

The background of the slide is an abstract composition of various colored rectangular and trapezoidal shapes. The colors include shades of blue, green, orange, red, purple, and pink, all set against a dark, textured background. The shapes are arranged in a somewhat chaotic but balanced pattern, creating a vibrant and modern aesthetic.

# The Business Cycle

# Macroeconomics

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- The Great Depression was the springboard for modern macroeconomics.

# Macroeconomics

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- *Macroeconomics* is the study of aggregate economic behavior, of the economy as a whole.

# Macroeconomics

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- The basic purpose of macro-economic *theory* is to explain the business cycle.
- Macro policy tries to control the business cycle.

# Business Cycles

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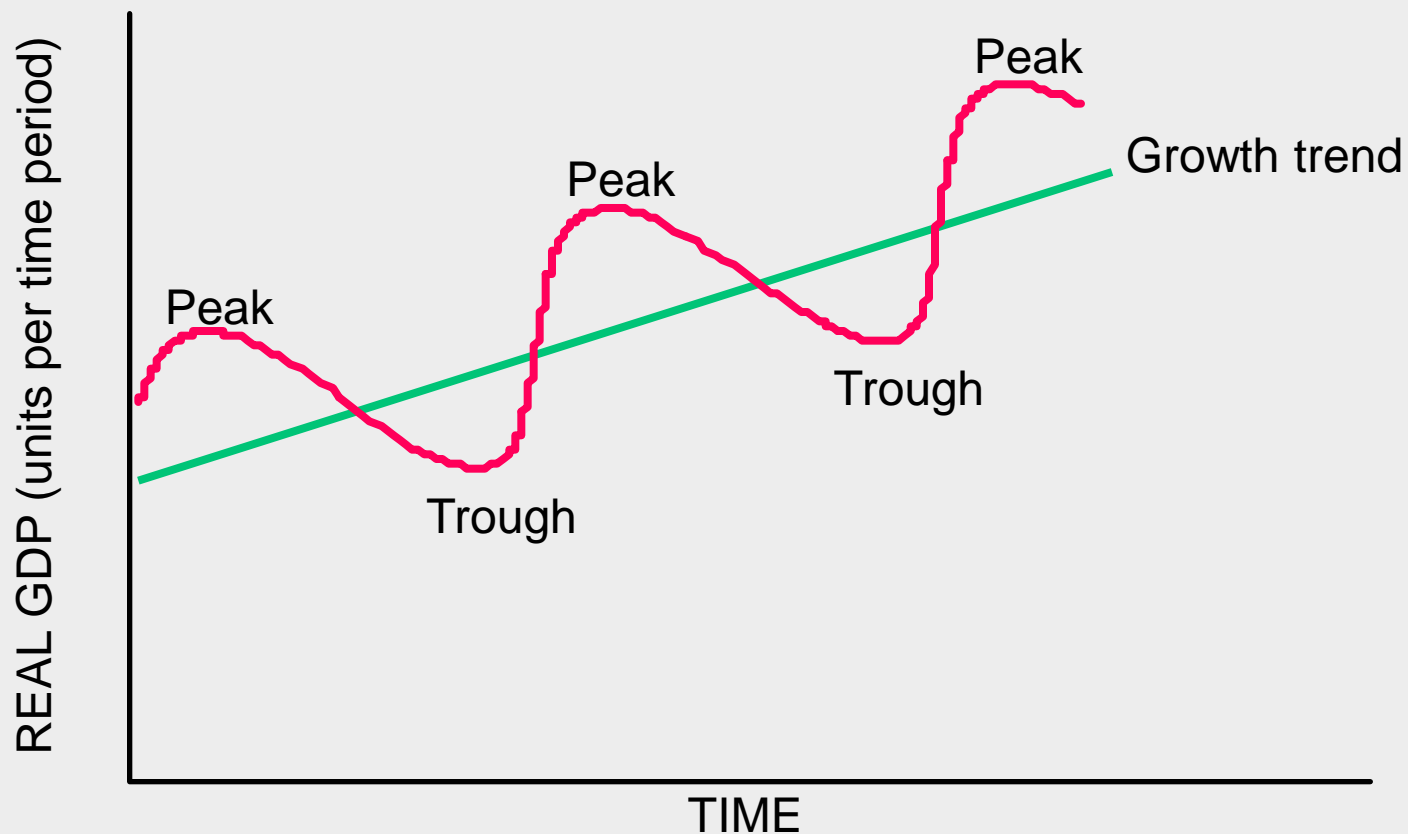
- The *business cycle* is the alternating periods of economic growth and contraction experienced by the economy.

