

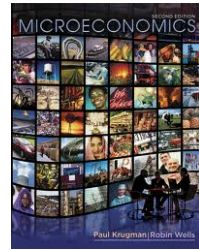


Economics 202 Principles Of Macroeconomics

Professor Yamin Ahmad

Lecture 1: Introduction

- Syllabus
- Definition and Tools in Economics
- Introduction to Macroeconomics



Syllabus



- Aplia Website:
 - <http://www.aplia.com>
 - Use course code:
 - XWZR-7TK5-FPZC
- Textbook:
 - Krugman and Wells (2009), Macroeconomics, 2nd Edition, Worth
- Course Homepage:
 - <http://facstaff.uww.edu/ahmady/courses/econ202/>
 - Note: This is not in D2L!

Note: These notes are incomplete without having attended lectures

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Requirements

- **Homework Assignments, Experiments**
- **Two in-class midterm exams**
 - Multiple choice and short answer questions
 - Cumulative
- **One Final Exam**
 - Cumulative
 - Multiple choice questions

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Grades

- Best Homeworks and Experiments = 15%
- **Option A:**
 - Midterms 25% Each
 - Final 35%
- **Option B:**
 - Best Midterm 35%
 - Final 50%

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Grades on Quizzes/Exams

- Note: **Each individual midterm or exam is not assigned a letter grade**
- Grade for course depends on which grading scheme awards you the **higher** score
- “Approximate” letter grades on quizzes/exams:

– “A”:	>=86%	“C+”:	66% - 69%
– “A-”:	82%-85%	“C”:	62% - 65%
– “B+”:	78% - 81%	“C-”:	56% - 61%
– “B”:	74% - 77%	“D”:	50% - 55%
– “B-”:	70% - 73%	“F”:	< 50%

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Extra Credit

Extra Credit will be available during the semester in two forms:

- Additional Extra Credit problem sets on Aplia
 - These are used to replace low scoring problem sets
 - Count only towards the “homework” part of the course score
- Participation in the UW-Whitewater Economics Club
 - Limited number of spots available (sign up today)
 - Requires participation and attendance at **all** Econ Club events
 - 5 bonus points added to your final course score

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Success in an (Any!) Economics Course

To do well in Economics, you need to be able to do 3 things well (in conjunction):

1. Think Mathematically: Don't be afraid of equations!
2. Think graphically!
3. Abstract Logic! (Often the hardest part)

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The Keys to Success in this Course...

- Read lecture notes and textbook on topics ahead of time
 - Think about “what happens if ... ?” It's the only real way to grasp concepts in economics – **and economics itself!**
- Don't be shy!
 - Come to class ready to ask questions! Use lecture time to “fill in the gaps”
- Practice and Discuss!!!
- Utilize my office hours!!
 - Come chat with me about concepts you are having trouble with, ideas you haven't grasped fully etc.

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A Definition of Economics

- **Economics** is the study of the use of scarce resources to satisfy unlimited human wants

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Big Ideas of Economics

- **Microeconomics**
 - Tradeoffs
 - Margins and incentives
 - Voluntary exchange is efficient
 - Market failures
- **Macroeconomics**
 - For the whole economy: expenditure = production
 - Productivity
 - Inflation
 - Unemployment

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Microeconomics

- **Microeconomics** is the study of the decisions of individual people and businesses and the interaction of those decisions in markets
- **Studies:**
 - Prices and Quantities
 - Effects of Regulation and Taxes

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Macroeconomics

- **Macroeconomics** is the study of the national economy and the global economy
- **Studies:**
 - Average prices and total employment, income and production
 - Effects of taxes, government spending, budget deficit on total jobs and incomes
 - Effects of money and interest rates

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Economics... Science or Art?

- **Theory**
 - Model of how the world works
 - Assumptions
 - Equations represent real world ideas
 - e.g. minimum wage causes unemployment
- **Empiricism**
 - Use statistics, data, computers to measure and test theory
 - e.g. see if states with higher minimum wage have higher unemployment

Note: These notes are incomplete without having attended lectures

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Positive vs. Normative Statements

- **Positive statements** are about *what is*
 - Can be proven right or wrong
 - Can be tested by comparing it to facts
- **Normative Statements** are about *what ought to be*
 - Depends upon personal values and cannot be tested
- Example: Global Warming
 - “Our planet is warming up because of increased CO₂ in the atmosphere”
 - “We ought to cut back on our use of carbon-based fuels such as coal and oil”

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Obstacles and Pitfalls in Economics

- Unscrambling Cause and Effect
 - *ceteris paribus*: all other things being equal
- **Fallacy of Composition**
 - False statement that what is true of the parts is also true of the whole & vice versa
- **Post Hoc Fallacy**
 - “after this, therefore because of this”
 - Error of reasoning that a first event *causes* a second event
- **Correlation vs. Causation**

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To refresh your memories...

