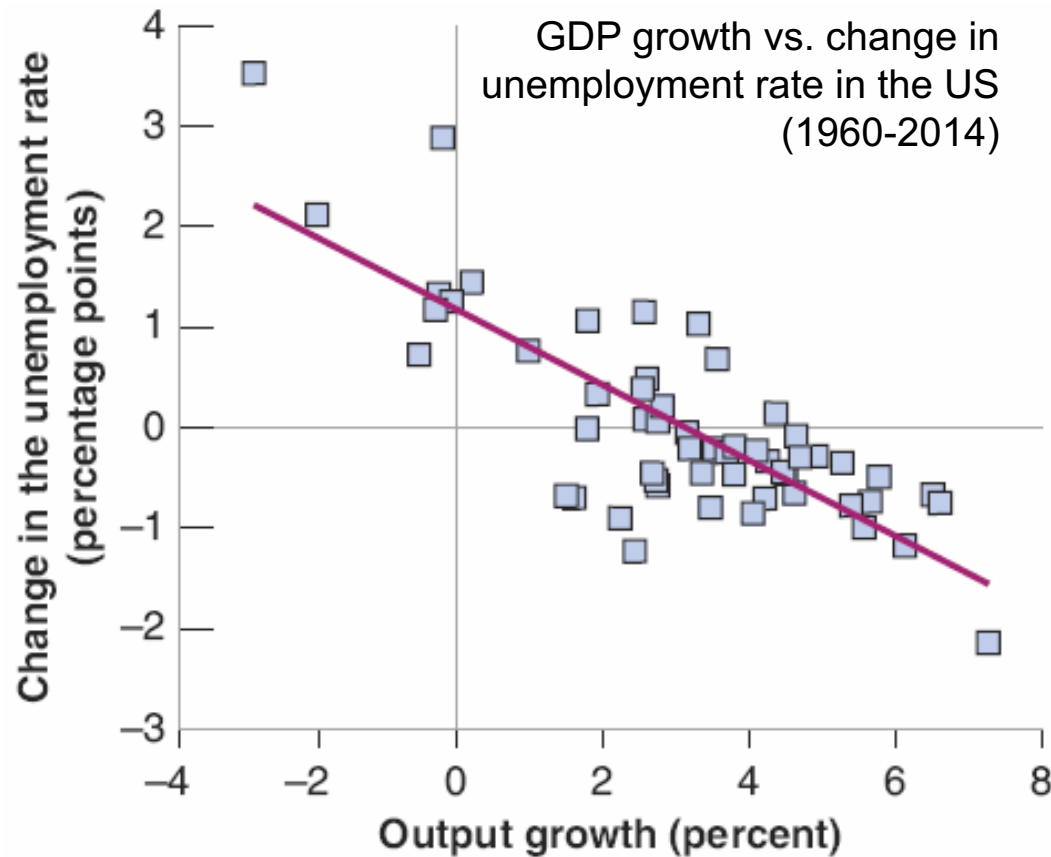
# Why do we care about inflation?

- Tends to redistribute income arbitrarily.
- Creates uncertainty and instability in relative prices and real wages.
- Decreases competitiveness of exports.
- Deflation is also bad, though:
  - increases real values of debts.
  - makes monetary policy less effective.
  - makes people postpone spending.
- In general, we would want inflation to be low & stable.

# 1.4 OKUN'S LAW & PHILLIPS CURVE



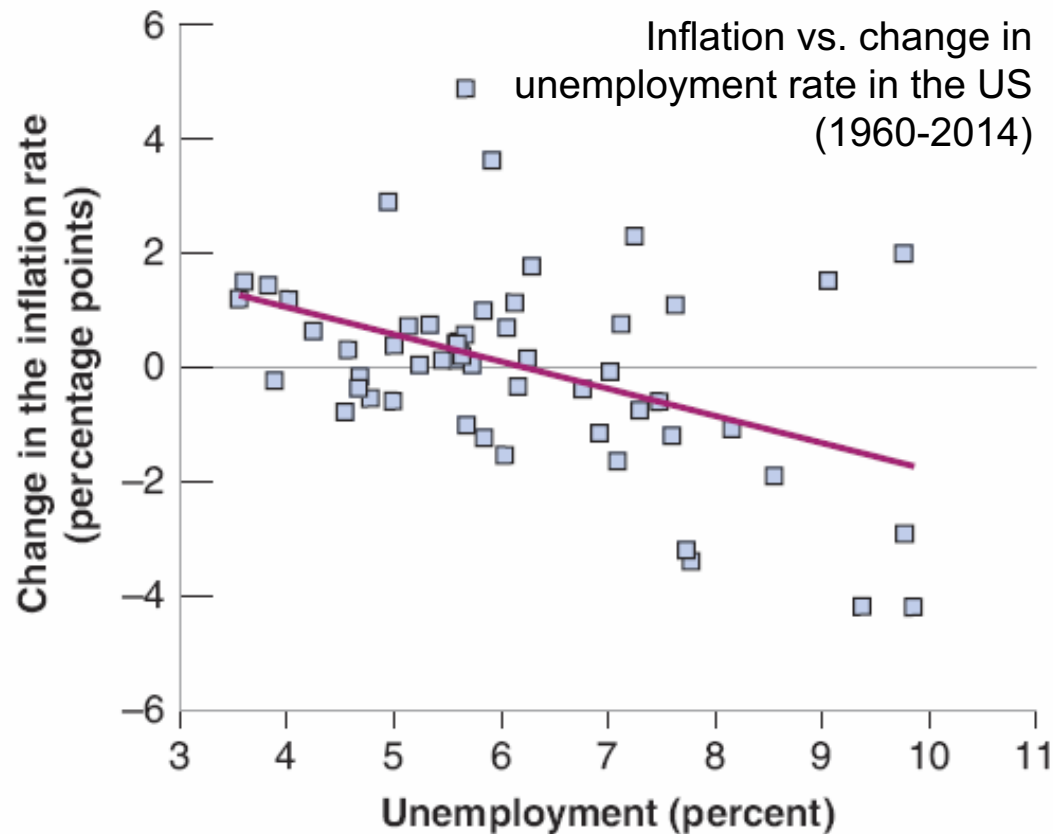
# Okun's law



- Inverse relation between GDP growth rate and the change in the unemployment rate.
- In US data, slope is around -0.4.
- The line crosses the horizontal axis where output growth is 3%.
- Strong & stable relation.



# Phillips Curve



- Inverse relation between inflation and unemployment.
- The line crosses the horizontal axis where unemployment is 6%.
- Not very strong relation, and definitely not stable.

# QUESTIONS & ANSWERS

University of  
Massachusetts  
Amherst

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