

## Lecture 3: Unemployment

Talk about business cycles often turns to the question of unemployment. There is a lot of confusion about unemployment and we need to spend some time discussing some of the basics.

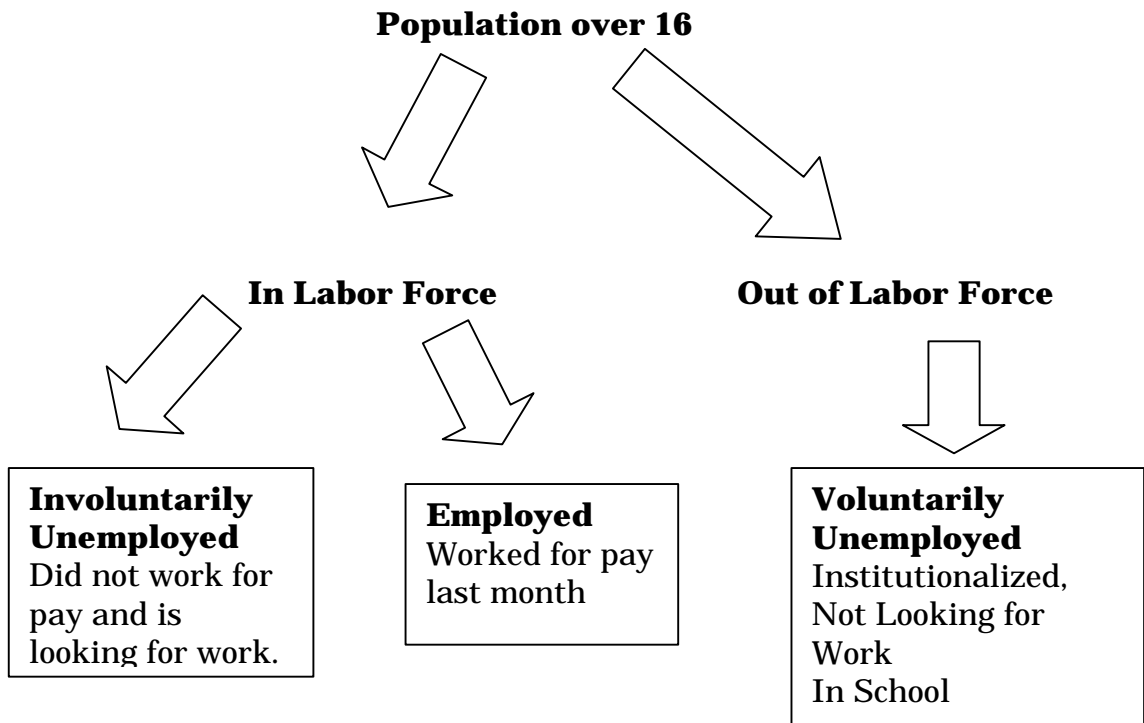
How the Unemployment Rate is computed

Each month, the **Bureau of Labor Statistics** (BLS) publishes something called the **unemployment rate**, and the commissioner of the BLS is summoned before congress to explain what the number means. To compute the unemployment rate, the BLS interviews a sample of 60,000 workers. It divides respondents into four categories according to the answers they give:

|  |   |
|--|---|
| Are you under 16?  | If you are under 16, you do not count. If you are 16 or older, you are a member of the <b>working age population</b> .                                    |
| Are you in school or Institutionalized?  | If so, you are <b>voluntarily unemployed</b> even if you are in prison  |
| If you answered no, did you work for pay at all last month (either inside or outside the house)? | If so, Congratulations! You are <b>employed</b> . Note: the BLS counts you as employed even if you were not able to work as many hours as you would like. |
| If none of these questions fit, are you looking for work?  | If not, you are <b>voluntarily unemployed</b> .   |
| Are you really looking for work?   | The BLS is not stupid. You really have to be looking for work in order to qualify as <b>unemployed</b>  |

**Chart 3-1**

**Classification of Population by Unemployment Status**



| <b><i>A pop quiz to see if you understand the concepts</i></b>  |   |   |
|---|---|---|
| <ul style="list-style-type: none"> <li>Each of the following individuals in Butte Montana has a mid-life “career change”. Would the Bureau of Labor Statistics count them as unemployed?</li> </ul> |   |   |
| Fred  | Fired, according to his boss for incompetence, and now looking for a comparable job.  | Unemployed  |
| Wilma   | Quit to have a baby   | Voluntarily Unemployed  |
| Barney  | Took early retirement in a corporate restructuring; would like a new position that does not involve relocation. Knows that nothing local is available, and so is not looking very hard. | Since he is retired, he is considered out of the labor force.                       |
| Betty   | Works during the peak of the tourist season in a dude ranch and then lives off unemployment compensation for the rest of the year.  | Officially she is unemployed, but in reality she is voluntarily unemployed          |
| BamBam  | Has a 15 hour a week job, but is desperate to get full time unemployment  | Employed. It does not matter how many hours you work, as long as you work for pay   |
| Pebbles   | Laid off at the local brewery but expects to be rehired when demand picks up in a month or two. Spends her time doing repairs on the house.   | Voluntarily unemployed  |
| Slate   | Expects to graduate from college in at the end of the semester, but is in despair about the changes of getting a job then.  | Out of the labor force. He will not be in the labor force until he finishes school. |

## Unemployment

The interaction of labor supply and demand determines the number of people working. All who want to work at that wage, can find it. There is quite literally, no unemployment. Alas, the real world is not that kind.

