Chapter 1: Introduction to Macroeconomics

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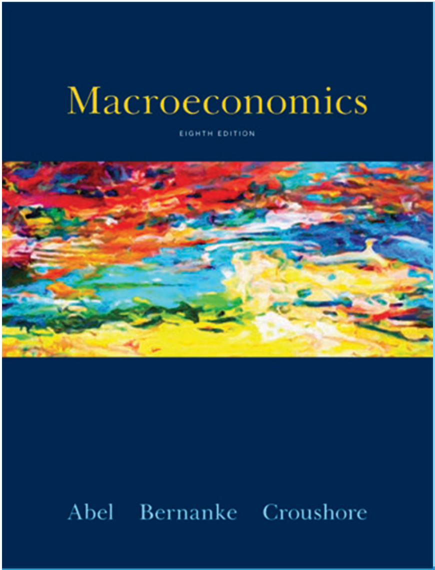
Chapter Outline

- What Macroeconomics Is About?
- What Macroeconomists Do?
- Why Macroeconomists Disagree?
- Three central concepts around which this course is organized:
  - *The short run*: What happens to the economy from year to year.
  - *The medium run*: What happens to the economy over a decade or so.
  - *The long run*: What happens to the economy over a half century or longer.



Chapter 1

Introduction to Macroeconomics

ALWAYS LEARNING

PEARSON

What macroeconomics is about?

- Macroeconomics: The study of structure and performance of national economies and government policies that affect economic performance.
- Issues addressed by macroeconomists:
    - Long-run economic growth
    - Business cycles
    - Unemployment
    - Inflation
    - The international economy
    - Macroeconomic policy
- Aggregation: from microeconomics to macroeconomics.

Long-run economic growth

- Figure 1.1: Output of United States since 1869. (Note decline in output in recessions; increase in output in some wars.)
- Two main sources of growth:
- Average labor productivity: Output produced per unit of labor input.

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- Average labor productivity: Output produced per unit of labor input.
- "Productivity isn't everything, but in the long run it is almost everything." (Paul Krugman, The Age of Diminished Expectations, MIT Press, (1994))

Figure 1.1 Output of the U.S. economy, 1869-2011

Sources: Federal spending and receipts for 1869–1929 from *Historical Statistics of the United States, Colonial Times to 1970, p. 1104; GNP 1869–1928* from Christina D. Romer, "The Prewar Business Cycle Reconsidered: New Estimates of Gross National Product, 1869–1908," *Journal of Political Economy, 97, 1 (February 1989)*, pp. 22–23; GNP for 1929 from FRED database, Federal Reserve Bank of St. Louis, *Research.stlouisfed.org/fred2/ series/GDPA; Federal spending* and receipts as percentage of output, 1930–2011 from *Historical Tables, Budget of the U.S. Government, Table 1.2*

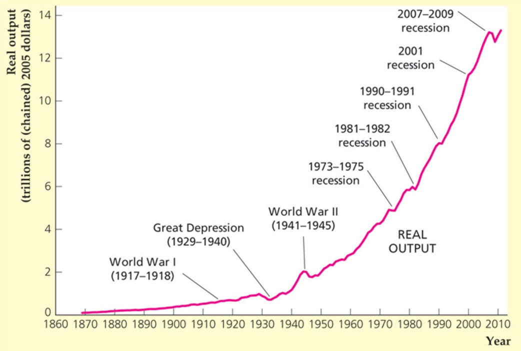
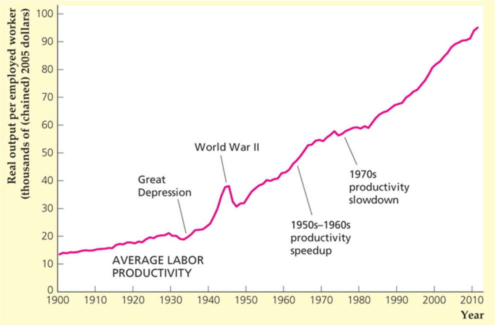


Figure 1.2 Average labor productivity in the United States, 1900-2011

Sources: Employment in thousands of workers 14 and older for 1900–1947 from *Historical Statistics of the United States, Colonial Times to 1970,* pp. 126–127; workers 16 and older for 1948 onward from FRED database, Federal Reserve Bank of St. Louis, *research.stlouisfed.org/fred2/series/ CE16OV. Average labor* productivity is output divided by employment, where output is from Fig. 1.1.



Solow Paradox and IT Revolution

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- Explanations for productivity puzzle:
- Eventually disappeared after middle 1990s.
- Reference: http://www.economist.com/node/375522

Business cycles

- Business cycle: Short-run contractions and expansions in economic activity.
- Downward phase is called a recession. During a recession, national output may be falling or perhaps growing only very slowly.
- Macroeconomists put a lot of effort into trying to figure out what causes business cycles and deciding what can do or should be done about them.

