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Macroeconomics

SECOND EDITION

CHAPTER 1

The Long and Short of Macroeconomics

Learning Objectives	
After studying this chapter, you should be able to:	
1.1	Become familiar with the focus of macroeconomics.
1.2	Explain how economists approach macroeconomic questions.
1.3	Become familiar with key macroeconomic issues and questions.

When you enter the job market can matter a lot

Job market entrants in 2005 had more employment opportunities.

- Expanding labor force, low and falling unemployment

Job market entrants in 2008-2011 had a much harder time.

- Unemployment rate at highest level in 25 years
- Over 600,000 more firms closed than opened during 2008-2009
- Depressed home and stock prices led many older workers to delay retirement

Economic research has shown that students graduating during a recession accept jobs paying 9% less than those graduating during an expansion.

- Lower average wages persist for 8-10 years on average.

Understanding these fluctuations

Fluctuations in the economy can be understood by learning *macroeconomics*.

Microeconomics The study of how households and firms make choices, how they interact in markets, and how the government attempts to influence their choices.

Macroeconomics The study of the economy as a whole, including topics such as inflation, unemployment, and economic growth.

1.1 Learning Objective

Become familiar with the focus of macroeconomics

Macroeconomics in the short run and in the long run

Short Run

Business cycle Alternating periods of economic expansion and economic recession.

Long Run

Long-run economic growth The process by which increasing productivity raises the average standard of living.

Labor productivity The quantity of goods and services that can be produced by one worker or by one hour of work.

One important determinant of growth is the ability of firms to expand and fund their operations; for this, a healthy *financial system* is critical.

Exploration of these concepts is the main focus of this class.

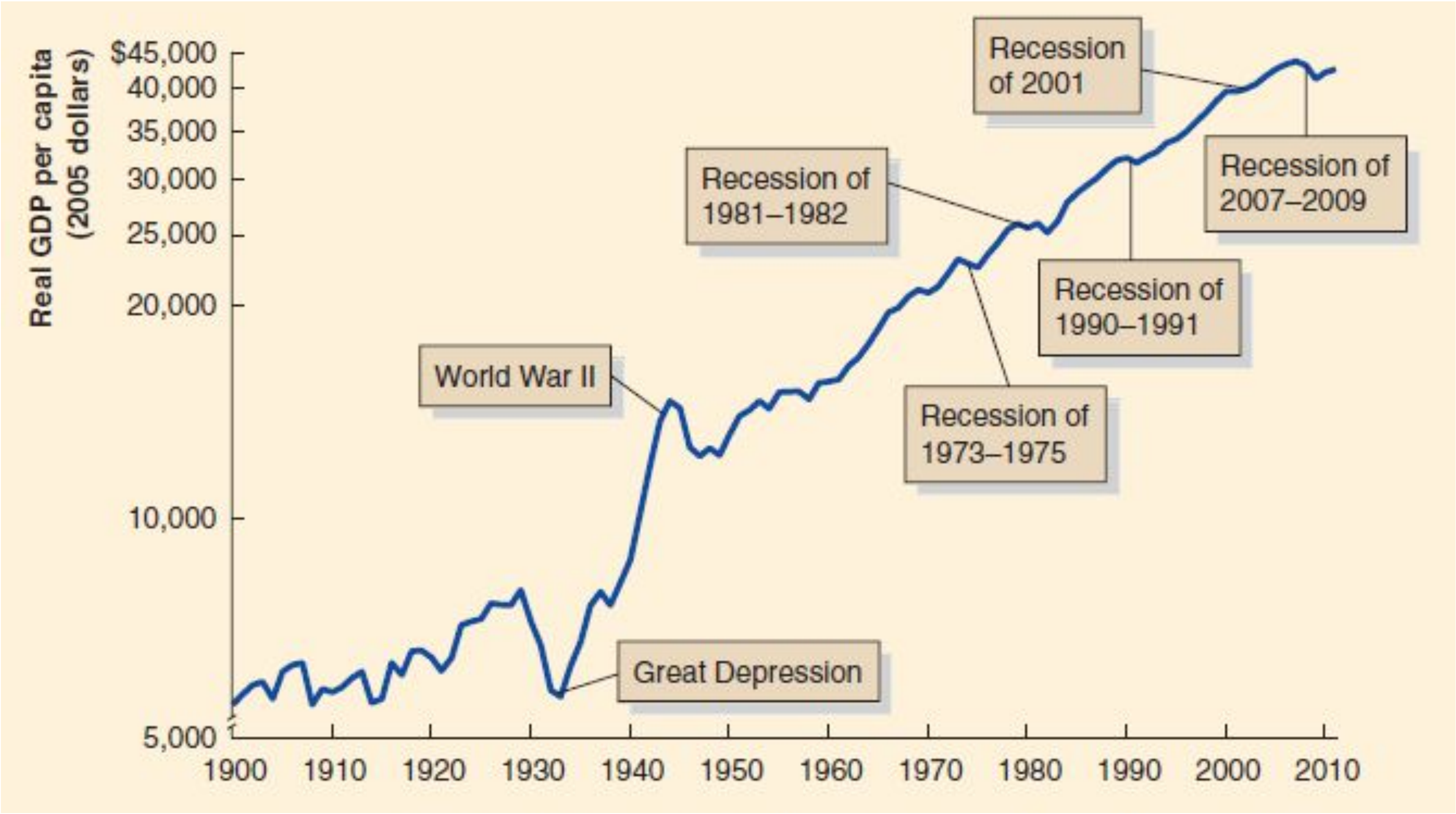
Long-run growth in the United States

Real gross domestic product (GDP) The value of final goods and services adjusted for changes in the price level.

Long-run economic growth is often better measured by real gross domestic product *per person*.

- Long-run growth between 1900 and 2012 improved the U.S. standard of living in many ways.
- 3% of homes had electricity in 1900 versus nearly all today.
- Average consumption of water increased from 5 to 150 gallons/day.
- Most homes used coal to heat and cook.
  - Seven tons per family per year on average.
  - Led to high levels of pollution.
- Lack of modern items like TV, radio, computers, air conditioners.
- Life expectancy increased from 47 to 78 years.

