Topic 1: Introduction to Macroeconomics

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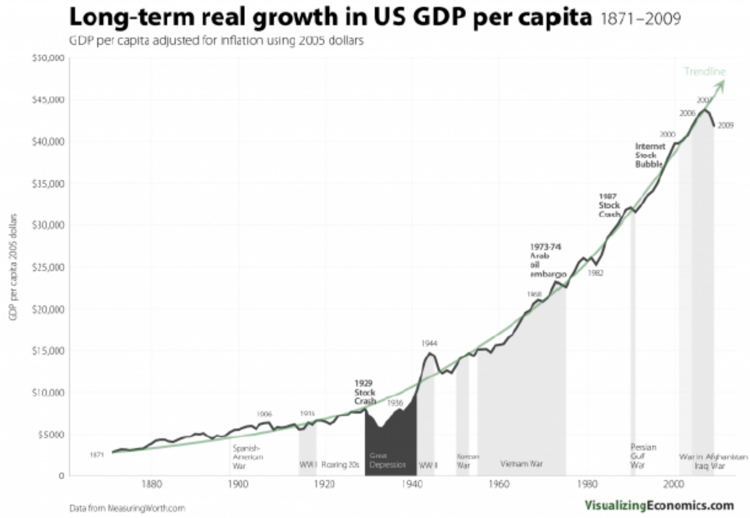
Chapter Outline

- What macroeconomics is about?
- What macroeconomists do?
- Why macroeconomists disagree?
- Three central concepts around which this unit 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.

What macroeconomics is about?

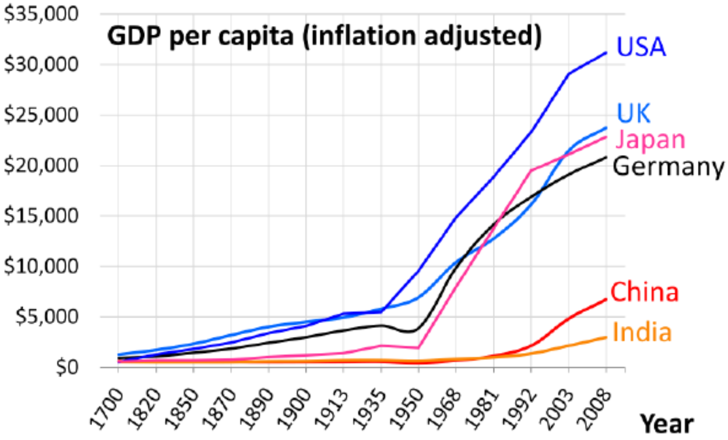
- Macroeconomics: The study of structure and performance of national economies and government policies that aect economic performance.
- Issues addressed by macroeconomists:
    - Long-run economic growth
    - Economic fluctuations (business cycles)
    - Unemployment
    - Inflation
    - The international economy (Globalization)
    - Macroeconomic policy (fiscal + monetary)
- Aggregation: from microeconomics to macroeconomics.

GDP per capita, US



Long-run economic growth

Cross-country pattern:

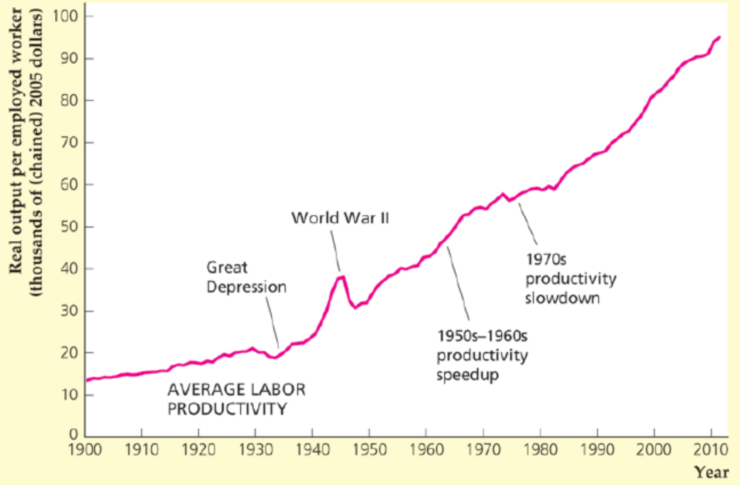


Long-run economic growth

What drives (long-run) economic growth?