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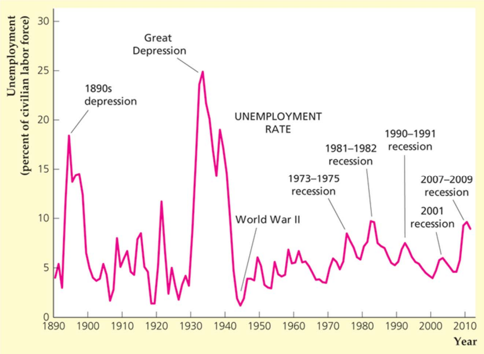
- Uncertainty shocks and delayed investment and hiring: Option value of delaying

Unemployment

- Unemployment: the number of people who are available for work and...
- The best-known measure of unemployment is... U.S. experience shown in Fig. 1.3.
- Recessions have led to significant increases in the unemployment rate in the postwar period.
- Labor participation rate is important as well.

Figure 1.3 The U.S. unemployment rate, 1890-2011

Sources: Civilian unemployment rate (people aged 14 and older until 1947, aged 16 and older after 1947) for 1890–1947 from *Historical Statistics of the United States, Colonial Times to 1970, p. 135; for 1948 onward* from FRED database Federal Reserve Bank of St. Louis, *research.stlouisfed.org/fred2/series/UNRATE.*



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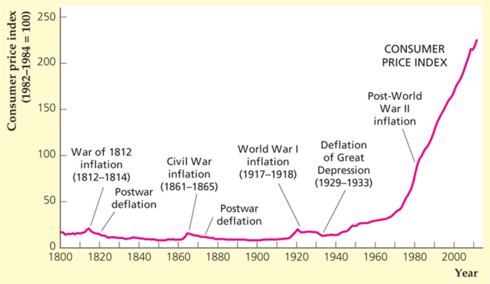
Inflation

- Inflation: The prices of goods and services are rising over time. U.S. experience shown in Fig. 1.4.
- Deflation: when prices of most goods and services decline.
- Inflation rate: the percentage increase in the average level of prices.
- Hyperinflation: an extremely high rate of inflation. High inflation also means that the purchasing power of money erodes quickly.

Figure 1.4 Consumer prices in the United States, 1800-2011



Sources: Consumer price index, 1800–1946 (1967 = 100) from *Historical Statistics of the United States, Colonial Times to 1970,* pp. 210–211; 1947 onward (1982–1984 = 100) from FRED database, Federal Reserve Bank of St. Louis, *research.stlouisfed.org/fred2/series/CPIAUCSL. Data prior to 1971* were rescaled to a base with 1982–1984 = 100.

The international economy

- Open vs. closed economies
- An important topic in macro: How international trade and borrowing relationships can help transmit business cycles from country to country.

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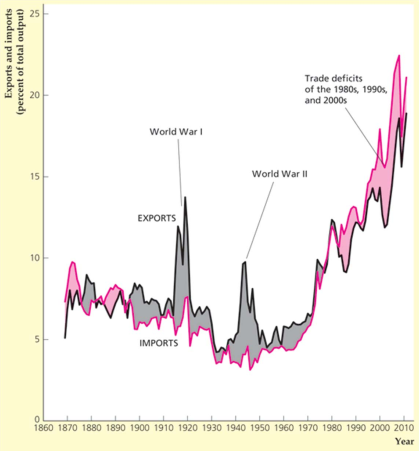
- Two views: macro view and trade view.
- Mystery behind number: Global Value Chains (GVCs) and fragmentation.
    - Prof. Shangjin wei (Columbia) and Davin Chor (NUS)'s work.
    - Upstreamness and downstreamness. US? China? HK?
    - Implications for trade deficit

Figure 1.5 U.S. exports and imports, 1869-2011

Sources: Imports and exports of goods and services: 1869–1959 from *Historical Statistics of the United States, Colonial Times to 1970,* pp. 864–865; 1960 onward from FRED database, Federal Reserve Bank of St. Louis, *research.stlouisfed.org/fred2/series/BOPX and BOPM;* nominal output: 1869–1928 from Christina D. Romer, "The Prewar Business Cycle Reconsidered: New Estimates of Gross National Product, 1869–1908," *Journal of Political Economy, 97, 1 (February 1989),* pp. 22–23; 1929 onward from FRED database, series *GDPA.*



Macroeconomic policy

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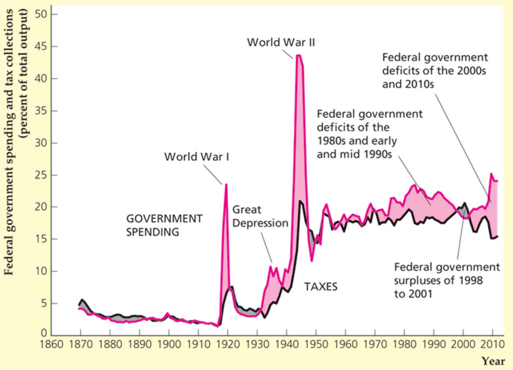
- Macro policies affect the performance of the economy as a whole.
- Fiscal policy.
- Monetary policy.

