About the Class

The objective of the course is to:

- Develop an analytical framework to
- explain growth, unemployment and inflation,
- and see how government policies (monetary and fiscal) affect these things.

Important issues in macroeconomics

- Why does the cost of living keep rising?
- Why are millions of people unemployed, even when the economy is recovering?
- Why are there recessions? Can the government do anything to combat recessions? Should it??

Class Logistics

Text: Mankiw, 5th edition, workbook on reserve. See website for materials.

Requirements: Econ 1A,B and Math 16A,B (21A,B) for calculus

Grading: Two midterms and a final. No rescheduling, but can drop a midterm.

Homework: penalty for every 2 missing.

macro

Topic 1:
Introduction
(chapter 1)

macroeconomics
fifth edition

N. Gregory Mankiw

PowerPoint® Slides
by Ron Cronovich

Learning objectives

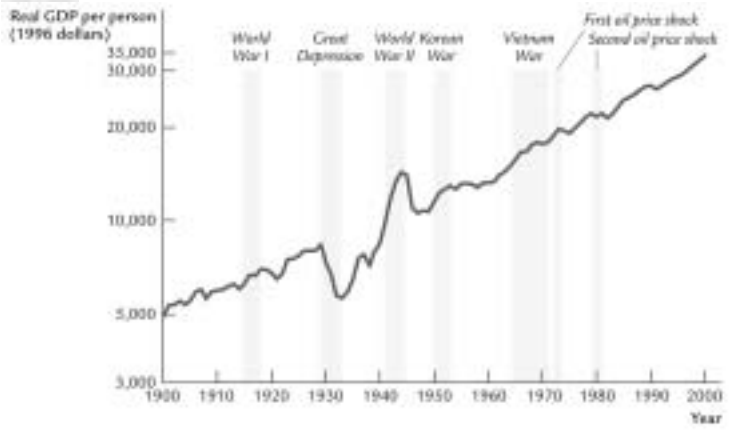
This chapter introduces you to

- the issues macroeconomists study
- the tools macroeconomists use
- some important concepts in macroeconomic analysis

Three main variables we will study:

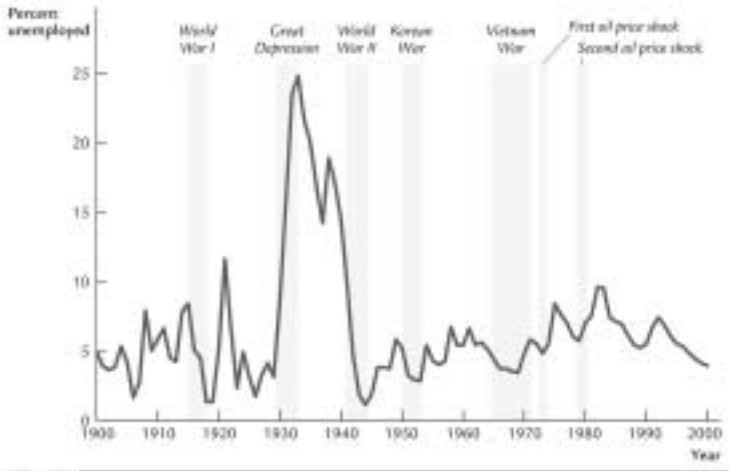
1) Gross domestic output (GDP)
2) Inflation in the cost of living (CPI)
3) Unemployment rate

We will begin by looking at trends in the data for these, and make initial observations.



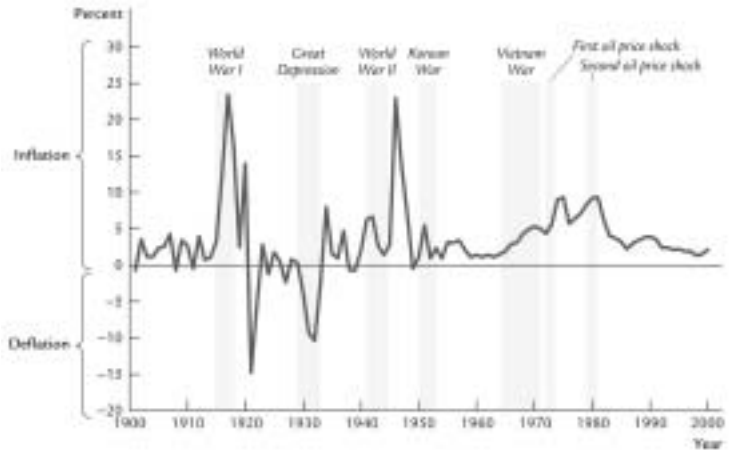
GDP: Observations

1. Long-term upward trend. Income more than doubled over last 30 years.
2. Short-run disruptions in the trend: recessions.



Unemployment: Observations

1. Unemployment always positive.
2. Fluctuations related to GDP: unemployment higher during recessions.



Inflation: Observations

1. Inflation can be negative.
2. Often high when GDP high, but not always (see 1970s).

Why learn macroeconomics?

1. The macroeconomy affects society's well-being.
   - *Crime and suicides tend to be higher during spells of high unemployment*

2. The macroeconomy affects your well-being.
   - *Will it be hard to find a job when you graduate?*

3. The macroeconomy affects politics and current events.
   - *Incumbents tend to lose elections during recessions or bad inflation.*

How we learn Economics: Models

...are simplied versions of a more complex reality
- irrelevant details are stripped away

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

Example of a model:
The supply & demand for new cars

- explains the factors that determine the price of cars and the quantity sold.
- assumes the market is **competitive**: each buyer and seller is too small to affect the market price
- Variables:
  Q^d = quantity of cars that buyers demand
  Q^s = quantity that producers supply
  P = price of new cars
  Y = aggregate income
  P_s = price of steel (an input)

The demand for cars

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

shows that the quantity of cars consumers demand is related to the price of cars and aggregate income.