The growth in real GDP per capita



By 2011, the average American was able to buy approximately eight times what they would have been able to buy in 1900.

Figure 1.1

The growth in real GDP per capita, 1900-2011

Some countries have experienced less long-run growth

Differing levels of long-run economic growth have resulted in countries today having very different levels of GDP per capita.

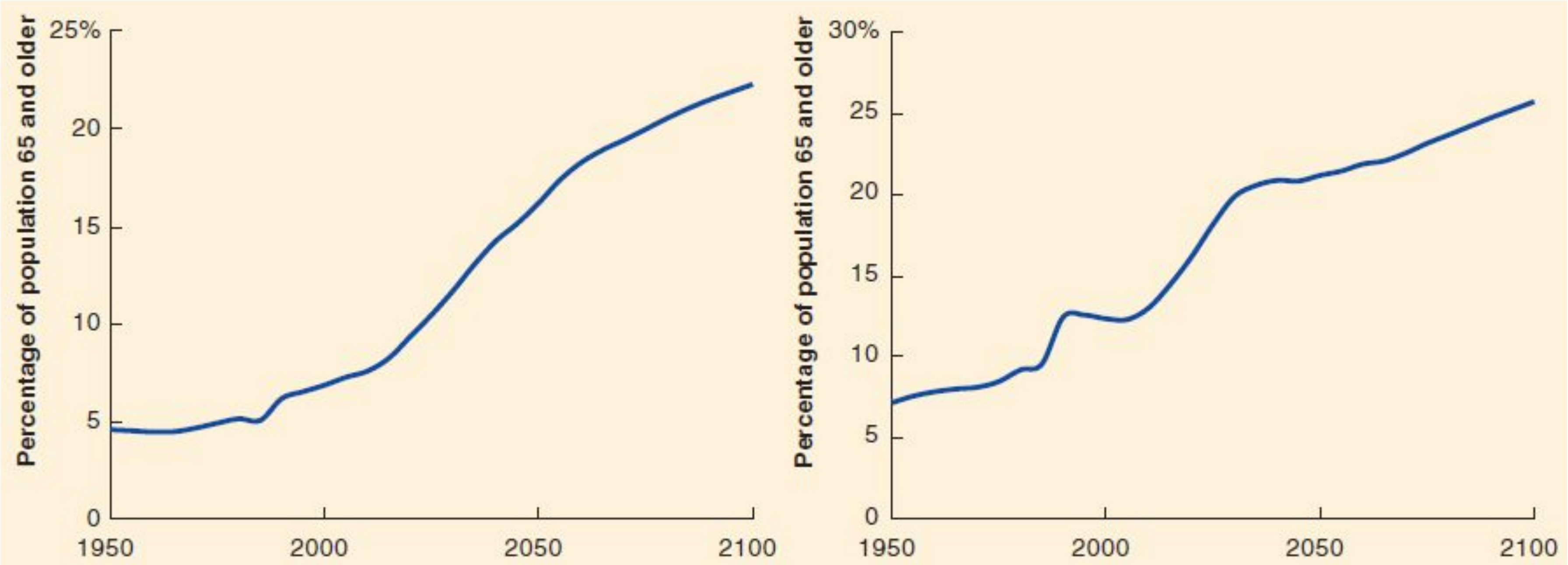
Figure 1.2

Differing levels of GDP per capita, 2011

Aging populations pose a challenge

Lower birthrates and increases in lifespans have resulted in aging populations; this trend it projected to continue.

Government spending on programs like Social Security, Medicare, and Medicaid is projected to grow to about 20% of GDP by 2050, which would be about the same size as the entire government today.



(a) The world (b) The United States

Figure 1.3

The aging of the population

Unemployment in the United States

Labor force The sum of employed and unemployed workers in the economy.

Unemployment rate The percentage of the labor force that is unemployed.

Unemployment rises and falls with the business cycle.

We will examine why it was so low during the *Great Moderation*.