Figure 1.6 U.S. Federal government spending and tax collections, 1869-2011

Sources: Federal spending and receipts for 1869–1929 from *Historical Statistics of the United States, Colonial Times to 1970, p. 1104; GNP 1869–1928* from Christina D. Romer, "The Prewar Business Cycle Reconsidered: New Estimates of Gross National Product, 1869–1908," *Journal of Political Economy, 97, 1 (February 1989)*, pp. 22–23; GNP for 1929 from FRED database, Federal Reserve Bank of St. Louis, *Research.stlouisfed.org/fred2/series/GDPA; Federal spending* and receipts as percentage of output, 1930–2011 from *Historical Tables, Budget of the U.S. Government, Table 1.2.*



Aggregation

- Aggregation: summing individual economic variables to obtain economywide totals.
- Micro: focuses on individual consumers, workers, and firms, each of which is too small to have an impact on the national economy.
- Macro focuses on national totals.
- Distinguishes microeconomics (disaggregated) from macroeconomics (aggregated).

What macroeconomists do?

- Macroeconomic forecasting.
  - Forecasting is a minor part of what macroeconomists do. Relatively few economists make forecasts.
  - Forecasting is very difficult.
- Rather than predicting what will happen, most macroeconomists are engaged in analyzing and interpreting events as they happen (macro analysis) or in trying to understand the structure of the economy in general (macro research).

Macroeconomic analysis

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- Does having many economists ensure good macroeconomic policies?

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- Prevent economic disasters.

Macro research

- Goal: to make general statements about how the economy works.
- Macro research proceeds primarily through the formulation and testing of theories.
- Economic theory.
- Economic model.
- Theoretical and empirical research are necessary for forecasting and economic analysis.
- Usefulness of economic theory or models depends on reasonableness of assumptions, possibility of being applied to real problems, empirically testable implications, theoretical results consistent with real-world data.

In touch with data and research: developing and testing an economic theory

1. State the research question.
2. Make provisional assumptions that describe the econ setting and the behavior of the economic actors.
3. Work out the implications of the theory.
4. Conduct an empirical analysis to compare the implications of the theory with the data.
5. Evaluate the results of your comparisons:

Positive vs. Normative Analysis

- Positive analysis:
- Normative analysis:
- For example, consider evaluating the effects on the economy of a 5% increase in the income tax.

Classicals vs. Keynesians. (1) The classical approach

- The economy works well on its own.
- The "invisible hand" (Adam Smith (1776): *The Wealth of Nations*): the idea that if there are free markets and individuals conduct their economic affairs in their own best interests, the overall economy will work well.
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- Wages and prices adjust rapidly to get to equilibrium
- Result: Government should have only a limited role in the economy
- Representing schools: U. of Chicago and U. of Minnesota.

(2) The Keynesian approach

- The Great Depression: Classical theory failed because high unemployment was persistent.
- Keynes (1936): *The General Theory of Employment, Interest, and Money*.
- Keynes: Persistent unemployment occurs because wages and prices adjust slowly, so markets remain out of equilibrium for long periods.
- Conclusion: Government should intervene to restore full employment.
- Representing schools: UC Berkeley, Harvard/MIT and Princeton (in 1990s and early 2000s).

The evolution of the classical-Keynesian debate

- Keynesians dominated from WWII to 1970.
- Stagflation led to a classical comeback in the 1970s.
- Last 30 years: excellent research with both approaches.

A unified approach to macroeconomics

- This course will use a single model to present both classical and Keynesian ideas. It draws heavily from both the classical and Keynesian traditions.
- Individuals, firms, and the government interact in three markets: goods, assets, and labor markets.
- The model's macro analysis: starts with microfoundations: individual optimizing behavior (consumer's utility maximization and firm's profit maximization).
- Both agree that in the long run: wages and prices are perfectly flexible.
- Short run: Classical case—flexible wages and prices; Keynesian case—wages and prices are slow to adjust.

Interesting Videos to Watch

- Free to Choose by Milton Friedman (1980):
  - Website: https://www.youtube.com/watch?v=d6vjrzUplWU

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  - Website: https://www.youtube.com/watch?v=d6vjrzUplWU
- Mankiw's 10 Principles, Translated by Yoram Bauman:
  - Website: http://www.youtube.com/watch?v=VVp8UGjECt4