Digression: Functional notation

- **General functional notation** shows only that the variables are related:

$$Q^d = D(P, Y)$$

A list of the variables that affect Q^d

Digression: Functional notation

- **General functional notation** shows only that the variables are related:

$$Q^d = D(P, Y)$$

- A **specific functional form** shows the precise quantitative relationship:

Examples:

1) $Q^d = D(P, Y) = 60 - 10P + 2Y$

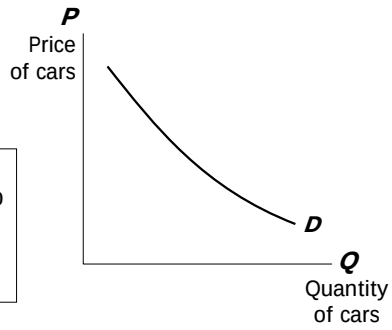
2) $Q^d = D(P, Y) = \dfrac{0.3Y}{P}$

The market for cars: demand

demand equation:

$Q^d = D(P, Y)$

The **demand curve** shows the relationship between quantity demanded and price, other things equal.

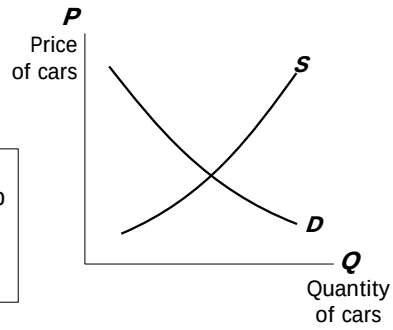


The market for cars: supply

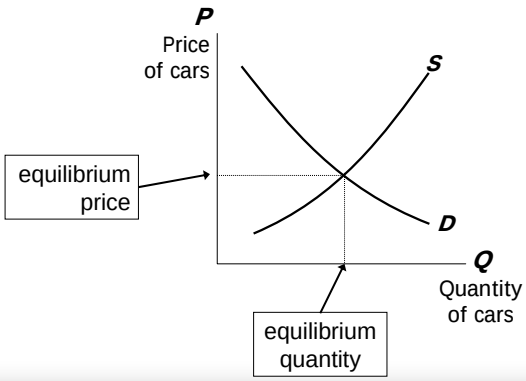
supply equation:

$Q^s = S(P, P_s)$

The **supply curve** shows the relationship between quantity supplied and price, other things equal.



The market for cars: equilibrium



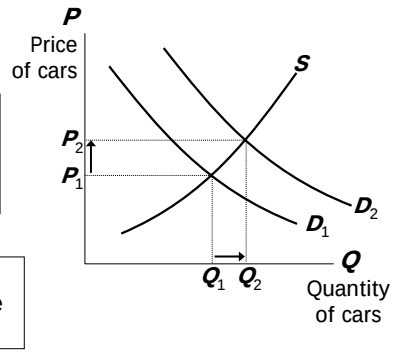
The effects of an increase in income:

demand equation:

$Q^d = D(P, Y)$

An increase in income increases the quantity of cars consumers demand at each price…

…which increases the equilibrium price and quantity.



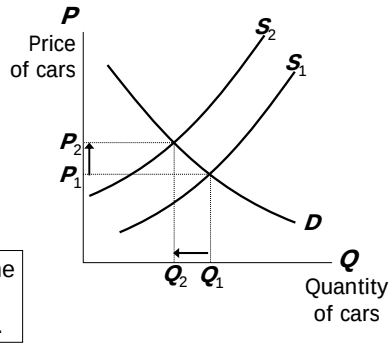
The effects of a steel price increase:

supply equation:

$Q^s = S(P, P_s)$

An increase in P_s reduces the quantity of cars producers supply at each price…

…which increases the market price and reduces the quantity.



Endogenous vs. exogenous variables:

- The values of **endogenous** variables are determined in the model.
- The values of **exogenous** variables are determined outside the model: the model takes their values & behavior as given.
- In the model of supply & demand for cars,

  endogenous: P, Q^d, Q^s

  exogenous: Y, P_s

A Multitude of Models

No one model can address all the issues we care about. For example,

- If we want to know how a fall in aggregate income affects new car prices, we can use the S/D model for new cars.
- But if we want to know why aggregate income falls, we need a different model.

A Multitude of Models

- So we will learn different models for studying different issues (e.g. unemployment, inflation, long-run growth).
- For each new model, you should keep track of
  - its assumptions,
  - which of its variables are endogenous and which are exogenous,
  - the questions it can help us understand,
  - and those it cannot.

Prices: Flexible Versus Sticky

- **Market clearing**: an assumption that prices are flexible and adjust to equate supply and demand.
- In the short run, many prices are **sticky**--- they adjust only sluggishly in response to supply/demand imbalances.
  For example,
  - labor contracts that fix the nominal wage for a year or longer
  - magazine prices that publishers change only once every 3-4 years

Prices: Flexible Versus Sticky

- The economy's behavior depends partly on whether prices are sticky or flexible:
- If prices are sticky, then demand won't always equal supply. This helps explain
  - unemployment (excess supply of labor)
  - the occasional inability of firms to sell what they produce
- Long run: prices flexible, markets clear, economy behaves very differently.

Outline of the class:

- ***Classical and Growth Theory*** (ch. 2-8)
  How the economy works in the long run, when prices are flexible and markets work well.
- ***Business Cycle Theory*** (ch. 9-14)
  How the economy works in the short run, when prices are sticky. What can policy makers do when things go wrong.
- ***Microeconomic foundations*** (Chaps. 16-19)
  Incorporate features from microeconomics on the behavior of consumers and firms. (as time permits)

(will defer chapters on the open economy)