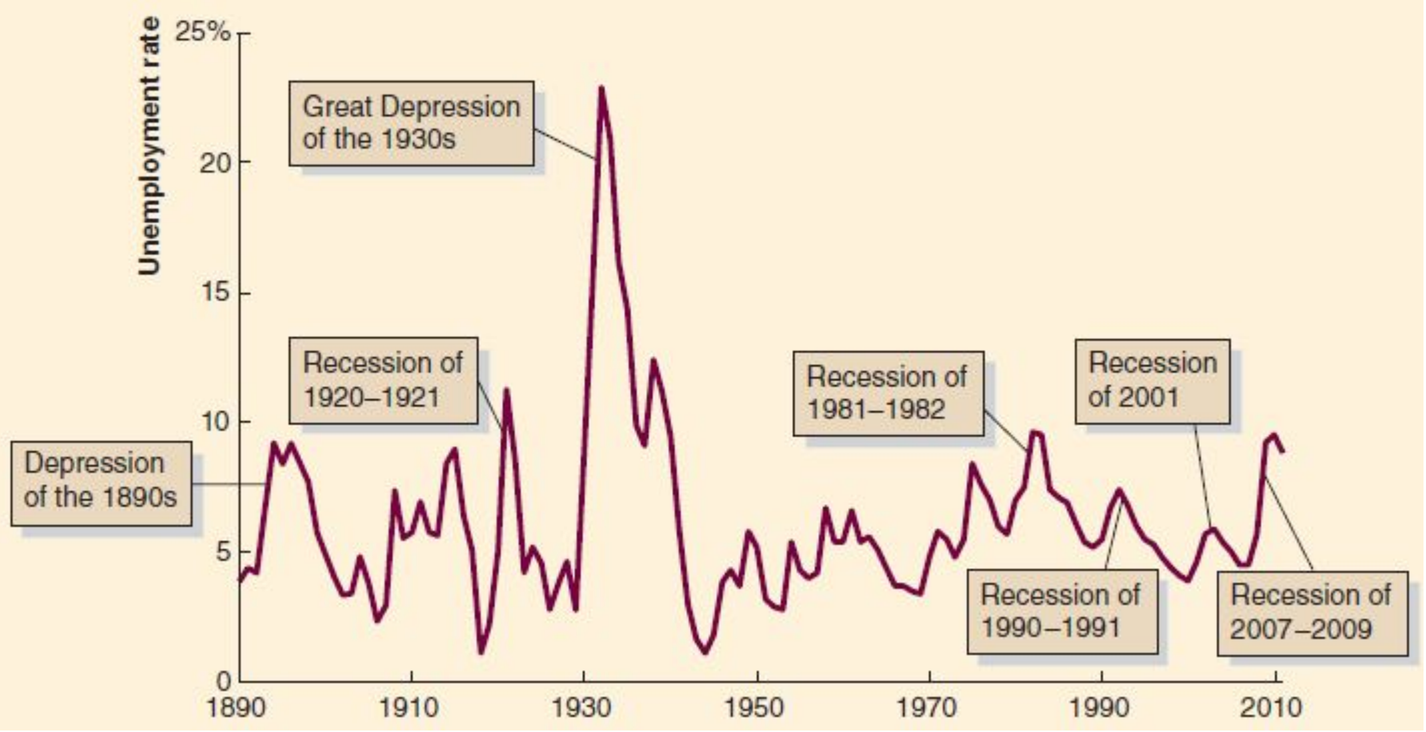


Figure 1.4

Unemployment rate in the United States, 1890-2011

Unemployment rates differ across developed countries

Government policy and structural differences can lead to persistently higher unemployment rates across developed countries.

Between 2001 and 2010, unemployment rates were on average much higher in developed countries like France, Germany, and Spain compared to the U.S. The reasons for widely varying levels of unemployment is not entirely clear.

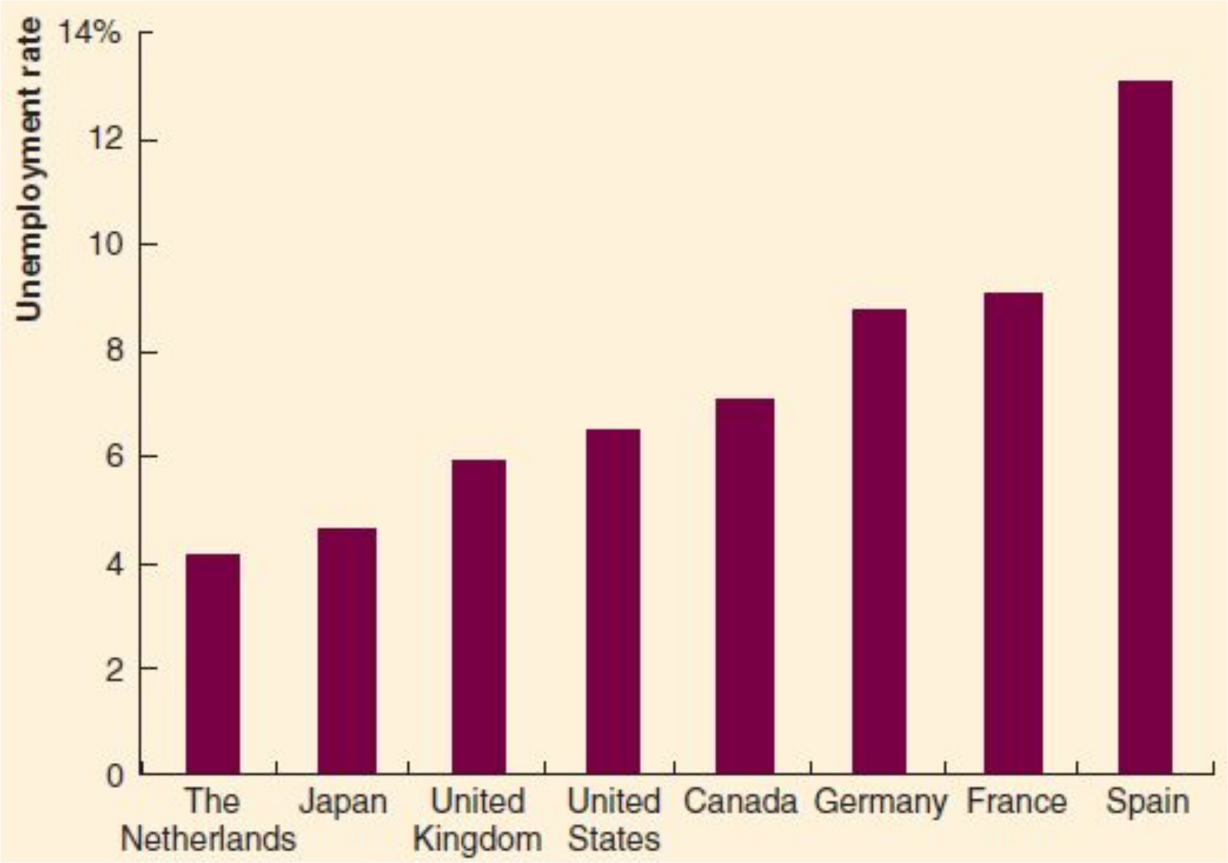


Figure 1.5

Average unemployment rates in the United States and other high income countries, 2002-2011

Inflation rates fluctuate over time

Inflation rates have tended to peak during wartime, with the 1970s being a notable exception.

Deflation occurred in 2009 for the first time in 50 years.

Inflation rates have averaged below 5% annually since the mid 1980s.

Inflation rate The percentage increase in the price level from one year to the next.

Deflation A sustained decrease in the price level.