- Review Key concepts from Micro: (see lecture 2)
 - Scarcity and Opportunity Cost
 - PPF
 - Marginal Cost, Marginal Benefits
 - Absolute Advantage, Comparative Advantage, Gains from Trade
- Review Demand and Supply: (see lecture 3)
- Review Market Equilibrium: (see lecture 4)

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Some Key Macroeconomic Questions...

- Will tomorrow's world be more prosperous than today?
- Will jobs be plentiful?
- Will the cost of living be stable?
- Will the government and the nation go into deficit again?

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Introduction to Key Macro Concepts

- Economic Growth and Fluctuations
- Jobs and Unemployment
- Inflation
- Surpluses and Deficits
- Macroeconomic Policy Tools

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Origins and Issues of Macroeconomics

- Economists began to study economic growth, inflation, and international payments during the 1750s
- Modern macroeconomics dates from the **Great Depression**, a decade (1929-1939) of high unemployment and stagnant production throughout the world economy.
- John Maynard Keynes book, *The General Theory of Employment, Interest, and Money*, began the subject.

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Origins and Issues of Macroeconomics

Short-Term Versus Long-Term Goals

- Keynes focused on the *short-term*—on unemployment and lost production.
- “In the long run,” said Keynes, “we’re all dead.”
- During the 1970s and 1980s, macroeconomists became more concerned about the *long-term*—inflation and economic growth.

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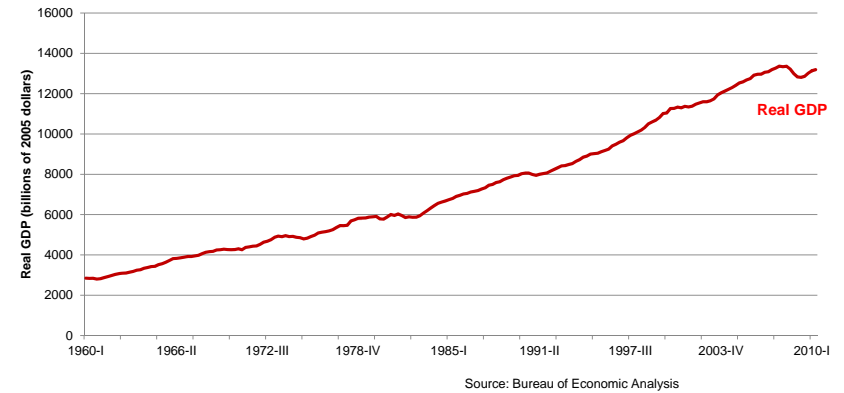
Economic Growth and Fluctuations

- **Economic growth** is the expansion of the economy's production possibilities—an outward shifting *PPF*.
- We measure economic growth by the increase in real GDP.
- **Real GDP—real gross domestic product**—is the value of the total production of all the nation's farms, factories, shops, and offices, measured in the prices of a single year.

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Economic Growth and Fluctuations

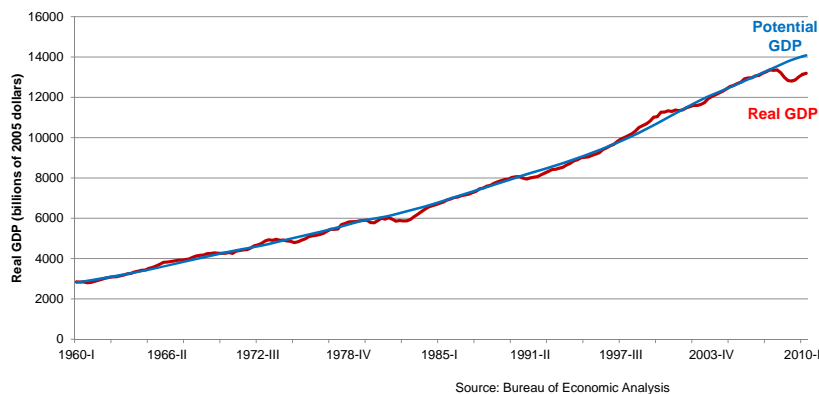


- Economic Growth in the United States
 - Figure 1 above shows real GDP in the United States from 1960 to 2010.

