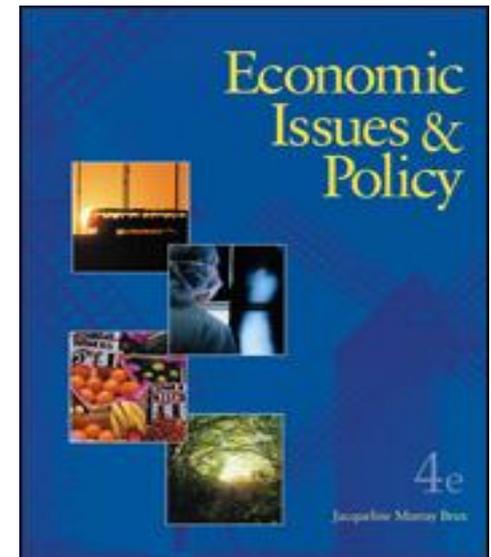


# Unemployment and Inflation

*Our economy is healthy and vigorous, and growing faster than other major industrialized nations. In the last two-and-a-half years, America has created 4.6 million new jobs—more than Japan and the European Union combined. Even in the face of higher energy prices and natural disasters, the American people have turned in an economic performance that is the envy of the world.*

—PRESIDENT GEORGE W. BUSH, STATE OF THE UNION ADDRESS, 2006



# Terminology

- **Macroeconomy**
  - Total economy
- **Macroeconomics**
  - Study of total economy
- **Microeconomics**
  - Study of individual aspects within total economy
- **Gross domestic product (GDP)**
  - Total output in economy
- **Recession**
  - Decline in nation's gross domestic product (output) associated with rise in unemployment

# Labor Force

- All people age 16 and older who are working for pay or actively seeking employment
  - Anyone who is not actively seeking a job is NOT included in labor force
- Labor force important for two reasons:
  1. Demonstrates quantity of labor resource available for production of national output
  2. Reflects societal trends and attitudes

# Labor Force Participation Rate

- Ratio of number of people in labor force to number of people age 16 or older in population

<b>T A B L E</b>		<b>U.S. LABOR FORCE PARTICIPATION RATES FOR MEN AND WOMEN, INDIVIDUALLY AND COMBINED, 1964 AND 2005</b>		
<b>14-1</b>				
<u>Year</u>	<u>Men (%)</u>	<u>Women (%)</u>	<u>Men and Women (%)</u>	
1964	81	39	59	
2005	73	59	66	

*Source:* U.S. Department of Commerce, Bureau of Labor Statistics, <http://www.bls.gov>.

# Labor Force Participation Rate (cont.)

TABLE 14-2	LABOR FORCE PARTICIPATION RATES,* BY REGION, SELECT COUNTRIES, AND GENDER, 2004	
	<u>Male (%)</u>	<u>Female (%)</u>
<b>Africa</b>		
Ethiopia	91	74
Congo, Democratic People's Republic	91	63
Egypt	77	22
<b>Asia</b>		
China	88	76
Japan	85	60
Iran	75	39
<b>Latin America</b>		
Argentina	83	60
Bolivia	84	64
Cuba	82	50
<b>Eastern Europe</b>		
Russia	75	67
Poland	69	58
Hungary	67	53
<b>Western Europe</b>		
United Kingdom	82	69
Finland	77	73
France	74	62
<b>North America</b>		
United States	82	70
Canada	83	73
Mexico	84	42

\*These participation rates are calculated by dividing the entire labor force ages 15–64 by the entire population. Homemakers and unpaid workers are excluded from the definition of the labor force.  
 Source: World Bank, *World Development Indicators 2006*, <http://www.worldbank.org>.

# The Unemployment Rate

- Percentage of labor force that is unemployed
- Calculated as:  
$$\frac{\text{Number of Unemployed People}}{\text{Number of People in Labor Force}}$$
- **Unemployed person**
  - Person 16 or older who is actively seeking employment but unable to find a job