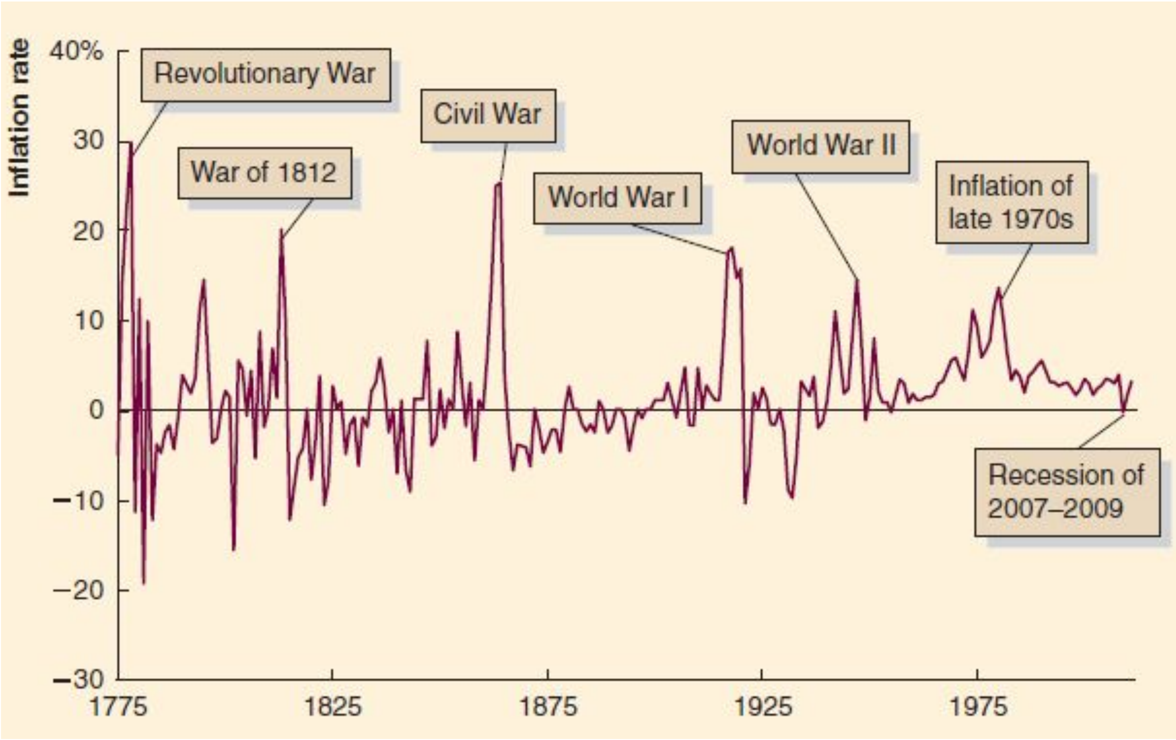


Figure 1.6

Inflation in the United States, 1775-2011

Inflation rates vary across countries

Different countries experience widely different inflation rates. Some countries like Ireland and Norway are experiencing mild inflation, while others face high inflation.

Extreme example: in 2008, Zimbabwe experienced 15 billion percent inflation.

Figure 1.7

Inflation rates around the world, 2011

High unemployment is associated with economic downturns.

Expansions have become longer and recessions shorter since 1950.

Recessions accompanied by financial crises are particularly deep and prolonged

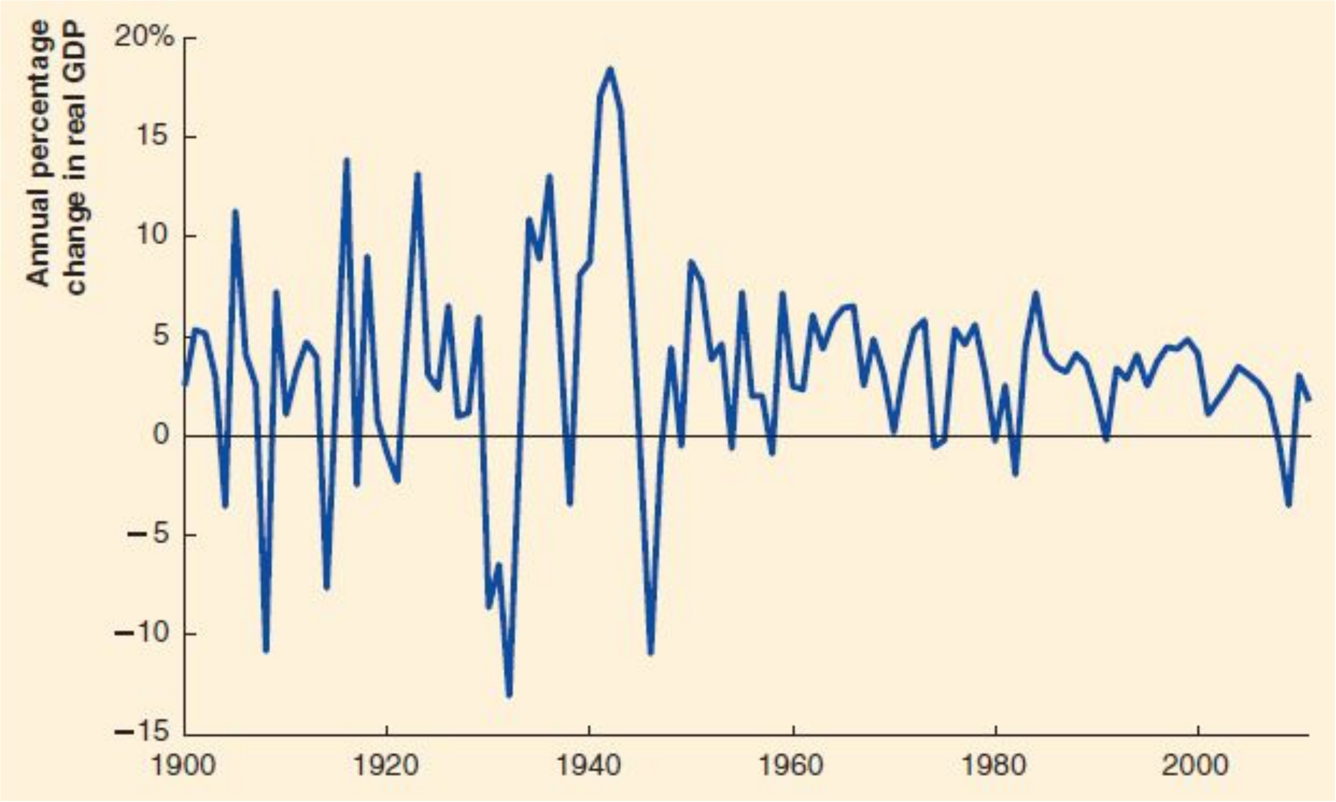


Figure 1.8

Fluctuations in U.S. real GDP, 1900-2011

Economic policy can help stabilize the economy

The two types of government policy used to stabilize the economy are:

Monetary policy The actions that central banks take to manage the money supply and interest rates to pursue macroeconomic policy objectives.