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Economic Growth and Fluctuations

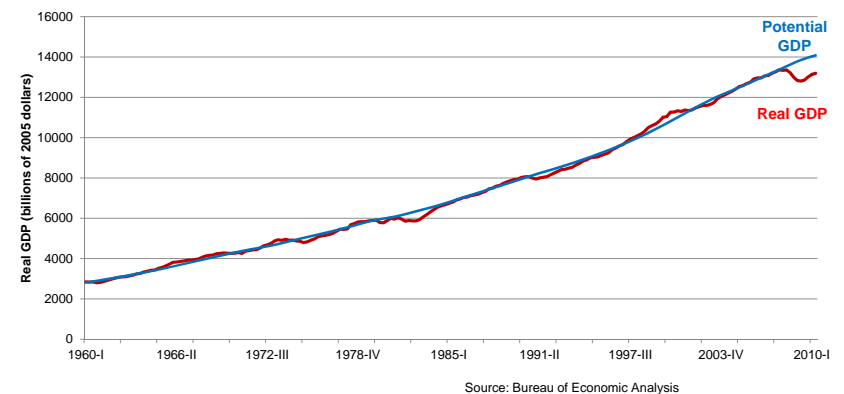


- The figure highlights:
 - Fluctuations of real GDP
 - Smoother growth of potential GDP

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Economic Growth and Fluctuations

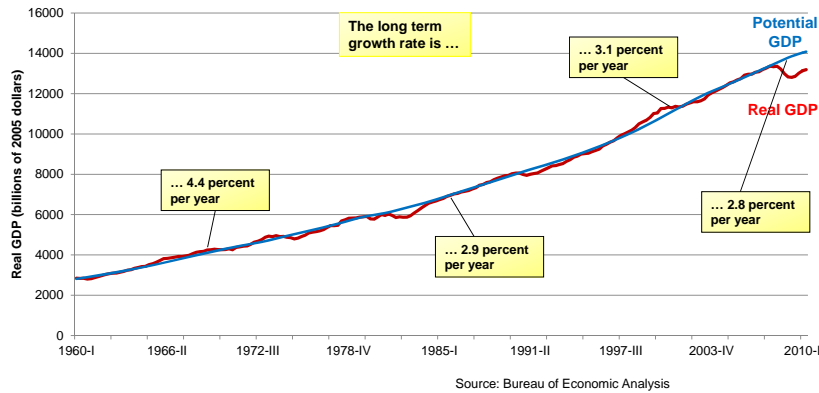


- **Potential GDP** is the value of real GDP when all the economy's labour, capital, land, and entrepreneurial ability are fully employed.

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Economic Growth and Fluctuations

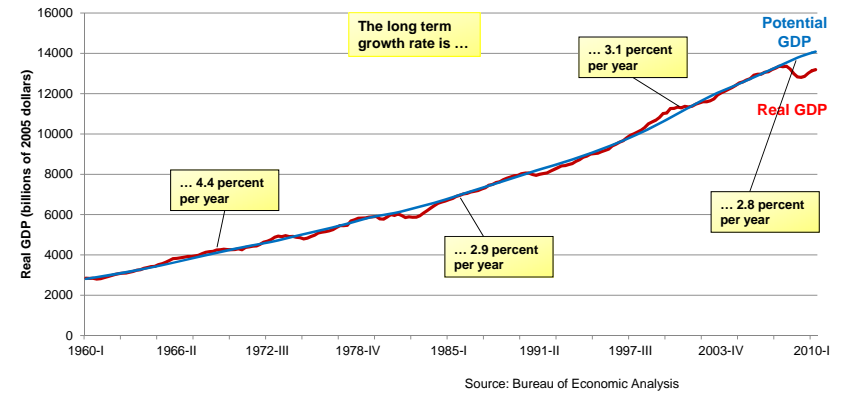


- During the late 1970s and early 1980s, real GDP growth slowed—a **productivity growth slowdown**.

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Economic Growth and Fluctuations



- Real GDP fluctuates around potential GDP in a **business cycle**
 - a periodic but irregular up-and-down movement in production.

