

Econ. 1A. Chapter 6: **Job and Unemployment**

1. **Unemployment rate is an indicator showing the economic health of an economy.**
In US, unemployment rate was compiled by Bureau of Labor Statistics (BLS) and based on Current Population Survey.
2. **Why is unemployment a problem?**

Unemployment is a serious personal and social problem because it results

(a) lost production and income

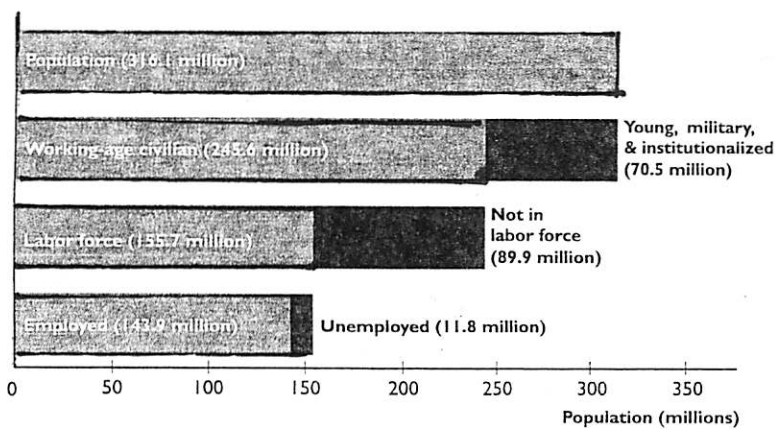
The loss of a job brings a loss of income for the unemployed worker and a loss of production. The loss of income is devastating for the people who bear it and makes unemployment of frighten prospect for everyone.

(b) lost human capital

Human capital: the knowledge and skill that people obtain from education, on-the-job training and work experience.

3. May 2013	millions
Population	316.1
- <i>People under 16, military, & living in institution</i>	<u>- 70.5</u>
Working age population	245.6
- <i>Not in labor force</i>	<u>- 89.9</u>
Labor force	155.7
<i>Employment</i>	<u>- 143.9</u>
Unemployment	11.8

Population Labor Force Categories



The U.S. population is divided into the working-age population and the young, military, and institutionalized. The working-age population is divided into the labor force and those not in the labor force. The labor force is divided into those employed and those unemployed. The figure shows the data for May 2013.

SOURCE OF DATA: Bureau of Labor Statistics.

4. **Unemployment:** all persons who during the week before survey:

- a. had no employment, b. were available for work.

And either

- a. had made specific efforts to find job some time during **the previous 4 weeks** or
b. were waiting to be recalled to a job from which they had been laid off.

5. **Employment:** all persons who during the week before the survey:

- a. worked at least 1 hour as paid employees or worked 15 hours or more as unpaid workers in their family business.
b. were not working but had jobs or business from which they were temporarily absent.

Two Main Labor Market Indicators

6. **Unemployment rate (UR or U-3)** = (No. of people unemployed/Labor force) \times 100%.
UR (May, 2013) = (11.8/155.7) \times 100% = 7.6%.

Labor force participation rate = (labor force/working age population) \times 100%
LFPR(May 2013) = (155.7/245.6) \times 100% = 63.4%.

Alternative Measures of Unemployment

The unemployment rate (UR or U-3) based on the official definition of unemployment omits some types of underutilization of labor: (1) marginally attached workers; (2) part-time workers.

7. **Marginally attached workers = discouraged workers + others.**

(a) **Marginally attached worker:** A person who does not have a job, is available and willing to work, has not made specific efforts to find a job within the previous 4 weeks, but has looked for work sometimes in the recent past.

(b) **Discouraged worker:** A marginally attached worker has not made specific efforts to find a job within the previous 4 weeks because previous unsuccessful attempts to find a job were discouraging.

Example:

May 2013:

discouraged workers = 0.753 million, other marginally attached workers = 1.372 millions
marginally attached workers = (discouraged workers + other marginally attached workers) = 0.753 + 1.372 = 2.125 millions.

(1) U-4

(no of people unemployed + discouraged workers) = $11.8 + 0.753 = 12.553$.