# Business Cycles

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- The modern business cycle resembles a roller coaster.
  - Output first climbs to a peak, then decreases.
  - After hitting a trough, the economy recovers, increasing again.

# The Business Cycle



# Real GDP

- Business cycles are measured by changes in real GDP.
  - *Real GDP* is the inflation-adjusted value of GDP—the value of output measured in constant prices.
  - *Nominal GDP* is measured in current prices

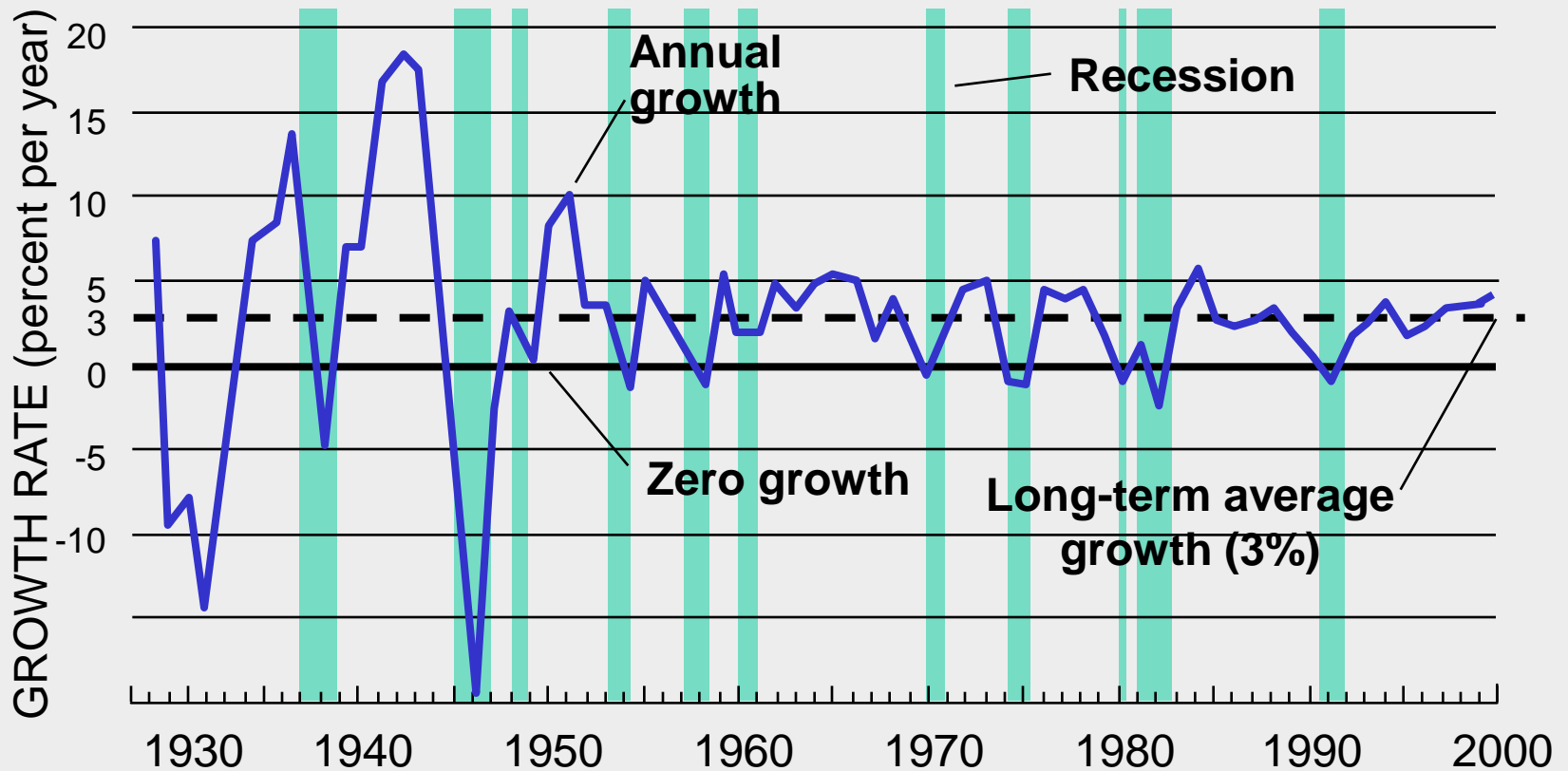


# Erratic Growth

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- Real GDP doesn't increase in consistent, smooth increments.
- It has been a series of steps, stumbles and setbacks.

# The Business Cycle in U.S. History



# The Great Depression

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- The most prolonged departure from our long-term growth path.

# The Great Depression

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- Real GDP fell 30% 1929-1933.
- Economy started to grow again in 1934.
- Total output declined again 1936-1937.

# The Great Depression

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- Real GDP in 1939 was virtually the same as in 1929.
- Per capita GDP was lower in 1939 than in 1929.

# World War II

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- Greatly increased demand for goods and services.