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Economic Growth and Fluctuations

Every business cycle has **two phases**:

1. A recession
2. An expansion

and **two turning points**:

1. A peak
2. A trough

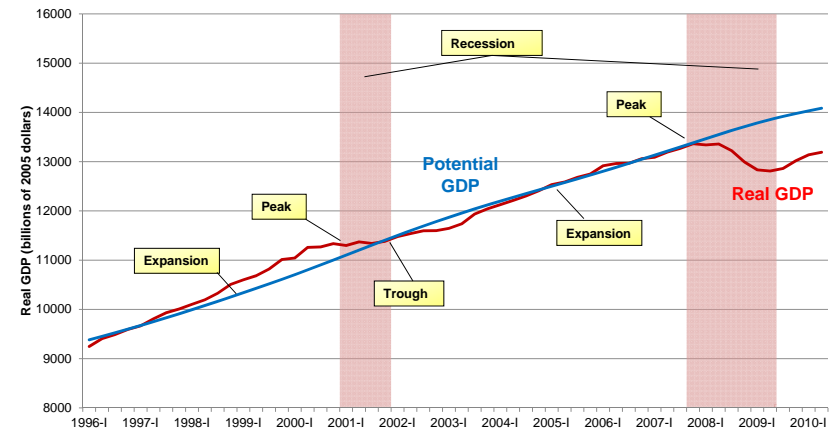
- A **recession** is a period during which real GDP decreases for at least two successive quarters.
- An **expansion** is a period during which real GDP increases.

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Economic Growth and Fluctuations

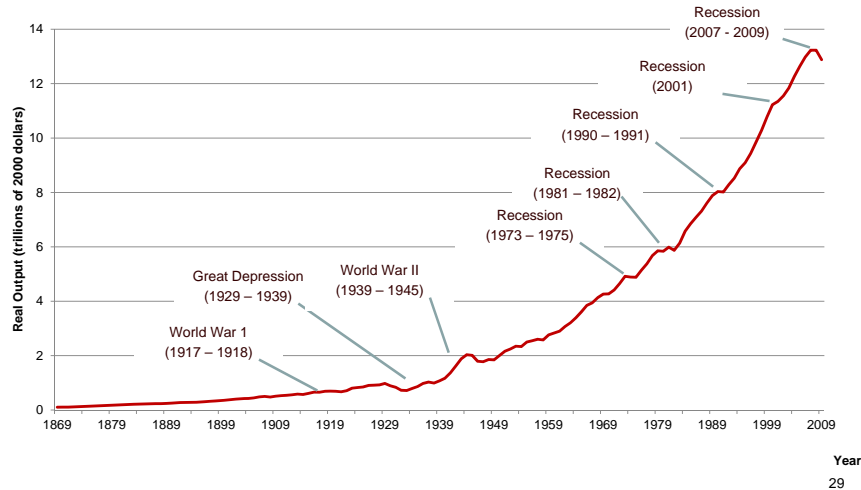
- This figure shows the most recent U.S. cycles.



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Output of the U.S. economy, 1869-2010

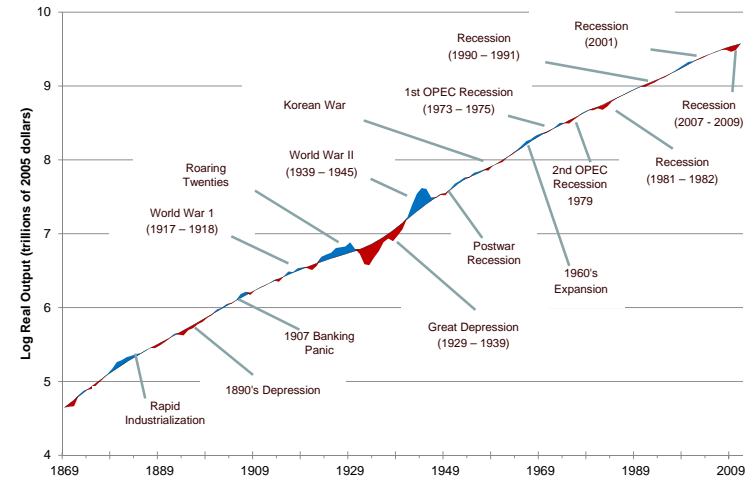


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Economic Growth and Fluctuations

- Decomposing output into a trend and cyclical component, we get:



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A Global Recession

- The most recent recession began during December 2007. The US economy “technically” exited the recession during June of 2009.
- Several other countries around the world, including most of the G7 countries also experienced a recession, e.g. Japan, the UK, France, Germany and several European countries.
- Most countries appear to have exited their respective recessions during 2009.