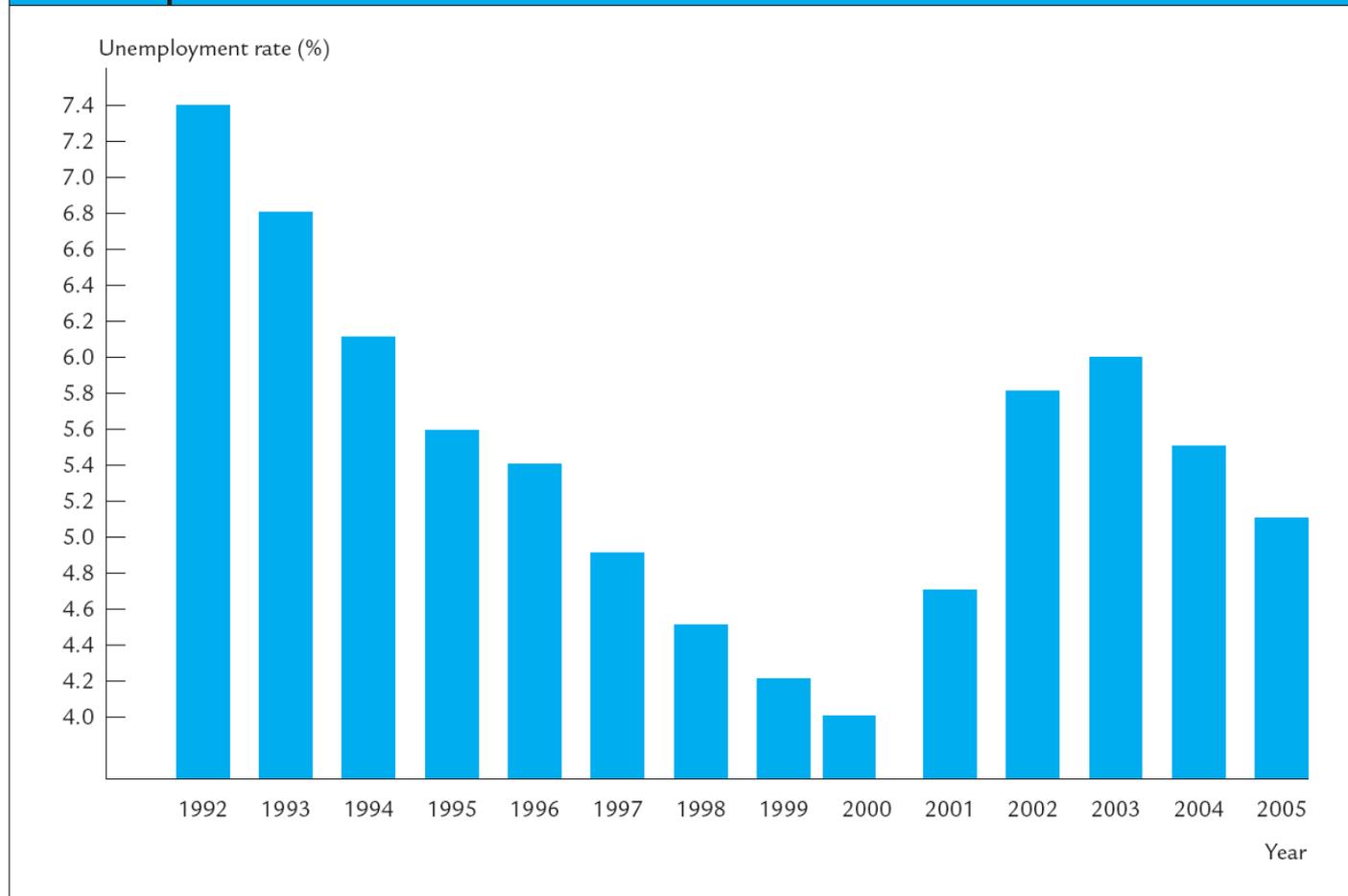
# The National Unemployment Rate

TABLE 14-3		U.S. UNEMPLOYMENT RATES, SELECTED YEARS FROM 1960 TO 2005	
<u>Year</u>	<u>Unemployment Rate (%)</u>	<u>Year</u>	<u>Unemployment Rate (%)</u>
1960	5.5	1990	5.6
1965	4.5	1992	7.4
1970	4.9	1995	5.6
1975	8.5	2000	4.0
1980	7.1	2001	4.7
1981	7.6	2002	5.8
1982	9.7	2003	6.0
1983	9.6	2004	5.5
1985	7.2	2005	5.1

*Source:* U.S. Department of Commerce, Bureau of Labor Statistics, <http://www.bls.gov>.

