

Chapter 6

ECONOMIC GROWTH, BUSINESS CYCLES, UNEMPLOYMENT, AND INFLATION



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Today's lecture will:

- Explain the difference between the long-run framework and the short-run framework.
- Summarize some relevant statistics about growth, business cycles, unemployment, and inflation.
- Discuss four phases of the business cycle.

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Today's lecture will:

- Explain how unemployment is measured and state some microeconomic categories of unemployment.
- Relate the target rate of unemployment to potential income.
- Define inflation and distinguish a real concept from a nominal concept.
- Discuss two important costs of inflation.

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Two Frameworks: The Long Run and the Short Run

- Issues of growth are considered in a long-run framework, which focuses on supply.
- Business cycles are generally considered in a short-run framework, which focuses on demand.
- Inflation and unemployment fall within both frameworks.

Growth

- The primary measurement of growth is changes in **real gross domestic product (real GDP)** – the market value of final goods and services produced in an economy, stated in the prices of a given year.
- The U.S. secular growth rate and the per capital real output growth have been 2.5 to 3.5 percent per year.
- **Per capita real output** is real GDP divided by the total population.

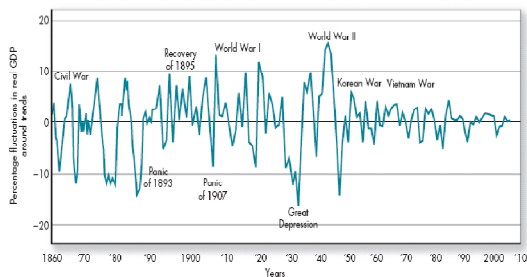
Global Experience with Growth

- Today's per capita growth rates are historically high. Today's trends began in the late 1700s, about the same time markets and democracies took hold.
- Growth rates rose from 0.9% in 1820-1950 to 2% since 1950.
- African economies have consistently lagged behind.
- Annual per capita income in Africa is about \$1,700, compared to the world average of \$6,600.

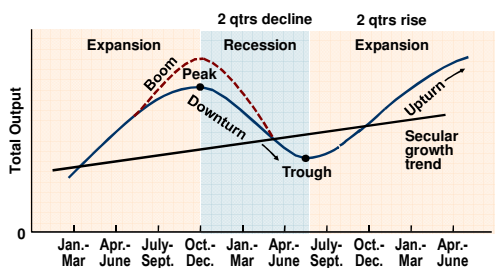
The Benefits and Costs of Growth

- Per capita economic growth allows everyone in society, on average, to have more.
- Growth, or the prediction of growth, allows governments to avoid hard questions.
- The costs of growth include:
 - Pollution
 - Resource exhaustion
 - Destruction of natural habitat

U.S. Business Cycles



Four Phases of the Business Cycle



Unemployment as Government's Problem

- In the Employment Act of 1946, the U.S. government took responsibility for unemployment.
- **Full employment** – an economic climate where nearly everyone who wants a job has one.
- Some unemployment is unavoidable.

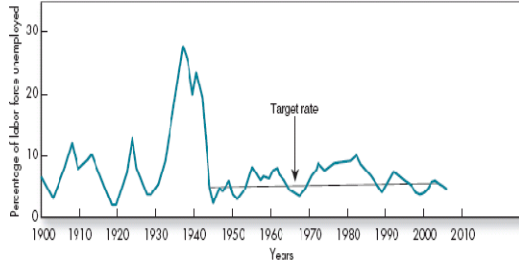
Target Rate of Unemployment

- The **target rate of unemployment** is the lowest sustainable rate of unemployment achievable under existing conditions.
- Today thought to be 5%. Earlier thought to be 5-7%.
- Changed due to changing
 - Demographics
 - Social and institutional structures
 - Unemployment insurance and welfare

Whose Responsibility is Unemployment

- Classical economists believe that individuals are responsible for their own jobs.
 - If people really want a job, they will find one.
- Keynesian economists tend to say that society owes people jobs commensurate with their training or past job experience.
 - Jobs should be close enough to home so that people don't have to move.

Unemployment Rate since 1900



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Calculating the Unemployment Rate

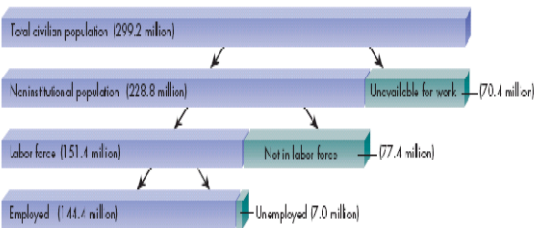
$$\text{unemployment rate} = \frac{\text{number unemployed}}{\text{labor force}} \times 100$$

- The labor force – those people in an economy who are willing and able to work.
- The labor force excludes those incapable of working and those not looking for work.

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Unemployment/Employment Figures (in millions)



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Accuracy of the Unemployment Rate

- Does not include discouraged workers.
- Does not take into account the underemployed.
- Includes people who say they're unemployed, but aren't.
- The labor force participation rate and the employment-population ratio provide additional information.