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Quick Exercise

- For the real GDP numbers to the right, calculate the percentage change in real GDP between the current year and the prior year.
- Is there any indication of a recession for any of these years?

Year	Real GDP	Percentage Change
1988	6742.7	
1989	6981.4	3.54
1990	7112.5	
1991	7100.5	
1992	7336.6	
1993	7532.7	
1994	7835.5	

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Economic Growth and Fluctuations

- Economic Growth Around the World

- Figure 3(a) shows the growth rate of real GDP in the United States alongside that of the world average growth rate.



Source: IMF World Economic Outlook Database, October 2008

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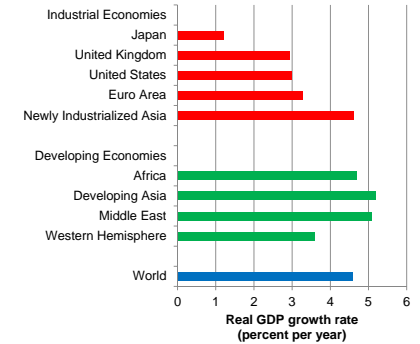


Economic Growth and Fluctuations

- Economic Growth Around the World

- Figure 3(b) compares the growth rate of real GDP in the United States with those of other countries and regions.
- The economies of Asia have grown persistently faster than those of the rest of the world.
- Industrialized countries are growing relatively slower than developing countries

(b) Countries and Regions Compared: 1997 - 2007 average



Source: IMF World Economic Outlook Database, October 2008

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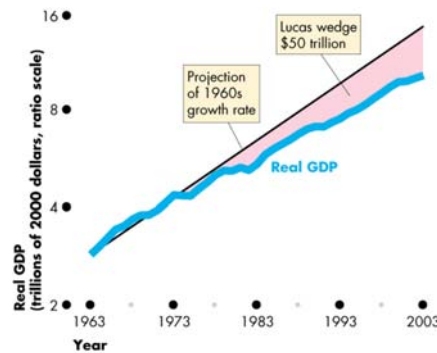
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Economic Growth and Fluctuations

- The Lucas Wedge

- The **Lucas wedge** is the accumulated loss of output from a slowdown in the growth rate of real GDP per person.
- Figure 4(a) shows that the U.S. Lucas wedge is some \$50 trillion or five year's GDP.



(a) The Lucas wedge

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Why growth matters

Consider this ...

- If the annual growth rate of U.S. real GDP per capita had been just one-tenth of one percent higher during the 1990s, the U.S. would have generated an additional \$496 billion of income during that decade, i.e.

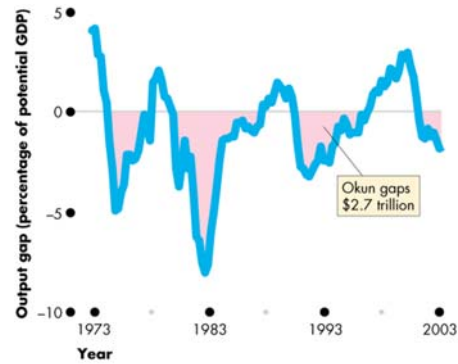
\$496 000 000 000 more!

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Economic Growth and Fluctuations

- The Okun Gap
 - The **Okun gap** is the gap between potential GDP and actual real GDP and is another name for the **output gap**.
 - Figure 4(b) shows that the Okun gaps since 1973 are \$2.7 trillion or about 3 months real GDP.



(b) The Okun gap

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Benefits and Costs of Economic Growth

- The main benefit of long-term economic growth is expanded consumption possibilities, including more health care for the poor and elderly, more research on cancer and AIDS, more space exploration, better roads, more and better housing, and a cleaner environment.
- The costs of economic growth are forgone consumption in the present, more rapid depletion of nonrenewable natural resources, and more frequent job changes.

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Production (Real GDP) as a Benchmark

- In Macroeconomics, we compare what happens to different variables in terms of how it relates to production in the economy (i.e. how does inflation, or unemployment relate to real GDP?)
- Definition:
 - **Procylical**: the variable moves with the business cycle (i.e. it *increases* when production *increases* and vice versa)
 - **Countercyclical**: the variable moves in the opposite direction of the business cycle (i.e. it *increases* when production *decreases* and vice versa)
 - **Acyclical**: does not move with the business cycle

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Introduction to Key Macro Concepts

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Jobs and Unemployment

- **Jobs (Job Creation)**
 - The U.S. economy created around 2 million jobs a year, on average during the 1990s.
 - However, this number fluctuates a lot and since 2001 the pace of job creation has been slow.
 - Between 2000 and 2007, the U.S. economy has created approximately 720 thousand jobs a year on average

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Unemployment

- **Unemployment** is a state in which a person does not have a job but is available for work, willing to work, and has made some effort to find work within the previous four weeks.
- The **labor force** is the total number of people who are employed and unemployed.
- The **unemployment rate** is the percentage of the people in the labor force who are unemployed.
- A **discouraged worker** is a person who available for work, willing to work, but who has given up the effort to find work.