- Marks the end of the Great Depression.
- Output grew 19% in 1942 and reached full employment.

# Recent Recessions

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- A *recession* is a decline in total output (real GDP) for two or more consecutive quarters.

# Post-War Recession

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- Lasted 8 months. Unemployment rate 4.3%.



# 1981-1982 Recession

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- Lasted 16 months.
- Unemployment rate 10.8%.
- Highest unemployment rate since 1930's.

# 1990-1991 Recession

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- Very brief – 8 months.
- Expansion continued through 1998

# Business Slumps, 1929-58

Dates	Duration (months)	Pct Decline in Output	Peak Unemployment Rate
Aug '29-Mar '33	43 months	53.4	24.9%
May '37-June '38	13 months	32.4	20.0
Feb '45-Oct '45	8 months	38.3	4.3
Nov '48-Oct '49	11 months	9.9	7.9
July '53-May '54	10 months	10.0	6.1
Aug '57-Apr '58	8 months	14.3	7.5

# Business Slumps, 1960-92

Dates	Duration (months)	Pct Decline in Output	Peak Unemployment Rate
Apr '60-Feb '61	10 months	7.2	7.1%
Dec '69-Nov '70	11 months	8.1	6.1
Nov '73-Mar '75	16 months	14.7	9.0
Jan '80-July '80	6 months	8.7	7.6
July '81-Nov '82	16 months	12.3	10.8
July '90-Feb '91	8 months	2.2	6.5