Fiscal policy Changes in government taxes and purchases that are intended to achieve macroeconomic policy objectives.

A major focus of this class is on these two types of policy, and on their role in stabilizing the economy. The severe recession of 2007-2009 will also be a focus, with its roots in the *financial crisis*.

Financial crisis involves a significant disruption in the flow of funds from lenders to borrowers.

International factors have become more important

International factors have become more important in explaining macroeconomic events.

Example: Fed Chairman Ben Bernanke spoke of a “global savings glut” that had driven down U.S. interest rates.

International trade has been becoming more and more significant for the United States.

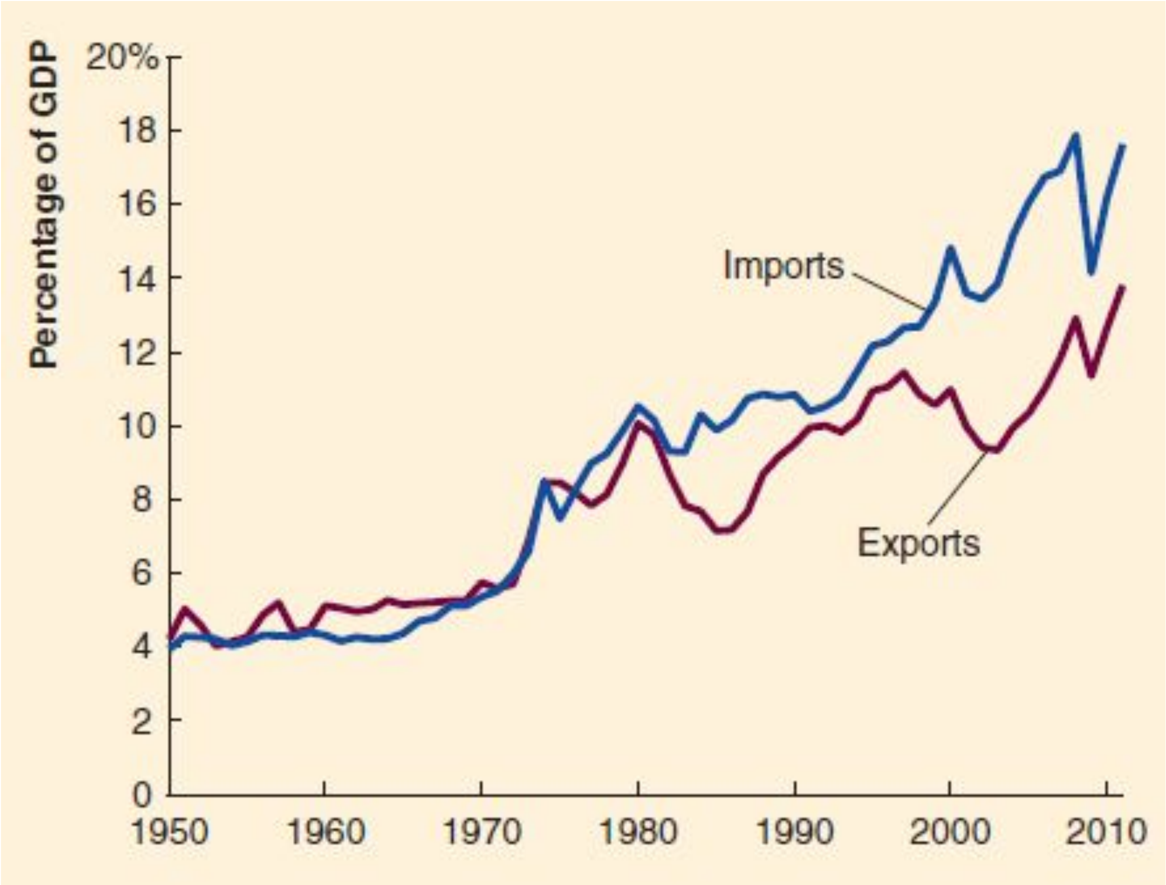


Figure 1.9a

International trade is of increasing importance to the United States

International factors have become more important

International trade is even more important for many other—especially smaller—countries.

Economic openness has increased in the U.S. and other developed countries.

Countries like S. Korea and Germany are highly dependent on trade.

China has dramatically increased its openness in the past few decades.