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Unemployment and Potential Output

- **Potential output** – output that would be achieved at the target rates of unemployment and of capacity utilization.
- **Okun's rule of thumb:**
1%Δ unemployment →
2% Δ output in opposite direction

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Unemployment by Microeconomic Subcategories

Total unemployment rate	
Total unemployment	7.0 million (4.5%)
Unemployment rate by sex	
Male	3.8 million (4.6%)
Female	3.2 million (4.6%)
Unemployment rate by age	
15-19	1.1 million (15.4%)
20-24	1.2 million (8.2%)
25-54	3.9 million (3.3%)
55 and over	0.8 million (1.0%)
Unemployment rate by race	
White	5.0 million (4.0%)
Black	1.5 million (8.7%)
Duration of unemployment	
Less than 5 weeks	2.6 million
5-14 weeks	2.1 million
More than 15 weeks	2.3 million
Reason for unemployment	
Job losers	3.3 million
Job leavers	0.8 million
Retirees	2.2 million
New entrants	0.6 million

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Inflation

- **Inflation** is a continual rise in the price level.
- **Deflation** is a continual fall in the price level.
- Inflation and deflation are measured with changes in price indexes.
- **Price index** – a number that summarizes what happens to a weighted composite of prices of a selection of goods over time.

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Creating a Price Index

Basket of Goods	Prices		Expenditures	
	2007	2008	2007	2008
10 pairs of jeans	\$20.00/pr.	\$25.00/pr.	\$200	\$250
12 flannel shirts	15.00/ea.	20.00/ea.	180	240
100 lbs. Apples	0.80/lb.	1.05/lb.	80	105
80 lbs. Oranges	1.00/lb.	1.00/lb.	80	80
Total Expenditures			\$540	\$675

$$\text{Price index in 2006} = \frac{\$675}{\$540} \times 100 = 125$$

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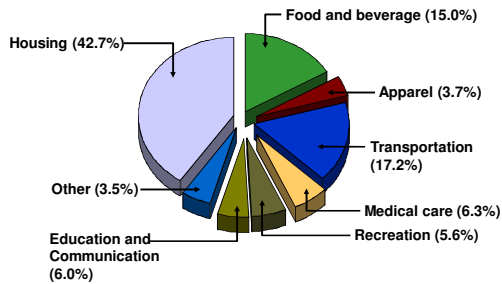
Real World Price Indexes

- **GDP Deflator**
- **Consumer Price Index**
- **Personal Consumption Expenditure (PCE) Deflator**
- **Producer Price Index (PPI)**

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Composition of CPI



Real and Nominal Concepts

- Nominal output is the total amount of goods and services measured at current prices.
- Real output is the total amount of goods and services produced, adjusted for price level changes.

$$\text{real output} = \frac{\text{nominal output}}{\text{price index}} \times 100$$

Expected and Unexpected Inflation

- Expected and unexpected inflations affect behavior differently.
- **Expected inflation** is inflation people expect to occur.
- Unexpected inflation is inflation that surprises people.
- Inflationary expectations can accelerate large inflation.

Costs of Inflation

- Inflation may not make a nation poorer.
- It can redistribute income from those who do not raise their prices to those who do.
- It can reduce the amount of information that prices convey.
- Inflation is a very serious problem it increases to hyperinflation – exceptionally high levels of inflation, 100 percent or more a year.

Summary

- Economists use two frameworks to analyze macroeconomic problems:
 - The long-run growth framework focuses on supply.
 - The short-run business cycle framework focuses on demand.
- Growth is measured by the change in:
 - Real gross domestic product (GDP)
 - Per capita real GDP

Summary

- The secular trend growth rate of the economy is 2.5% to 3.5%.
- Business cycles are fluctuations of real output around the secular growth trend.
- Phases of the business cycle are:
 - Peak
 - Downturn
 - Trough
 - Upturn

Summary

- Unemployment is calculated as the number of unemployed people divided by the labor force.
- Unemployment rises during a recession and falls during an expansion.
- The target rate of unemployment is the lowest sustainable rate of unemployment possible under existing institutions.
- The lower the target rate of unemployment, the higher an economy's potential output.

Summary

- A real concept is a nominal concept adjusted for inflation.
- Real output equals nominal output divided by the price index.
- Inflation is the continual rise in the price level.
- The CPI, the PPI, and the GDP deflator are all price indexes used to measure inflation.

Summary

- Expectations of inflation can provide pressure for inflation to continue even when other causes don't exist.
- Inflation redistributes income from people who do not raise their prices to people who do raise their prices.
- Inflation reduces the information that prices convey.

Review Question 6-1 Suppose that the nominal price of gasoline is \$3.25 per gallon. The CPI (1982 base year) is 190%. Find the real price of a gallon of gasoline.

$$\text{real price} = \frac{\text{nominal price}}{\text{price index}} = \frac{\$3.25}{190} \times 100 = \$1.71$$

Review Question 6-2 Suppose that the number of people, at least 16 years old, able to work is 200. The labor force is 150 and the number of employed people is 140. Find the labor force participation rate and the unemployment rate.

$$\text{labor force participation rate} = \frac{150}{200} \times 100 = 75\%$$

$$\text{unemployment rate} = \frac{150 - 140}{150} \times 100 = 6.67\%$$