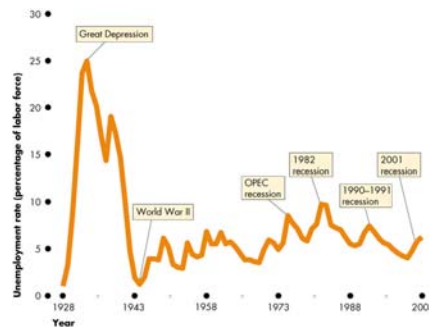
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Jobs and Unemployment

- **Unemployment in the United States**
 - Figure 5 shows the unemployment rate in the United States since 1926.
 - During the 1930s, the unemployment rate hit 25 percent
 - The lowest rate occurred during World War II at 1.2 percent



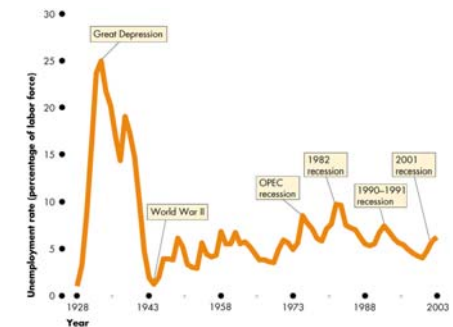
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Jobs and Unemployment

- During recent recessions, the unemployment rate increases
- The unemployment rate has averaged 6 percent since World War II



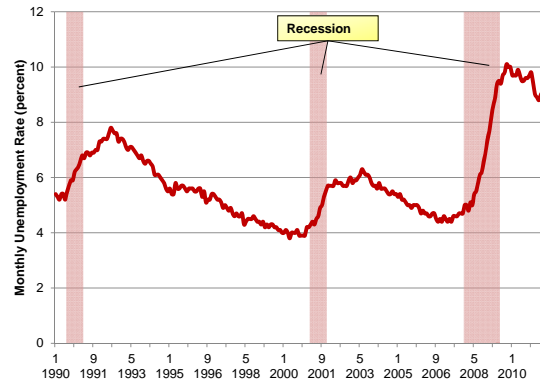
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US Unemployment Rates During Last Recession

- During the last recession, the unemployment rate hit 10.1%.
- The figure to the right shows how the unemployment rate has changed over the most recent cycle.
- The unemployment rate has dropped from its peak, but remains high and persistent.



Source: Bureau of Labor Statistics

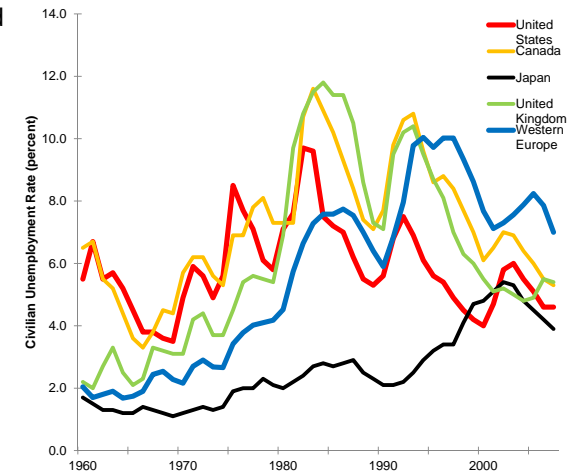
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Jobs and Unemployment

- Unemployment Around the World
 - Figure 6 compares the unemployment rate in the United States with those in Western Europe, Japan, Canada and the United Kingdom.
 - In the 1960's – 1970's, U.S. unemployment, on the average, was higher than the other countries shown.
 - More recently, US unemployment has declined relative to the other countries.



Source: IMF's World Economic Outlook Database

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Jobs and Unemployment

- Why Unemployment Is a Problem
- Unemployment is a serious economic, social, and personal problem for two main reasons:
 - Lost production and incomes
 - Lost human capital
- The loss of a job brings an immediate loss of income and production—a temporary problem.
- A prolonged spell of unemployment can bring permanent damage through the loss of human capital.