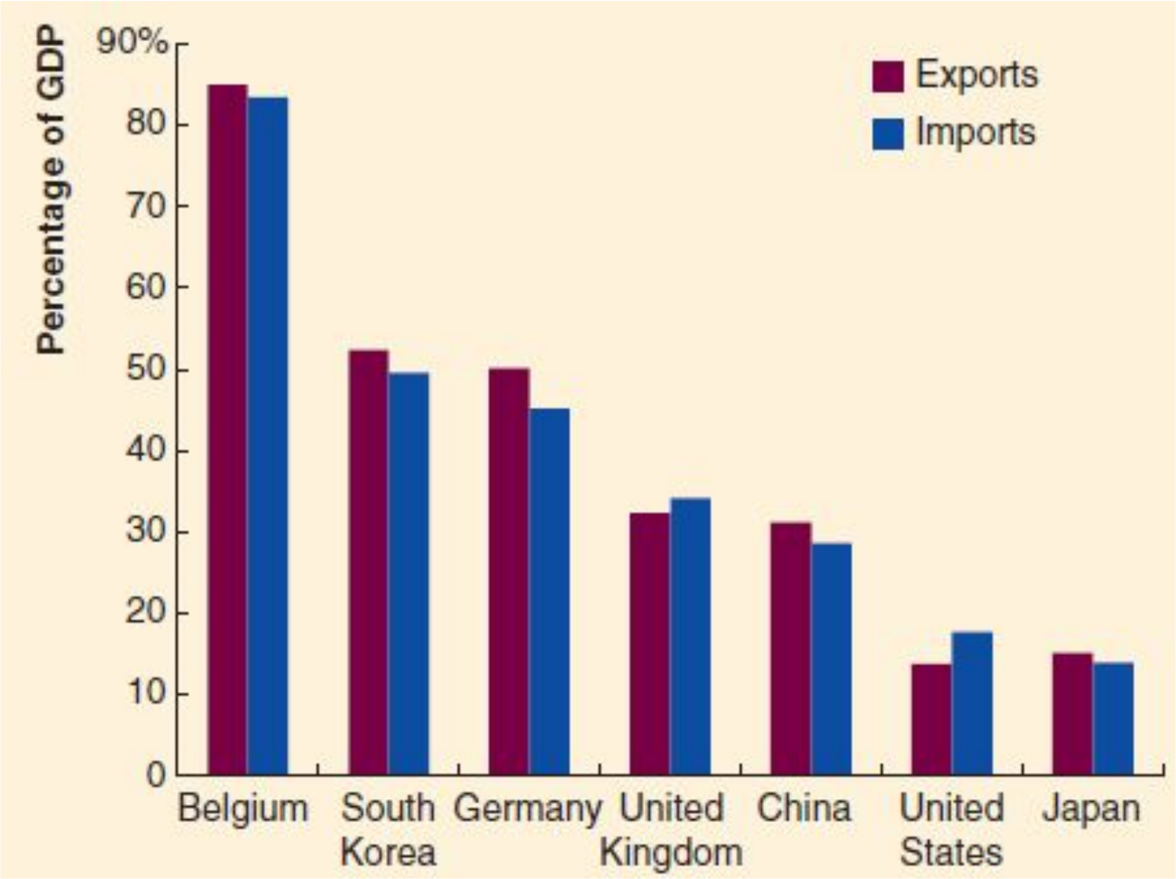


Figure 1.9b

International trade as a percentage of GDP for several countries, 2011

The increasing importance of global financial markets

Just as markets for goods and services have become more open, so have global financial markets.

Foreigners now invest more in the United States; and U.S. investors invest more overseas also.

Markets affect one another; the recession of 2007-2009 reduced Chinese exports, and the Greek debt crisis caused worldwide stock market declines.

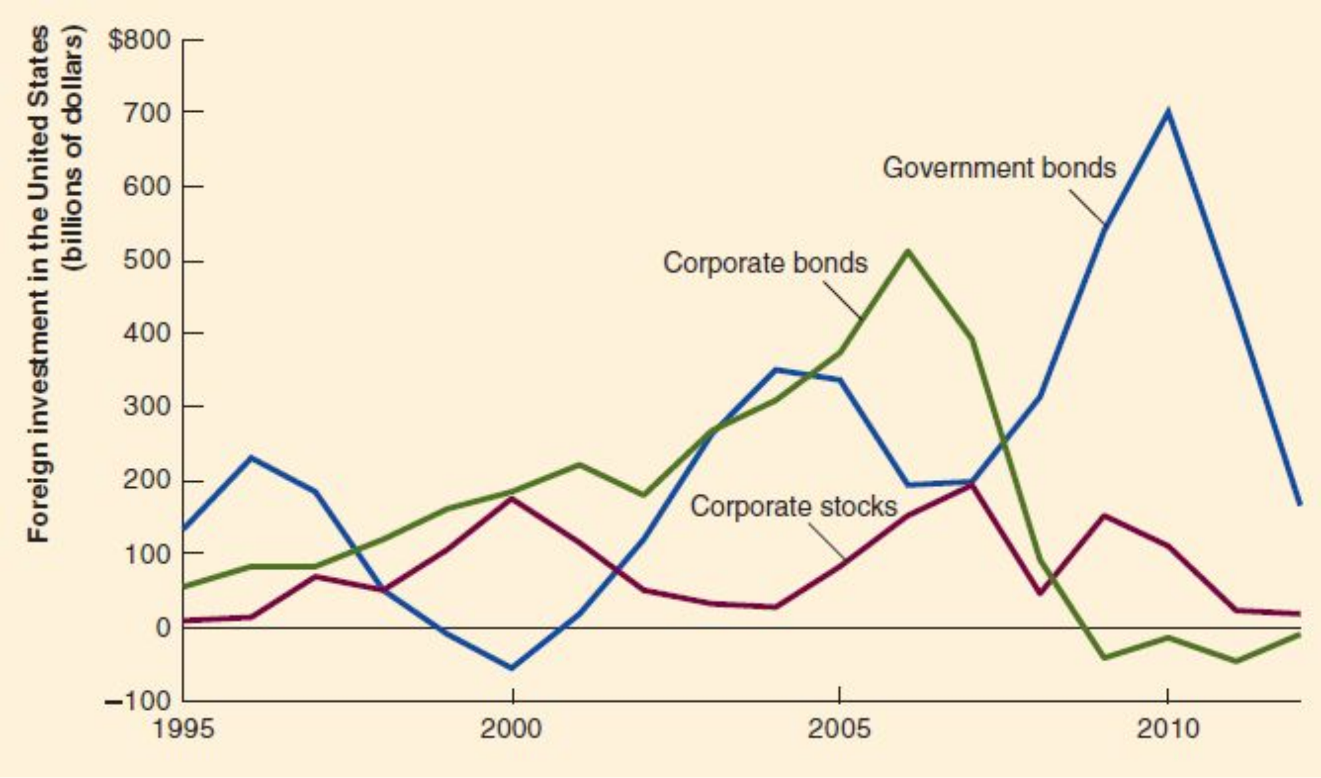


Figure 1.10

Growth of foreign financial investment in the United States

1.2 Learning Objective

Explain how economists approach macroeconomic questions

Macroeconomics happens to us all

Everyone is affected by macroeconomics:

- Job loss due to recessions
- Stock market gains and losses
- Obtaining loans

Misperceptions about macroeconomics are common in the general public:

- What causes inflation?