- Literature: mainly technology progress
- Demographics such as population growth
- Other factors such as democracy

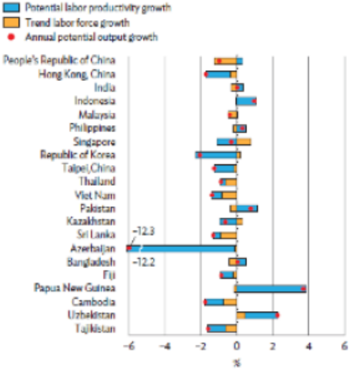
Technology


Real output per employed worker (thousands of (chained) 2005 dollars)
100
90
80
70
60
50
40
30
20
10
0
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
Year
World War II
Great Depression
1970s productivity slowdown
1950s–1960s productivity speedup
AVERAGE LABOR PRODUCTIVITY

Demographics

Asian Development Bank report:

2.2.3 Change in potential output growth and its components between 2000–2007 and 2008–2013

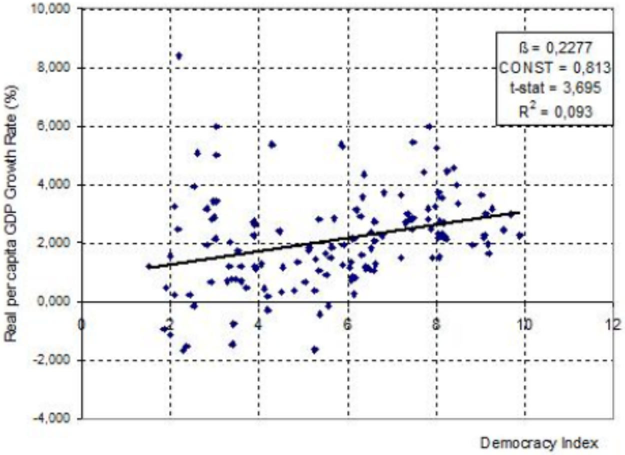


Note: For Fiji and Papua New Guinea, first period refers to 2002–2007. For Taipei,China, Cambodia, and Uzbekistan, second period refers to 2008–2012. For Tajikistan, first period refers to 2002–2007 while second period refers to 2008–2012.

Source: ADB estimates.

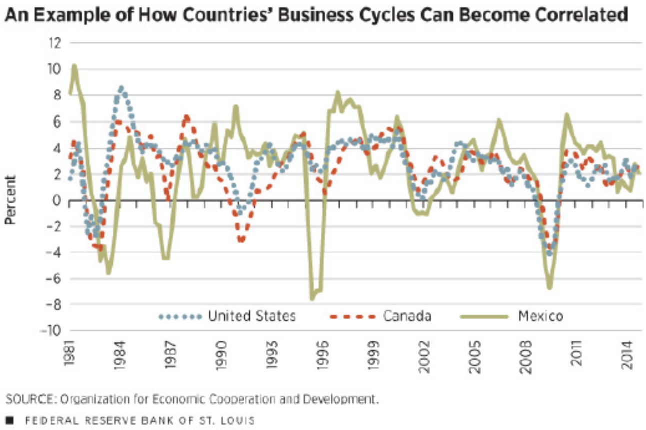
Democracy

Barro:



Business cycles

Removing trend:

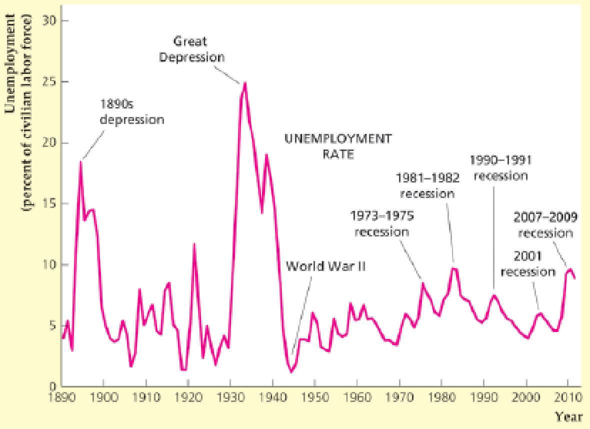


Business cycles

- Business cycle is used to describe short-run, but sometimes sharp, contractions and expansions in economic activity.
    - Upward phase is called *expansion*
    - Downward phase is called *recession*
- 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.
- Closely related to unemployment

Unemployment

Unemployment: the number of people who are available for work and actively seeking work but cannot find jobs.



Unemployment

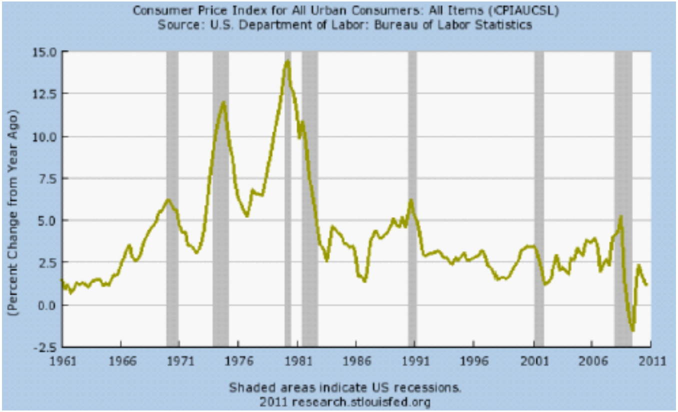
- The best-known measure of unemployment is the unemployment rate.
- Recessions have led to significant increases in the unemployment rate in the postwar period.