(labor force + discouraged workers) = $155.7 + 0.753 = 156.5$

$$U-4 = (12.6/156.5) \times 100\% = 8.0\%$$

(2) U-5

(no of people unemployed + marginally attached workers) = $11.8 + 1.8 = 13.6$

(labor force + marginally attached workers) = $155.7 + 1.8 = 157.5$

$$U-5 = (13.6/157.5) \times 100\% = 8.7\%$$

8. Part-Time Workers

(a) **Labor force** includes *full-time workers* (who usually work 35 hours or more a week), and *part-time workers* (who usually work less than 35 hours per week).

(b) **part-time workers = part time for economic reasons + part time for noneconomic reasons.**

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(i) **Part time for economic reasons:** people who work 1 to 34 hours per week but are looking for full-time work and cannot find it because of unfavorable business conditions.

(ii) **Part time for noneconomic reasons:** people who work part time because they don't want full time work and are not available for such work. For example, people with health problem, family or personal responsibilities, or education commitments.

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Example:

May 2013,

Employment = full time + part time = $117.1 + 26.8 = 143.9$

Part time = part time for economic reasons + part time for noneconomic reasons
= $7.9 + 18.9 = 26.8$.

A = (labor force + marginally attached workers) = $155.7 + 1.8 = 157.5$

B = (no of people unemployed + marginally attached workers + part time for economic reasons) = $11.8 + 1.8 + 7.9 = 21.5$

$$U-6 = B/A = (21.5/157.5) \times 100\% = 13.7\%.$$

Labor Market Trends and Fluctuations**9. Unemployment rate (U-3)**

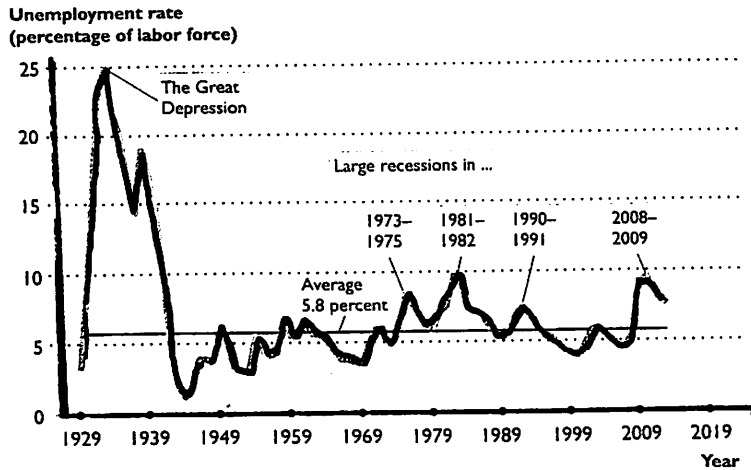
(a) The average unemployment rate (U-3) from 1948-2011 is 5.8%.

(b) The unemployment rate fluctuates with the business cycle, increasing in recessions and decreasing in expansion.

(c) During the great depression years (1929-1939), each year U-3 is above 5.8%. U-3(1933) = 25%.

(d) During the recessions of 1973-1975, 1981-1982, 1990-1991 and 2008-2009, U-3 increased and was above 5.8%.