# Unemployment

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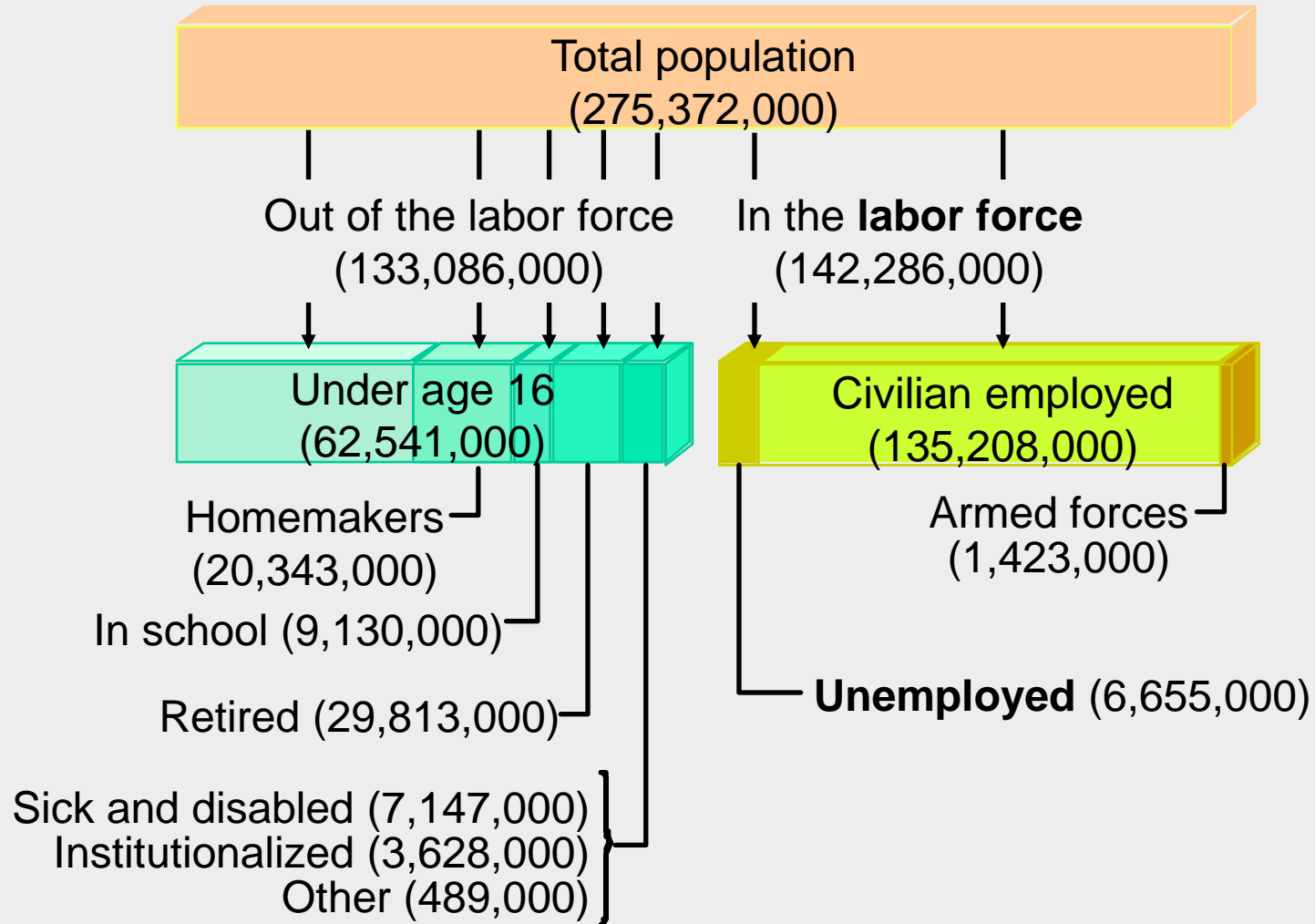
- Unemployment is the inability of labor-force participants to find jobs.
- When output declines, jobs are eliminated.

# The Labor Force

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- All persons over age sixteen who are either working for pay or actively seeking paid employment.