  "Corporate greed!"

- How would an increase in inflation affect wages and salaries?

  "No effect!"

- What causes recessions?

  "Government mistakes!"

- How do foreign imports affect unemployment rates?

  "Permanent increase!"

What is the best way to analyze macroeconomic issues?

Economists study economic problems systematically.

- Gather data relevant to the problem.
- Form models capable of analyzing data.

Could inflation be caused by corporate greed?

- Inflation has varied a great deal since 1775.
- Most recent 50 years inflation was below 3% in the 1950s and 1960s and well above 10% in the late 1970s and early 1980s.
- If corporate greed were the cause, greed would have to fluctuate over time.

Just inspecting data can give misleading results.

Rather than rejecting an explanation, it is useful to provide an alternative explanation.

Macroeconomic models

Models are very important to the study of macroeconomics.

- Economists study economic problems systematically by gathering data relevant to the problem and then building a model capable of analyzing the data.
- Simple explanations are often not satisfying.
- *Solved Problems* are in each chapter of the textbook. These problems show you how to solve an applied macroeconomic problem by breaking it down step by step.
- Visit www.myeconlab.com to practice using more *Solved Problems*.

Solved Problem

Rising imports and U.S. employment

Do rising imports lead to a permanent reduction in U.S. employment?

Opinion polls show that many people believe that imports of foreign goods lead to a reduction in employment in the United States. On the surface, this claim may seem plausible: If U.S. automobile firms use more imported steel, production at U.S. steel firms declines, and U.S. steel firms will lay off workers. Briefly describe how you might evaluate the claim that employment in the United States has been reduced as a result of imports.

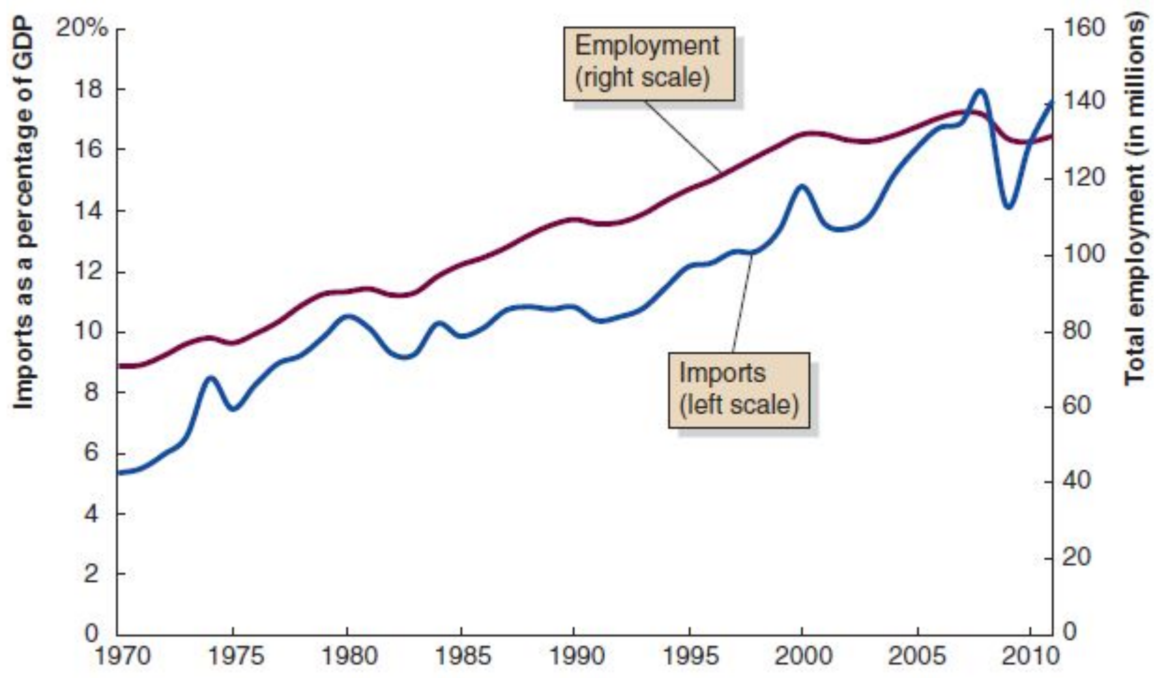
Rising imports and U.S. employment

Do rising imports lead to a permanent reduction in U.S. employment?

Step 1 **Review the chapter material**

Step 2 **Discuss what data you might use in evaluating this claim.** The Bureau of Economic Analysis (BEA) at www.bea.gov collects data on GDP and trade. The Bureau of Labor Statistics (BLS) at www.bls.gov can provide employment data.

Step 3 **Draw a graph that shows total employment and imports as a percentage of GDP.**



Rising imports and U.S. employment

Do rising imports lead to a permanent reduction in U.S. employment?

Step 4 **Discuss what else you might do to evaluate this claim.**

Economists typically inspect data as only the first step in evaluating a claim about a macroeconomic event. By examining the data here, it appears that over the past 40 years, both imports and employment have risen. Thus, it seems unlikely that rising imports have led to reduced employment. However, employment might have risen faster if imports did not rise so much. In Chapter 7, we will study a model of the labor market in an attempt to better understand the long-run determinants of employment.

Macroeconomic models

Macroeconomic models are useful simplifications of reality

- Economists typically assume that consumers buy goods and services that maximize their well-being or utility.
- Firms are often assumed to maximize profits.
- Abstraction from reality, since we do not describe the motives of all consumers and firms.

Reminders

Models and Theories

- Used to analyze real-world issues.
- *Model* and *theory* will be used interchangeably.
- Models use assumptions to simplify reality by focusing on a few key variables.