The U.S. Unemployment Rate: 1929-2013

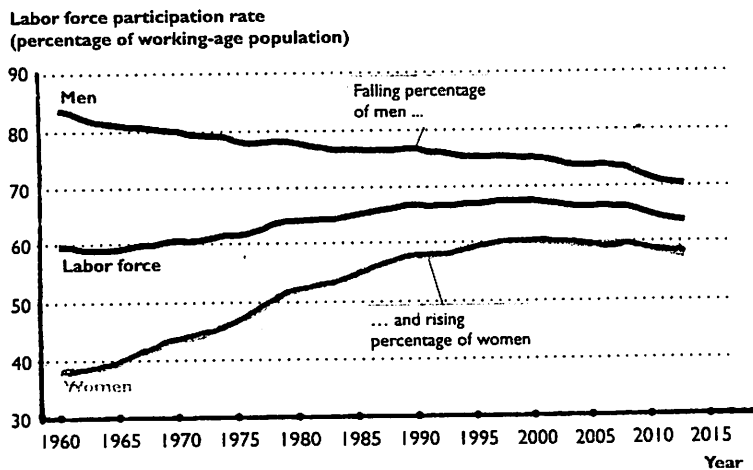


The average unemployment rate from 1948 to 2013 was 5.8 percent. The unemployment rate increases in recessions and decreases in expansions. Unemployment was at its lowest during World War II and the expansions of the 1950s, 1960s, and the 1990s and at its highest during the Great Depression and the recessions of 1981-1982 and 2008-2009.

10. The labor force participation rate

(a) The labor force participation rate increased from 59% in 1959 to 67% in the late 1990s. As a result of the number of women entered the labor force has increased.

The Changing Face of the Labor Market: 1960-2013



The labor force participation rate increased from 1960 to 1999 but then decreased slightly.

The labor force participation rate of women has driven these trends, increasing strongly from 37 percent in 1960 to 60 percent in 1999.

The labor force participation rate of men has decreased steadily through the past 53 years.

- (b) The labor force participation rate of women has increases and the labor force participation rate of men has decreased.

	Labor force participation rate	
	1959	2009
Women	37%	60%
Men	84%	72%

Note:

There are four reasons for the increase in labor participation rate of women.

- (1) More women pursued a college education and so increased their earning power.
- (2) Technological change in workplace created a large number of white-collar jobs with flexible work hours that many women found attractive.
- (3) Technological change in the home increased the time available for paid employment.
- (4) Families looked increasingly to a second income to balance tight budgets.

Unemployment and Full Employment

11. Types of unemployment

- a. **Frictional unemployment** is the unemployment that arises from normal labor turn over – from people entering and leaving the labor force and from the ongoing creation and destruction of jobs.
- b. **Structural unemployment** is the unemployment that arises when change in technology or international competition change the skills needed to perform jobs or change the locations of jobs.
- c. **Cyclical unemployment** is the fluctuating unemployment over business cycle that increases during a recession and decreases during an expansion.

12. **Full employment** occurs when there is no cyclical unemployment or, equivalently, when all the unemployment is frictional, or structural. **This indicates that at full employment, $UR \neq 0$.**

13. **Natural unemployment rate (NUR)** is the unemployment rate when the economy is at full employment. That is there is no cyclical unemployment or, equivalently, when all the unemployment is frictional, or structural.

14. The natural unemployment rate (NUR) is influenced by many factors but the most important ones are:

(1) The age distribution of population.

An economy with a young population has a larger number of new jobs seekers every year and has a high level of frictional unemployment. An economy with an aging population has fewer new job seekers and a low level of frictional unemployment.

(2) The pace of structural change.

The amount of structural unemployment fluctuates with the pace of technological change and the change driven by fierce international competition.

(3) The real wage.

Anything that raises the real wage above the market equilibrium level creates a surplus of labor and increase the natural unemployment rate (NUR).

(4) Unemployment benefits.

Unemployment benefits increase the natural unemployment rate (NUR) by lowering the opportunity cost of job search.

Note:

There is no controversy about the existence of a natural unemployment rate. Nor is there disagreement that the natural unemployment rate changes. But economists don't know its exact size or the extent to which it fluctuates. The Congressional Budget Office estimates NUR and its estimate for 2013 is $NUR = 6.0\%$.

Unemployment and Real GDP

15. **Potential GDP (Y_p)** is the level of RGDP when all the economy's factors of production – labor, land, capital and entrepreneurial ability – are employed. It should be noted that Y_p occurs when unemployment rate = natural unemployment rate, i.e., $UR = NUR$.

16. The relationship between Y (RGDP) and Y_p

- (a) $UR < NUR \rightarrow Y > Y_p$.
- (b) $UR = NUR \rightarrow Y = Y_p \rightarrow$ full employment.
- (c) $UR > NUR \rightarrow Y < Y_p$.