# The U.S. Labor Force



# The Unemployment Rate

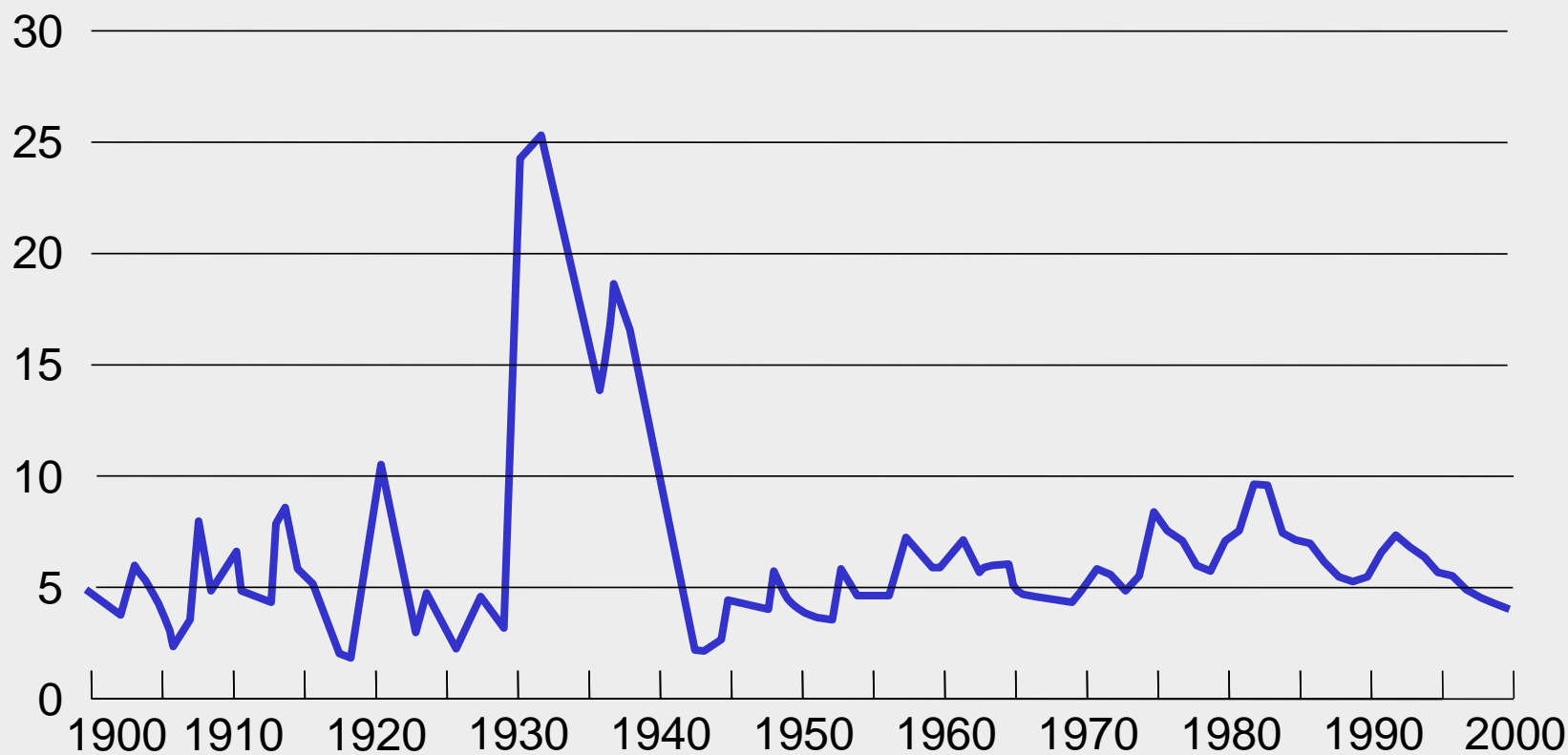
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- The proportion of the labor force that is unemployed

$$\textit{Unemployment rate} = \frac{\textit{number of unemployed people}}{\textit{size of the labor force}}$$



# The Unemployment Record



# The Full Employment Goal

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- There are good reasons for pursuing low but not zero unemployment.

# Seasonal Unemployment

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- Caused by seasonal changes.
  - An example is school is out in summer so teens are looking for summer jobs.

# Frictional Unemployment

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- Brief period of unemployment associated with job search.
  - Examples include students with marketable skills entering work force after graduation, and workers in between jobs.

# Structural Unemployment

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- Results from mismatch between skills of labor force participants and skills needed by employers.
  - For example, defense cutbacks made it hard for displaced workers to find jobs in non-defense industry.

# Cyclical Unemployment

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- Not enough jobs to go around due to downturns in the business cycle.
  - The Great Depression is an example.

# The Policy Goal

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- Avoid as much cyclical and structural unemployment as possible.
- Try to achieve full employment.

# The Policy Goal

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- Full employment is the lowest rate of unemployment comparable with price stability.
- It is estimated to be between 4 and 6 percent unemployment.



# Inflation

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- The biggest fear as an economy reaches full employment is inflation.

# Inflation

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- The fear of inflation is based on the price pressures that accompany capacity production.

# Relative vs. Average Prices

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- *Inflation* is an increase in the average level of prices and services, not a change in any specific price.

# Relative vs. Average Prices

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- *Deflation* is a decrease in the average level of prices of goods and services.

# Relative vs. Average Prices

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- The *relative price* of a good is its price in comparison with the price of other goods.