# The National Unemployment Rate (cont.)

**FIGURE 14-1** CHANGE IN UNEMPLOYMENT RATES SINCE 1992 (BASED ON THE DATA IN TABLE 14-3)



# Unemployment Rates for Selected Groups of People

**T A B L E**  
**14-4**

**U.S. UNEMPLOYMENT RATES FOR SELECT GROUPS, APRIL 2006**

<u>Group</u>	<u>Unemployment Rate (%)</u>
Nation	4.7
Men	4.7
Women	4.7
Youth ages 16–19	14.6
Whites	4.1
African-Americans	9.4
Hispanics	5.4

*Source:* U.S. Department of Commerce, Bureau of Labor Statistics, <http://www.bls.gov>.

## Unemployment Rates for Selected Groups of People (cont.)

- Some economists believe that unemployment rates for women are lower than those of men during and immediately after recessions
- Teenagers have highest unemployment rate of any age group, year after year
  - Part of difficulty is that they lack education, skills, and experience that are often required by employers
- Burden of unemployment is not borne equally by race and ethnicity
  - Unemployment rate for whites is almost always far below national average and always below average for African Americans and Hispanics

# Problems in Measuring Unemployment

- Many economists believe unemployment rate understates true extent of economic hardship from unemployment in our country for two reasons:
  1. Anyone working at least part-time for pay is considered to be employed
    - Although many people prefer part-time work, many others prefer full-time employment and need full-time work to support their families
      - When people can find only part-time jobs, they experience economic hardship even though officially classified as being employed
  2. Some people who would like to work and who have actively sought employment have become so discouraged in their search that they have given up looking for jobs
    - In many ways, **discouraged workers** are ones most severely affected by unemployment, yet they cease to be tallied in unemployment statistics as soon as they cease active job search

## Problems in Measuring Unemployment (cont.)

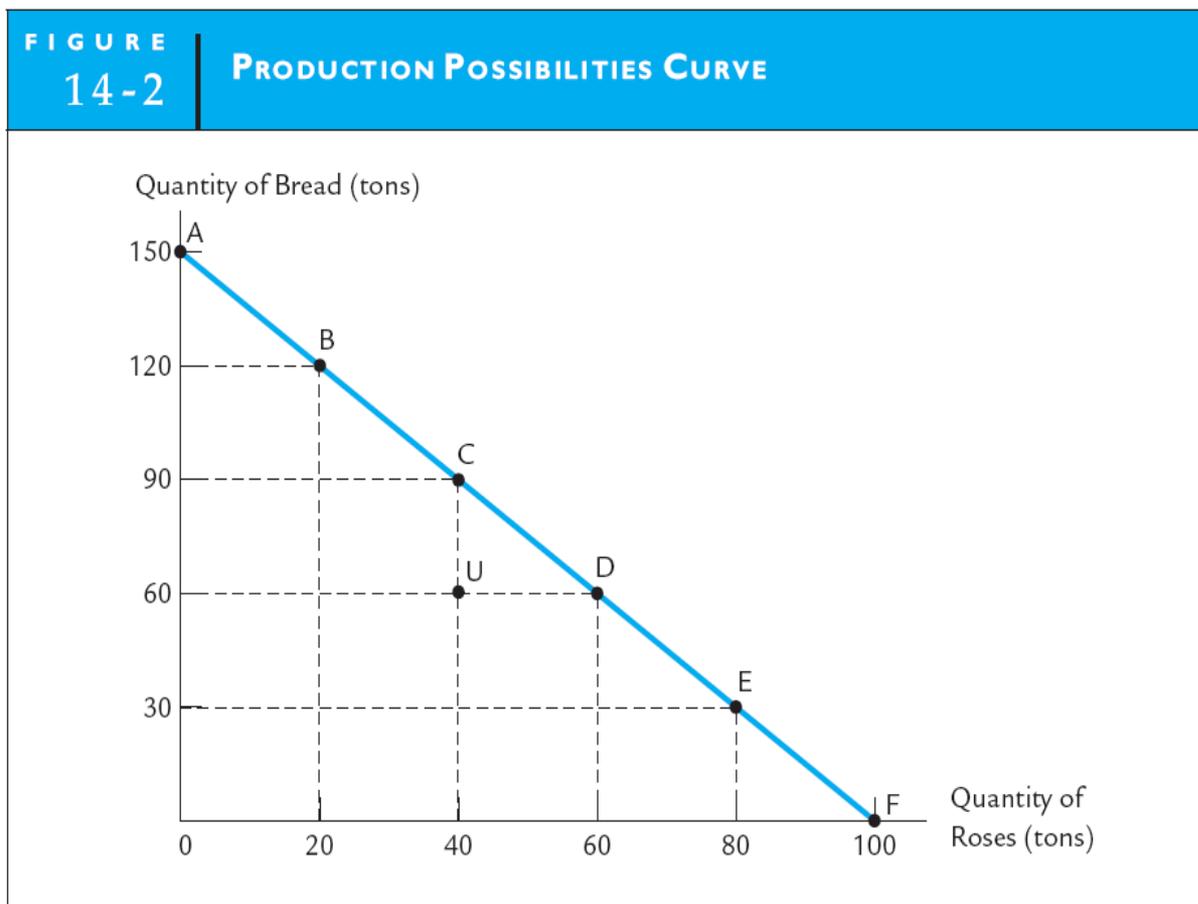
- Economists believe mismeasurement of unemployment rate can have serious ramifications:
  1. Many macroeconomic policies based on unemployment rate; if unemployment is understated, policymakers may not take problem seriously enough
  2. Changes in economy can have misleading impact on official unemployment rates