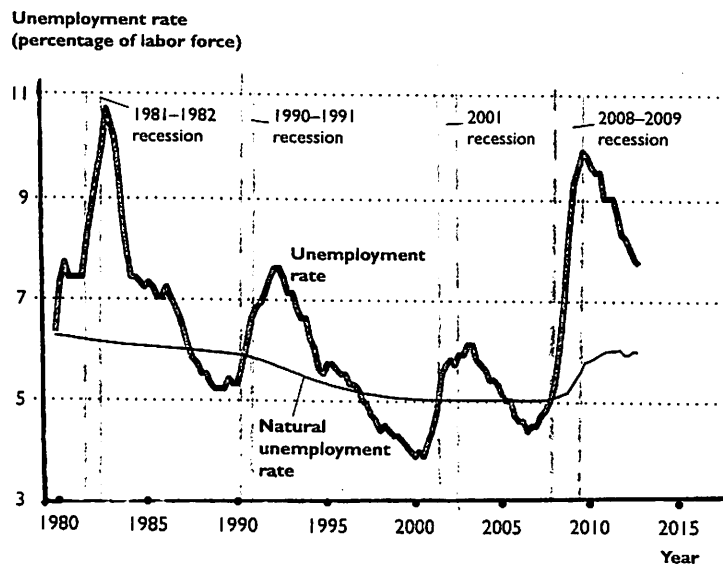
17. **Output gap** is RGDP minus potential GDP expressed as a percentage of potential GDP. That is

$$\text{Output gap} = [(Y - Y_p)/Y_p] \times 100\%$$

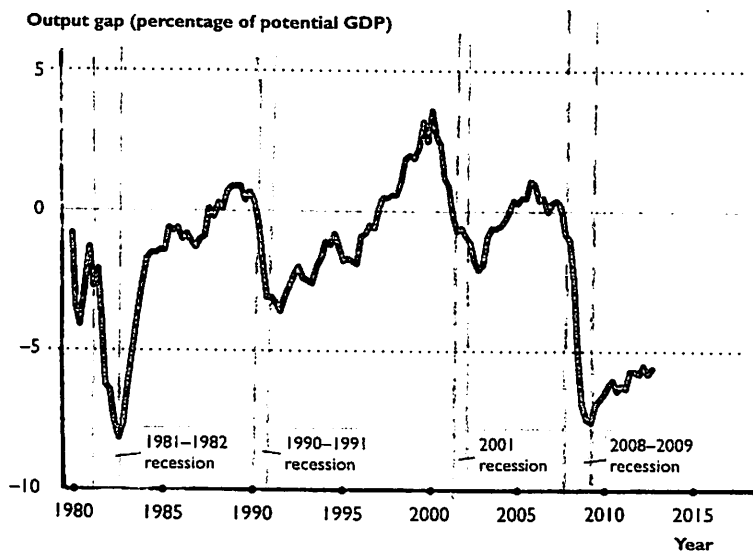
- (a) Output gap > 0 (positive) $\rightarrow UR < NUR$.
- (b) Output gap = 0 $\rightarrow UR = NUR$.
- (c) Output gap < 0 (negative) $\rightarrow UR > NUR$.

18. As the unemployment rate fluctuates around the natural unemployment rate, RGDP fluctuates around potential GDP and the output gap fluctuates between negative and positive values.

The Relationship Between Unemployment and the Output Gap



(a) Cyclical and natural unemployment



(b) The output gap

As the unemployment rate fluctuates around the natural unemployment rate in part (a), the output gap—real GDP minus potential GDP expressed as a percentage of potential GDP—fluctuates around a zero output gap in part (b).

When the unemployment rate exceeds the natural unemployment rate, real GDP is below potential GDP and the output gap is negative (red sections in both parts).

When the unemployment rate is below the natural unemployment rate, real GDP is above potential GDP and the output gap is positive (blue sections in both parts).

The natural unemployment rate shown in the graph is the Congressional Budget Office's estimate. It might turn out to be a substantial underestimate for the years since 2008.

SOURCES OF DATA: Bureau of Economic Analysis, Bureau of Labor Statistics, and Congressional Budget Office.