# Relative vs. Average Prices

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- It is possible for individual prices to rise or fall without changing the average price level.
- Relative changes can occur in period of stable average prices.

# Relative vs. Average Prices

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- Changes in relative prices are market signals which help reallocate resources in the economy.

# Redistributions

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- Although inflation makes some people worse off, it makes other people better off.



# Redistributions

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- Inflation acts just like a tax, taking income or wealth from some people and giving it to others.

# Price Effects

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- *Nominal income* is the amount of money income received in a given time period, measured in current dollars.

# Price Effects

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- *Real income* is income in constant dollars — nominal income adjusted for inflation.

# Price Effects

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- Not all prices rise at same rate during inflation.
- Not everyone suffers equally from inflation.

# Student's Annual Budget

## First Year's Budget

Nominal Income	\$6,000
Consumption	
Tuition	\$3,000
Room & Board	2,000
Books	300
Everything else	<u>700</u>
Total	\$6,000

## Second Year's Budget

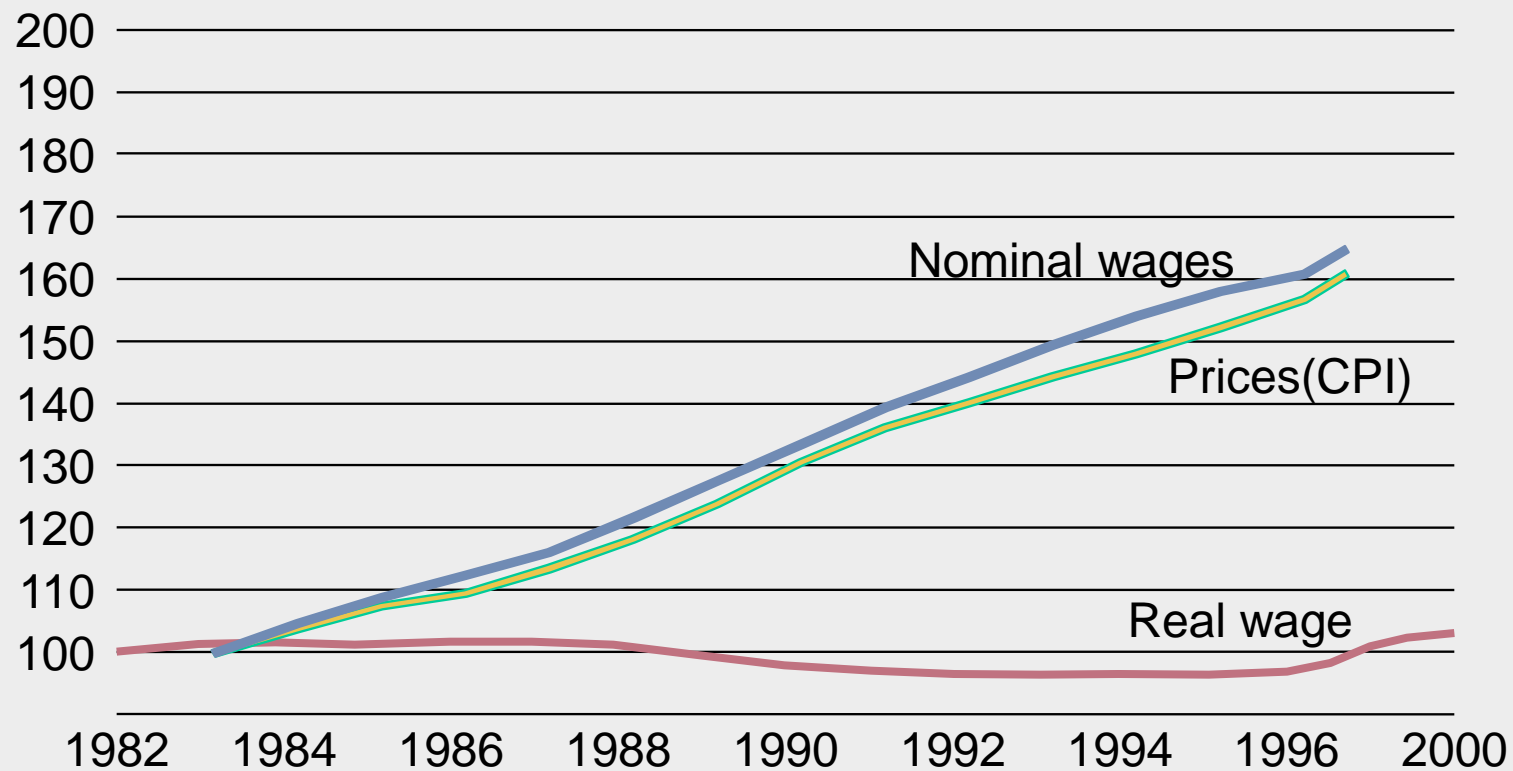
Nominal Income	\$6,000
Consumption	
Tuition	\$3,500
Room & Board	2,000
Books	300
Everything else	<u>200</u>
Total	\$6,000