# Personal Effects of Unemployment

- Income of family will fall when breadwinner loses job
  - Many people unaware that unemployed people do not receive unemployment compensation
    - Unemployment compensation is an income transfer from government to eligible unemployed person
      - To be eligible, one must first have had a job
- Beyond income loss, unemployed person suffers other tangible losses
  - Employment-related health benefits
  - On-the-job experience
- High correlation between unemployment rates and variety of social ills
  - When unemployment rates go up, typically see increase in domestic violence, divorce, alcoholism, child abuse, and suicide

# Macroeconomic Effects of Unemployment

- Macroeconomic problem of unemployment is reduction in nation's output that it causes



# Types of Unemployment

- Three basic types:
  1. **Frictional unemployment**
  2. **Structural unemployment**
  3. **Cyclical unemployment**



# Frictional Unemployment

- Temporary unemployment caused by normal time delay when person seeks first job, changes jobs, or reenters labor force after absence
- Frictional unemployment is normal; many consider it necessary for healthy economy

# Structural Unemployment

- Results from structural changes in economy, such as changes in demand or technology
- Job vacancies may exist for each unemployed worker, but because of structural circumstances within economy, unemployed worker is not suited to particular job
  - Example: A welder is laid off and there is high demand for jobs in the computer industry, but welder lacks education necessary for job in the computer industry

# Cyclical Unemployment

- Results from drop in economic activity in economy as a whole
- Most closely linked to macroeconomy and to macroeconomic policy
  - Only with cyclical unemployment do we assume that economy has insufficient number of jobs

# Full Employment

- Situation in which there is no cyclical unemployment
  - All unemployment is frictional or structural
- Unemployment rate of 4 to 5 percent or slightly higher is often considered to represent full employment
- When economy achieves full employment, may be need to provide better information, training, education, or other services; but no need for macroeconomic policy to correct economy
- On the other hand, when economy does not experience full employment, macro policies must come into play

# Immigration in the U.S.

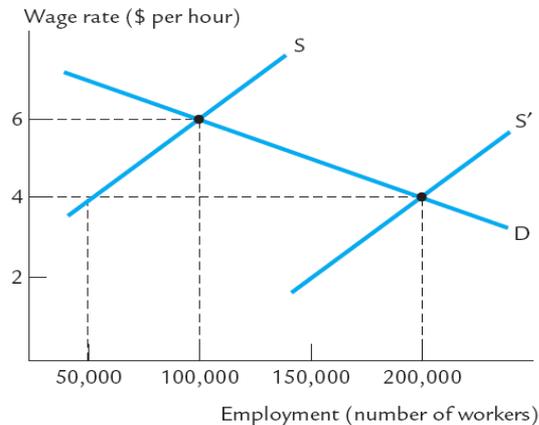
- Currently some 21 million immigrants holding jobs in U.S.
- Animosity toward immigrants permeates public policy
  - Some sought to restrict legal immigrants' eligibility for welfare benefits and impose new requirements that recipients of welfare and applicants for citizenship use English on forms and exams
- President Bush proposed dual program of providing work visas for illegal immigrants already in the country, along with tighter border control to prevent further illegal immigration
  - Conservatives split on issue: many opposed to any overtures to illegal workers in U.S. and others supportive of access to cheap Mexican labor
  - Liberals concerned with equity issues were horrified by initial House bill that would place severe sanctions on illegal immigrants, including requirement to display documentation before receiving health care
    - Disagreement between House and Senate killed chances for passage of immigration bill for near future