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Introduction to Key Macro Concepts

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Inflation

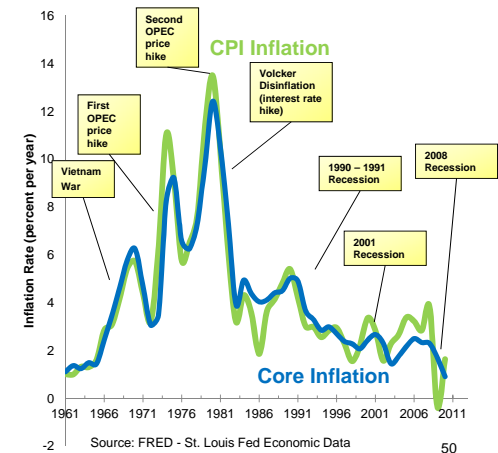
- **Inflation** is a process of rising prices.
- We measure the **inflation rate** as the percentage change in the **average** level of prices or the **price level**.
- The Consumer Price Index — the CPI — is a common measure of the price level used to calculate inflation.
- An alternative measure of inflation, called “**core inflation**” uses the CPI in its construction, except the price index used to construct core inflation does not include any food or energy prices (which tend to be fairly volatile).

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Inflation

- Inflation in the United States
 - Figure 7 shows the inflation rate in the United States since 1961.
 - Inflation was low during the 1960s
 - Inflation increased during the 1970s
 - Inflation was lowered in two waves during the 1980s and 1990s

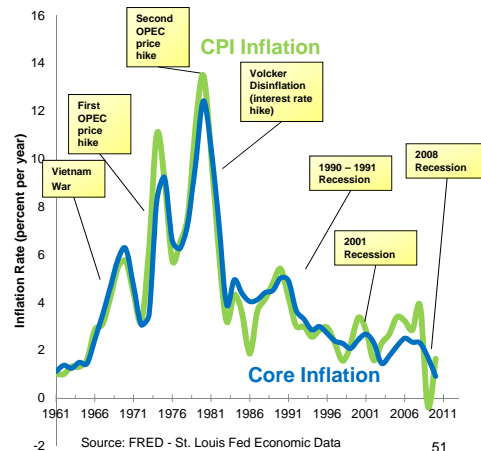


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Inflation

- The inflation rate fluctuates, but it is always positive — the price level has not fallen during the years shown in the figure.
- A falling price level — a negative inflation rate — is called **deflation**.

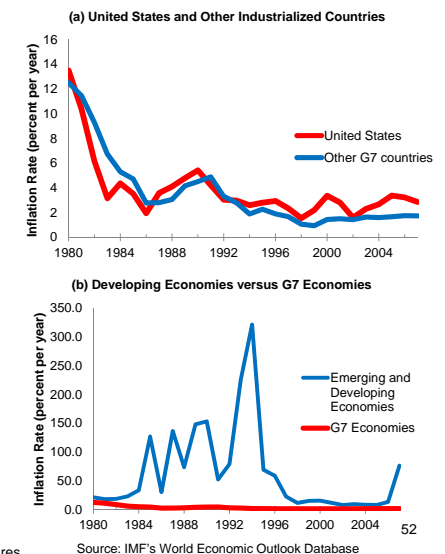


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Inflation

- Inflation Around the World
 - Figure 9 shows the inflation rate in the United States compared with other countries.
 - U.S. inflation has been similar to that in other industrial countries
- U.S. inflation has been much lower than that in developing countries



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Inflation

Is Inflation a Problem?

- Answer: Not in and of itself. Moderate inflation (between 1% - 2% annual increase) is good for the economy since it contributes towards job and wage growth.
- However: out of control inflation is not good since it erodes the purchasing power of money.
- In addition, deflation is not good either since it typically leads to declining salaries.

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Inflation

Is Inflation a Problem?

- Unpredictable changes in the inflation rate are a problem because they redistribute income in arbitrary ways between employers and workers and between borrowers and lenders.
- A high inflation rate is a problem because it diverts resources from productive activities to inflation forecasting.
- Eradicating is costly because it brings a period of greater than average unemployment.

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Introduction to Key Macro Concepts

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Surpluses and Deficits

Domestic/Government Budget Surplus and Deficit

- If a government collects more in taxes than it spends, it has a **government budget surplus**.
- If a government spends more than it collects in taxes, it has a **government budget deficit**.

