The Science of Macroeconomics

MACROECONOMICS

Class Logistics

- Waitlist
  - In economics department faculty cannot issue PTAs at all. Economics undergraduate advising office handles waitlist and all enrollment decisions

- Lecture Capture

- Homework
  - Turn in via file upload on Canvas
  - If you write by hand, you need to be able to scan it
  - One file only (i.e. MS Word, PDF), no camera photos

- Written Assignments
  - 300-500 words each, uploaded via Canvas.

IN THIS CHAPTER, YOU WILL LEARN:

- about the issues macroeconomists study

- about the tools macroeconomists use

- some important concepts in macroeconomic analysis

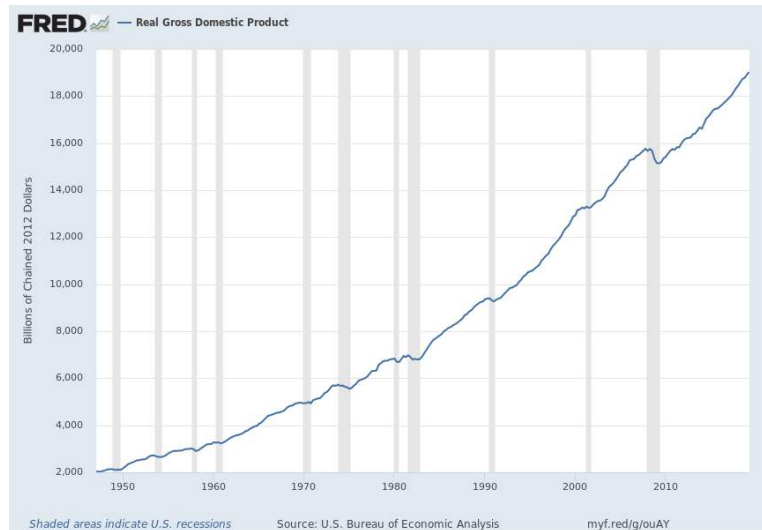# Important issues in macroeconomics

**Macroeconomics**, the study of the economy as a whole, addresses many issues in the news
e.g.:

- What is monetary policy, what should monetary policy be, and how should it be implemented?

- Why are so many countries poor? What policies might help them grow out of poverty?

- What are the causes of recessions and expansions? What policies should governments implement related to the business cycle?
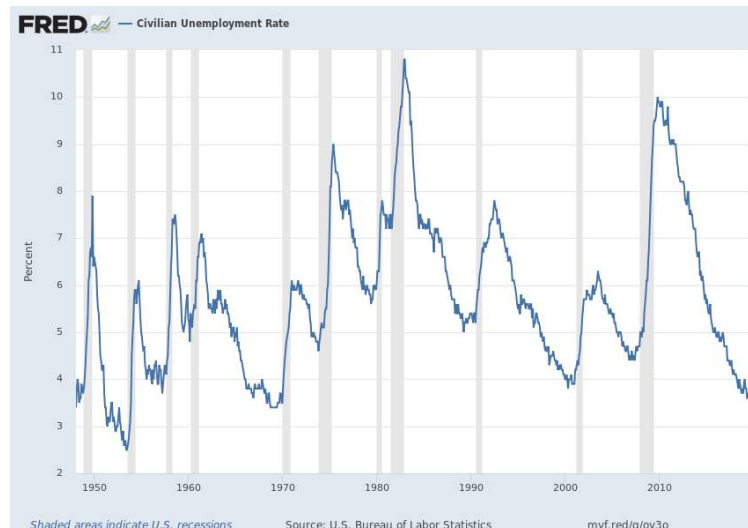
Key Macro Variables

Gross Domestic Product (GDP)　　　Inflation
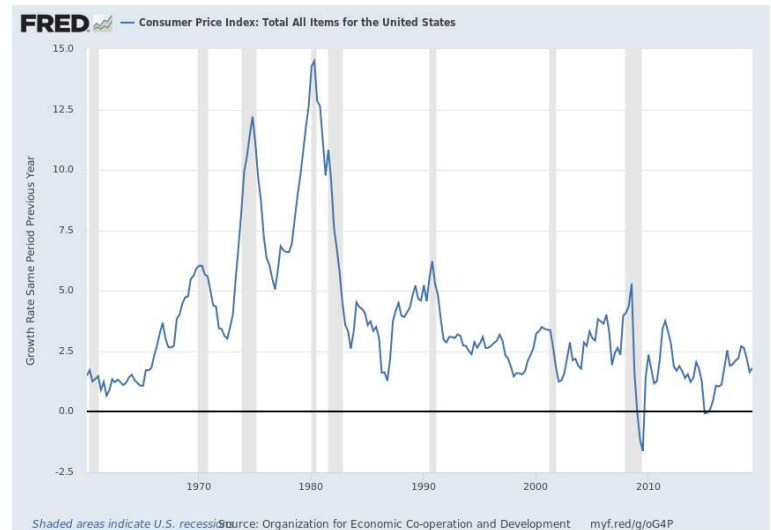
Unemployment

Rate

Economic models

…are simplified versions of a more complex reality

- irrelevant details are stripped away

…are used to

- show relationships between variables
- explain the economy's behavior
- devise policies to improve economic performance

Example of a model: Supply & demand for lattes

- shows how various events affect price and quantity of lattes bought and sold

- assumes the market is competitive: each buyer and seller is too small to affect the market price

Variables

Q^d = quantity of lattes that buyers demand

Q^s = quantity that producers supply

P = price of lattes

Y = aggregate income

P_{milk} = price of milk (an input)

Supply & demand for lattes

demand equation: $Q^d = f(P, Y)$

- shows that the quantity of lattes consumers demand is related to the price of lattes and aggregate income

supply equation: $Q^s = f(P, P_{milk})$

- Shows the quantity of lattes produced is related to the price of lattes and the price of milk.

Endogenous vs. exogenous variables

- The values of **endogenous** variables are determined in the model (use the model to solve for them).

- The values of **exogenous** variables are determined outside the model: the model takes their values and behavior as given.

- In the model of supply & demand for lattes,

  endogenous: P, Q^d, Q^s

  exogenous: Y, P_{milk}

The use of multiple models

- No one model can address all the issues we care about.

- So we will learn different models for studying different issues (*e.g.*, unemployment, inflation, long-run growth or GDP).

- For each new model, you should keep track of

  - its assumptions

  - which variables are endogenous, which are exogenous

  - the questions it can help us understand, those it cannot

Prices: flexible vs. sticky

- **Market clearing**: An assumption that prices are flexible, adjust to equate supply and demand.

- In the short run, many prices are **sticky** – adjust sluggishly in response to changes in supply or demand.   For example:

  - many labor contracts fix the nominal wage for a year or longer

  - iTunes has changed its prices infrequently (e.g. $0.99 to $1.29, some $0.69 sales)

Prices: flexible vs. sticky

- The economy's behavior depends partly on whether prices are sticky or flexible:

  - If prices sticky (short run),
    demand may not equal supply, which explains:

    - unemployment (excess supply of labor)

    - why firms cannot always sell all the goods they produce

  - If prices flexible (long run), markets usually clear and economy behaves very differently