Inflation

- When the prices of most goods and services are rising over time, the economy is said to be experiencing inflation.
- 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.

Deflation

Deflation: when prices of most goods and services decline.

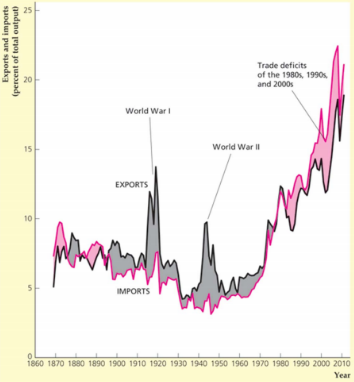


The international economy

- Open vs. closed economies
  - Open economy: an economy that has extensive trading and financial relationships with other national economies. Today, every major economy is an open economy.
  - Closed economy: an economy that does not interact economically with the rest of the world.
- An important topic in macro: How international trade and borrowing relationships can help transmit business cycles from country to country.

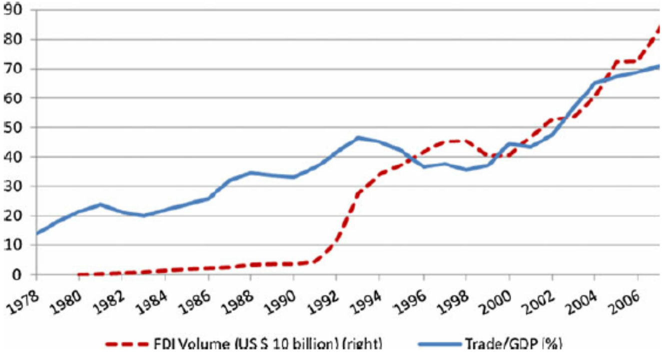
The international economy

- Trade imbalances. U.S. experience Question: Are they bad for U.S. or for the economies of this country's trading partners?
  - Trade surplus: exports exceed imports.
  - Trade decit: imports exceed exports.



Globalization

Capital and trade flows: China



Macroeconomic policy

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

Policy maker:

- Can macroeconomic policy help stabilize business-cycle fluctuations?
- What can policymakers do to increase economic growth?
- Fiscal policy: government spending and taxation. It is determined at the national, state, and local levels in the U.S.
  - Effects of changes in federal budget.
  - Relation to trade deficit?
- Monetary policy: growth of money supply or a nominal interest rate (the federal fund rates) (Taylor rule); determined by central bank (the Fed in U.S).

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: (1) our understanding of how the economy works is imperfect; (2) it is impossible to take into account all the uncertain factors (many of them are not strictly economic) that might affect future economic trends.
- 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

- Macroeconomic analysis
  - Private sector economists: try to determine how general economic trends will affect their employers' financial investments, their opportunities of expansions, the demand for their products, and so on.
  - Public sector (national and regional governments and international agencies) economists: to assist in policy making – for example, by writing reports that assess various macro problems and by identifying and evaluating possible policy options. The world bank, international monetary fund, and the federal reserve banks.
- Does having many economists ensure good macroeconomic policies? No, since politicians, not economists, make major decisions.

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: a set of ideas about the economy, organized in a logical framework.
- Economic model: a simplified description of some aspect of the economy.
- 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:
    - If the theory fits the data well: Use the theory to predict what would happen if the economic setting or econ policies change.
    - If the theory fits the data poorly: Starts from developing a new model and repeats steps 2-5.
    - If the theory fits the data moderately well: Either do with a partially successful theory or modify the model with additional assumptions and then repeats steps 2-5.

Macroeconomic variables

Variables

- Endogenous variables
- Exogenous variables

Positive vs. normative analysis

- Positive analysis: examines the economic consequences of a policy but does not address the question of whether those consequences are desirable.
- Normative analysis: determines whether a policy should be used.
- 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.
- Wages and prices adjust rapidly to get to equilibrium
  - Equilibrium: a situation in which the quantities demanded and supplied are equal.
  - Changes in wages and prices are signals that coordinate people's actions.
- Result: Government should have only a limited role in the economy

(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.

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 unit 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 labour 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. These two assumptions can be incorporated into the model. This aspect allows us to compare classical and Keynesian conclusions and policy recommendations.

Models in this unit

Three markets:

- Labour
- Goods
- Asset (money. bonds and capital)

Three prices

- Wage rate
- Price
- Interest rate

Three equations:

- *FE line* (equilibrium or full-employment in labour market)
- *IS curve* (equilibrium in goods market)
- *LM curve* (equilibrium in asset market)