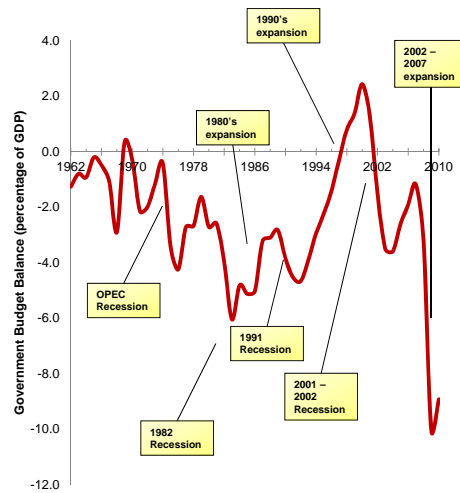
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Surpluses and Deficits

- Figure 10(a) shows the changing surplus and deficit of the federal and provincial governments in the United States since 1971.
- Persistent federal deficit during the 1970s through 1990s.
- Surplus from 1998 to 2001
- More deficits from 2002 onwards!



Source: Congressional Budget Office

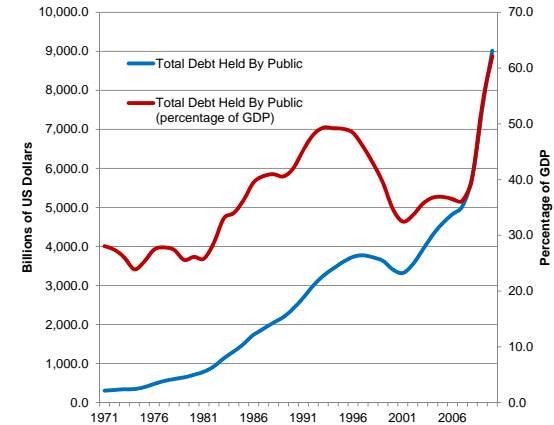
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Deficits and Debt

- The US government has run persistent deficits since the 1970's
- This has added to the amount of debt that the US now owes.



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Surpluses and Deficits

International Surplus and Deficit

- If a nation **imports** more than it **exports**, it has an **international (trade) deficit**.
- If a nation **exports** more than it **imports**, it has an **international (trade) surplus**.
- The **current account** deficit or surplus is the balance of exports minus imports plus net interest paid to and received from the rest of the world.

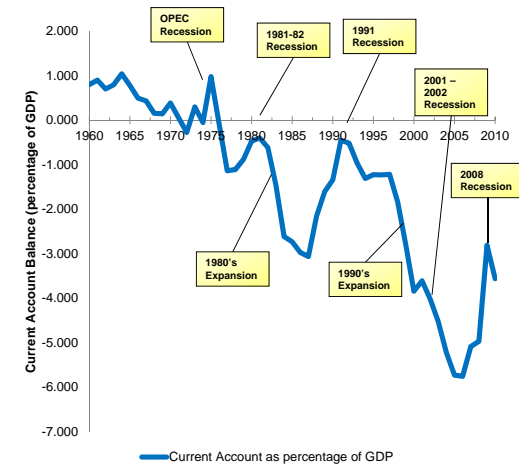
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Surpluses and Deficits

- Figure 10(c) shows The U.S. current account balance since 1960.
- Persistent current account deficit since 1983
- The trade deficit increased substantially during the last decade.



Source: Bureau of Economic Analysis

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Introduction to Key Macro Concepts

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Macroeconomic Policy Challenges and Tools

Six widely agreed policy challenges for macroeconomics are to:

1. Boost economic growth
2. Keep inflation low
3. Stabilize the business cycle
4. Reduce unemployment
5. Reduce government and international deficits
6. Reduce the size of government debt (more recently)

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Macroeconomic Policy Challenges and Tools

Two broad groups of macroeconomic policy tools are :

- **Fiscal policy**—making changes in tax rates and government spending
- **Monetary policy**—changing interest rates and changing the amount of money in the economy

Note: These notes are incomplete without having attended lectures

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Review Questions:

1. What is Economic Growth and how is the long term growth rate measured?
2. What is the difference between real and potential GDP?
3. What is a Business Cycle and what are its phases?
4. What is a recession?
5. What is unemployment?
6. What are the main costs of unemployment?
7. What is inflation and how does it influence the value of money?
8. How is inflation measured?
9. What determines a country's budget deficit? What determines its international deficit?
10. How do the unemployment rate, inflation rate, and the deficits move with regards to the Business Cycle?

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