# Employment Effects of Immigration

- Many immigrants are highly skilled and educated, but if we focus attention on low-skill immigrants in short run, large-scale immigration increases supply of low-skilled workers and lowers wage rate for these workers
  - At lower wage rate, fewer U.S. workers take low-skill jobs, and immigrants fill more of these jobs

# Employment Effects of Immigration (cont.)

**FIGURE 14-3** | **A U.S. LABOR MARKET FOR LOW-SKILLED WORKERS WITH AND WITHOUT IMMIGRATION**



The quantity of labor (the number of workers) is shown along the horizontal axis, and the price of labor (the wage rate) is shown along the vertical axis. The demand curve  $D$  is the demand for low-skilled workers, and  $S$  is the supply of native-born U.S. workers who offer their labor services to the low-skill labor market. The equilibrium wage rate is \$6 per hour, and the equilibrium number of U.S. workers is 100,000. The immigration of low-skilled workers increases the supply of labor to  $S'$ , thereby lowering the wage rate to \$4 per hour. As a result, the number of native-born workers is just 50,000 workers, while the total number of workers is 200,000. (Note that the increase in supply and decrease in the wage rate are exaggerated in this example in order to show the theoretical result.)

# Employment Effects of Immigration (cont.)

- In longer run, effects of immigration are less clear
  - Lower wages decrease business firms' costs of production, thereby increasing profits
    - May encourage businesses to expand
      - American consumers can purchase larger array of consumer goods and services at lower prices
  - Larger labor force encourages expanded productivity and economic growth
  - Immigrants are consumers
    - As they purchase food, clothing, and housing, increases demand for labor to produce these goods
  - Immigrants, as a group, are entrepreneurial and are more likely to start up businesses than are native-born citizens

# The Minimum Wage

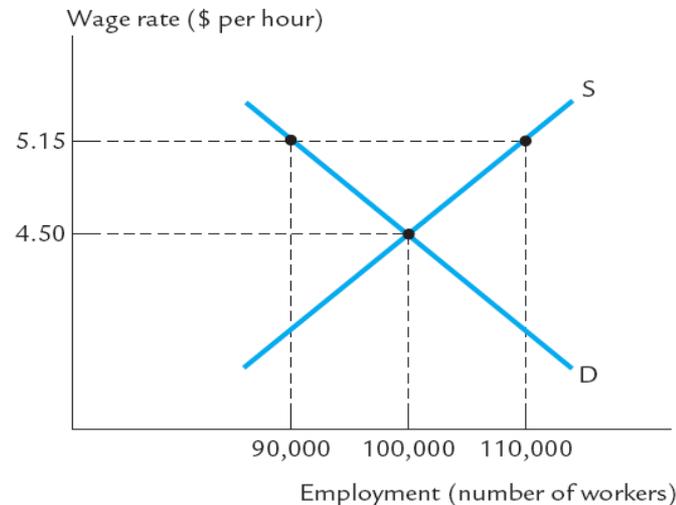
- Legally imposed minimum price (wage) for labor
- As of 2006, federal minimum wage rate was, with a few exceptions, \$5.15
- Several proposals to increase minimum wage, which has not kept up with rate of inflation, have been made
- Minimum wage is example of **price floor**
  - Legally imposed minimum price for a good or service

# The Effects of the Minimum Wage

- Raising minimum wage creates surplus of labor (another way of saying that raising minimum wage creates unemployment)
  - Although minimum wage has benefited some workers (those who are able to find jobs and receive higher wage), it has harmed other workers (those who become unemployed)
  - Business firms also lose as forced to pay higher wages
    - Valid for only low-skill occupations
      - Since minimum wage is below equilibrium wage rates in higher-wage paying professions, becomes ineffective in these professions
        - » Does not raise wages, and does not create unemployment

# The Effects of the Minimum Wage (cont.)

**FIGURE 14-4** | THE MINIMUM WAGE IN A MARKET FOR LOW-SKILLED WORKERS



The quantity of labor (the number of workers) is shown along the horizontal axis. The demand curve  $D$  is the demand for low-skilled labor, and the supply curve  $S$  is the supply of low-skilled labor. The equilibrium wage rate is \$4.50 per hour, and the number of workers is 100,000. A minimum wage of \$5.15 results in a quantity of labor supplied of 110,000 workers and a quantity of labor demanded of 90,000 workers. The result is a surplus of 20,000 workers.