# Income Effects

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- What looks like a price to buyer is income to the seller.
- If prices rise, so do incomes.

# Nominal Wages and Prices



# Wealth Effects

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- Inflation alters the real value of savings.



# Inflation's Impact, 2001-2011

Year	Annual Inflation Rate				
	2%	4%	6%	8%	10%
2001	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
2002	980	962	943	926	909
2003	961	925	890	857	826
2004	942	889	840	794	751
2005	924	855	792	735	683
2006	906	822	747	681	621
2007	888	790	705	630	564
2008	871	760	665	584	513
2009	853	731	627	540	467
2010	837	703	592	500	424
2011	820	676	558	463	386

# The Real Story of Wealth

<b>Asset</b>	<b>Pct Changes in Value, 1984-94</b>
Stocks	322
Bonds	273
Diamonds	75
Housing	49
Average price of goods	42
Gold	- 2
U.S. farmland	- 7
Stamps	- 9
Silver	- 6
Oil	- 66

# Robin Hood?

- Inflation redistributes income through these effects:
  - *Price effects* – people who prefer goods and services that increase in price least quickly end up with larger share of real income.

# Robin Hood?

- Inflation redistributes income through these effects:
  - *Income effects* – people whose nominal incomes rise faster than inflation end up with larger share of total income.

# Robin Hood?

- Inflation redistributes income through these effects:
  - *Wealth effects* – people who own assets that increase in real value end up better off.

# Robin Hood?

- Inflation acts just like a tax taking income or wealth from one group and giving it to another.

# Uncertainty

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- The uncertainties of inflation may cause people to change their consumption, saving, or investment decisions.

# Uncertainty

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- Fear of rapidly increasing prices may deter consumers from making long-term purchasing decisions.
- Firms may postpone construction or not finish new construction.



# Uncertainty

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- Changing price levels can induce people to buy *more* goods and services before price increases occur.

# Measuring Inflation

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- *Consumer Price Index (CPI)* — a measure (index) of changes in the average price of consumer goods and services.

# Measuring Inflation

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- *Inflation rate* — the annual rate of increase in the average price level.

# Measuring Inflation

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- The *Bureau of Labor Statistics* tells us what is happening to consumer prices by updating the CPI monthly.

# The Price Stability Goal

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- Price stability is the absence of significant changes in the average price level.

# The Policy Goal

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- The Full Employment and Balanced Growth Act of 1978 holds the rate of inflation to less than 3%.

# Why 3 Percent?

- Congress weighs the tradeoff between inflation and full employment.
- Zero percent inflation might harm the goal of full employment.
- The CPI is not a perfect measure of inflation.

# Why 3 Percent?

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- Because of quality improvements and new products, the CPI is not a perfect measure of inflation.



# Quality Improvements

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- Old products become better as a result of quality improvements.

# Quality Improvements

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- A 1955 television does not compare in quality to a 2000 television.
- Today's automobiles cost more than Henry Ford's model T, but part of that price is reflected in the higher quality.

# New Products

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- The market basket used to measure the CPI changes.
- Products like computers did not exist in the 1972-73 market basket.
- DVD players did not exist in the 1987 CPI market basket.