Macroeconomic models

Endogenous and Exogenous in a Model

- If we assume the Federal Reserve determines the supply of money, then the money supply is exogenous.
- Inflation would then be considered endogenous because we are attempting to explain how the Federal Reserve can control inflation.

Reminders

Economic Variables

- Something measureable that can have different values, like the rate of inflation.

Endogenous variable A variable that is explained by an economic model.

Exogenous variable A variable that is taken as given and is not explained by an economic model.

Macroeconomic models

Decide on assumptions to be used in developing the model. Decide on *endogenous* and *exogenous* variables.

↓

Formulate a testable hypothesis.

↓

Use economic data to test the hypothesis.

↓

Revise the model if it fails to explain the economic data well.

↓

Retain the revised model to help answer similar economic questions in the future.

Formulating and testing hypotheses in economic models

Hypothesis A statement that may be either correct or incorrect.

- Example: "Higher marginal tax rates on income lead to higher rates of unemployment."
- How to evaluate? Idea: collect data on unemployment and tax rates for several countries.

Causation vs. Correlation

- Economic hypotheses are usually about causal relationships, showing that changes in one variable cause changes in another variable.
- Proving correlation, that two variables are related, is much easier than causation.
- Confounding variables may be related to both exogenous and endogenous variables
  - Example: Stringent labor laws limiting the firing of workers might be positively correlated with both high tax and high unemployment countries.

Formulating and testing hypotheses in economic models

Positive analysis Analysis concerned with “what is”.

- Examining the world from an objective point of view.
- Measuring the costs and benefits of different courses of action.
- Economics is mostly concerned with positive analysis.

Normative analysis Analysis concerned with “what ought to be”.

Why should the U.S. worry about the Euro crisis?

Euro zone: 17 member states of the European Union that adopted the euro as their currency.

- Monetary policy conducted by European Central Bank.
- Recession beginning 2007 worsened debt problems of several euro-zone members.
- *Austerity policies* (economic reforms, spending cuts, tax increases) became common.

Effect on the U.S. economy?

- Decreased exports to Europe.
- U.S. banks hold European debt.
- “A lack of confidence can be very contagious.”
  - Shawn DuBravac, Chief Economist, Consumer Electronics Association

1.3 Learning Objective

Become familiar with key macroeconomic issues and questions

Key issues and questions of macroeconomics

Each chapter will highlight one *key issue* and a related *key question*.

- Material from each chapter will use the concepts covered to answer that question.

Chapter 2: Measuring the Macroeconomy

Issue: The unemployment rate can rise even though a recession has ended.

Question: How accurately does the government measure the unemployment rate?

Key issues and questions of macroeconomics

Chapter 3: The U.S. Financial System

Issue: The financial system moves funds from savers to borrowers, which promotes investment and the accumulation of capital goods.

Question: Why did the bursting of the housing bubble in 2006 cause the financial system to falter?

Chapter 4: The Global Financial System

Issue: Some governments allow the value of their currency to fluctuate in foreign-exchange markets, while other government fix the value of their currency.

Question: What are the advantages and disadvantages of floating versus fixed exchange rates?

Key issues and questions of macroeconomics

Recommended Reading:

Chapter 5: The Standard of Living Over Time and Across Countries

Issue: Some countries have experienced rapid rates of long-run economic growth, while other countries have grown slowly, if at all.

Question: Why isn't the whole world rich?

Chapter 6: Long-Run Economic Growth

Issue: Real GDP has increased substantially over time in the United States and other developed countries.

Question: What are the main factors that determine the growth rate of real GDP per capita?

Key issues and questions of macroeconomics

Chapter 7: Money and Inflation

Issue: The Federal Reserve's actions during the financial crisis of 2007–2009 led some economists and policymakers to worry that the inflation rate in the United States would be increasing.

Question: What is the connection between changes in the money supply and the inflation rate?

Chapter 8: The Labor Market

Issue: The unemployment rate in the United States did not fall below 8% until more than three years after the end of the 2007–2009 recession.

Question: Has the natural rate of unemployment increased?

Key issues and questions of macroeconomics

Chapter 9: Business Cycles

Issue: Economies around the world experience a business cycle.

Question: Does the business cycle impose significant costs on the economy?

Chapter 10: Explaining Aggregate Demand: The *IS-MP* Model

Issue: The U.S. economy has experienced 11 recessions since the end of World War II.

Question: What explains the business cycle?

Recommended: 10.A IS-LM Model

Keynesian Model

Focuses on Money Supply while IS-MP focuses on Fed interest rate target.

IS-MP is updated model, but still similiar

Key issues and questions of macroeconomics

Chapter 11: The *IS-MP* Model: Adding Inflation and the Open Economy

Issue: The recession of 2007–2009 was the worst since the Great Depression of the 1930s.

Question: What explains the severity of the 2007–2009 recession?

Chapter 12: Monetary Policy in the Short Run

Issue: The Federal Reserve undertook unprecedented policy actions in response to the recession of 2007-2009.

Question: Why were traditional Federal Reserve policies ineffective during the 2007-2009 recession?

Key issues and questions of macroeconomics

Chapter 13: Fiscal Policy in the Short Run

Issue: During the 2007–2009 recession, Congress and the president undertook unprecedented fiscal policy actions.

Question: Was the American Recovery and Reinvestment Act of 2009 successful in increasing real GDP and employment?

Chapter 14: Aggregate Demand, Aggregate Supply, and Monetary Policy

Issue: Between the early 1980s and 2007, the U.S. economy experienced a period of macroeconomic stability known as the Great Moderation.

Question: Did discretionary monetary policy kill the Great Moderation?

Key issues and questions of macroeconomics

Recommended Reading:

Chapter 15: Fiscal Policy and the Government Budget in the Long Run

Issue: In 2012, the federal government's budget deficit and the national debt were on course to rise to unsustainable levels.

Question: How should the United States solve its long-run fiscal problem?

Chapter 16: Consumption and Investment

Issue: Households and firms make decisions about how much to consume and invest based on expectations about the future.

Question: How does government tax policy affect the decisions of households and firms?