# Inflation

- Rise in average price level
- To calculate inflation rate, use **consumer price index (CPI)**
  - Weighted average of prices of fixed basket of goods and services purchased by typical urban household
  - Tells how prices in one year compare with those in another year
- Inflation rate calculated:
$$\frac{(\text{Current Year CPI} - \text{Prior Year CPI})}{\text{Prior Year CPI}}$$

# Inaccuracy of the Inflation Rate

- Consumer price index tends to systematically overstate true problem of inflation for two reasons:
  1. Basket of goods and services purchased by typical household is deliberately assumed to remain fixed for several years so that changes in prices of basket reflect changes in prices only, not changes in quantities of goods and services themselves
    - When we ignore quantity changes, are ignoring fact that consumers tend to conserve on items for which price is increasing
  2. Many quality changes within basket of consumer items not taken into account
    - Price increase may be recorded for particular item (for example, personal computer) without taking into account some quality improvements of item

# U.S. Inflation Rates

TABLE  
14-5

U.S. INFLATION RATES,\* SELECTED YEARS FROM 1970 TO 2006

<u>Year</u>	<u>Inflation Rate (%)</u>	<u>Year</u>	<u>Inflation Rate (%)</u>
1970	5.8	1998	1.6
1980	13.5	1999	2.2
1990	5.4	2000	3.4
1991	4.2	2001	2.8
1992	3.0	2002	1.6
1993	3.0	2003	2.3
1994	2.6	2004	2.7
1995	2.8	2005	3.4
1996	3.0	2006	2.5
1997	2.3		

<sup>a</sup>Based on CPI with the base year being the average of the time period 1982–1984.

Source: U.S. Department of Commerce, Census Bureau, <http://www.census.gov>.

# Hyperinflation

- Extremely high inflation, whereby money becomes almost worthless
  - People may resort to **barter**
    - Direct exchange of goods and services for other goods and services rather than for money
- Almost always occurs in countries experiencing war, revolution, or other severe disruptions of economies
- Should not be a concern for United States—even if severe economic disruptions were to occur, policies of Federal Reserve System and government could mitigate impact on inflation rates

# Problems with Inflation

- Can be categorized as:
  - Redistribution
    - Even though purchasing power of nation is not harmed by inflation, some people will gain and some will lose
      - Negative effects of inflation on people whose incomes do not increase as rapidly as price level will be offset by positive effects on others who see incomes rise more rapidly than average price level
      - Borrowers gain and lenders lose during inflation...only if inflation is unanticipated

# Problems with Inflation (cont.)

## – Uncertainty

- Inefficiency that may result from uncertainty about prices
  - If inflation rate has varied considerably from year to year over long period of time, no one can reliably predict what rate of inflation will be over next few years

## – **Menu costs**

- Costs associated with reprinting menus, revising cost schedules, adjusting telephones and vending machines, and so on, when inflation occurs

## – International effects

- Makes prices in that country higher than those in other countries
  - Increases country's imports while reducing exports

# Types of Inflation

- **Demand-pull inflation**
  - Occurs when any sectors of economy increase demand for goods and services
- **Cost-push inflation**
  - Occurs as result of increases in costs of production
- **Profit-push inflation**
  - Occurs when businesses use market power to restrict output in order to push up prices and profits

# The Economic Left and the Economic Right

- THE ECONOMIC LEFT (**Liberal**)
  - Prefer to see lower rates of unemployment and inflation
  - May wish to see government heavily involved in dealing with economy

- THE ECONOMIC RIGHT (**Conservative**)
  - Prefer to see lower rates of unemployment and inflation
  - May be reluctant to see expanded role of government in economy
  - Have more confidence in private sector to solve economic problems

## Appendix: Construction of the Consumer Price Index

- Constructed first by choosing a base year
- Calculate consumer price index for particular year by dividing actual weighted-average price of fixed basket of consumer goods and services in that year by actual weighted-average price of fixed basket of consumer goods and services of base year and multiplying result by 100