There are some basic facts we can establish about unemployment.

### *Fact One: Unemployment is Good for You*

On an individual basis unemployment may not seem like a good thing, but in a macro sense unemployment is good. The reason being that our economy relies on a continual efficient allocation of resources. In many cases, this allocation comes via unemployment. It is what Joseph Schumpeter called the process of creative destruction.

The modern American economy is quite dynamic; with over 130 million employed.

- By one estimate, 15 million jobs currently existing will not exist a year from now.
- More than 15 million new jobs will be created in the coming year.
- People are always entering and leaving the labor force.
- New workers are entering the labor force each year, just as some jobs open because of people retiring each year.

Table 3-2 sheds some light on how the unemployed got unemployed. As you can see, over 40 percent of the unemployed are either reentrants or new entrants to the labor force.

|                   |           |      |
|-------------------|-----------|------|
| <b>Unemployed</b> | 5,880,000 | 100% |
| Job Losers        | 2,622,000 | 44%  |
| On Layoff         | 848,000   | 14%  |
| Other             | 1,774,000 | 30%  |
| Job Leavers       | 783,000   | 13%  |
| Reentrants        | 2,005,000 | 35%  |
| New Entrants      | 469,000   | 8%   |

*Fact Two: A Healthy Economy will have some Unemployment*

These dynamic changes do not take place instantly. The task of matching supply and demand will always mean some unemployment. This part of the price we pay for constantly reallocating resources.

Is it worth it? Consider the alternative by looking at the old Soviet Empire where unemployment was illegal, you were assigned a job and you could neither quit nor be fired. While "unemployment" was thus non-existent, the real unemployment of wasted resources was much higher than in industrial democracies like the United States.

*Fact Three: Different Age, Gender, Ethnic and Socioeconomic Groups have Different Equilibrium Unemployment Rates*

The **equilibrium unemployment rate**, what many economists call the **natural unemployment rate**, occurs when job creation equals job destruction. Different groups have different unemployment rates. There are significant differences among race, sex, and age groups, as the following data on unemployment data show:

| <b>Table 3-3</b>                                    |                  |              |              |
|---|------------------|--------------|--------------|
| <b>Unemployment Data for Different Groups, 1999</b> |                  |              |              |
|   | <b>All Races</b> | <b>White</b> | <b>Black</b> |
| Total   | 4.2%             | 3.7%         | 8.0%         |
| <i>Males</i>  |                  |              |              |
| Total   | 4.1%             | 3.7%         | 8.2%         |
| 16-19 Years   | 14.7%            | 12.6%        | 30.9%        |
| 20 Years and Older                                  | 3.5%             | 3.0%         | 6.7%         |
| <i>Females</i>                                      |                  |              |              |
| Total   | 4.3%             | 3.8%         | 7.8%         |
| 16-19 Years   | 13.2%            | 11.3%        | 25.1%        |
| 20 Years and Older                                  | 3.8%             | 3.3%         | 6.8%         |

| <b>Table 3-4</b>                         |      |
|--|------|
| <b>Additional 1999 Unemployment Data</b> |      |
| Experienced Wage and Salary Workers      | 4.0% |
| Married Men, Spouse Present              | 2.2% |

|                             |      |
|-----------------------------|------|
| Women who Maintain Families | 6.4% |
|-----------------------------|------|

*Fact Four: Unemployment is a relatively short phenomenon. Most people are unemployed for a relatively short period.*

The process of matching workers and jobs does not take place instantly. It takes time for firms to find just the right worker, just as it takes time for people to find the right position. But it does not take forever, as Table 3-5 shows.

| <b>Table 3-5<br/>Unemployment by Duration, 1999</b> |                  |             |
|---|------------------|-------------|
| <b>Number Unemployed</b>                            | <b>5,880,000</b> | <b>100%</b> |
| Less Than 5 Weeks                                   | 2,568,000        | 44%         |
| 5-14 Weeks  | 1,832,000        | 31%         |
| 15-26 Weeks   | 755,000          | 13%         |
| 27 Weeks and Over                                   | 725,000          | 12%         |
| Mean Duration (Weeks)                               | 13.4             |             |
| Median Duration (Weeks)                             | 6.4              |             |

*Fact Five: The economy is always in the process of moving to equilibrium unemployment*

An example will show how this process can occur. Suppose that each month, a million people become unemployed because their jobs are destroyed. Suppose further that, on average, a third of all unemployed people will find a job each month. Then the equilibrium unemployment rate will be three million. Each month, one million newly unemployed will swell the unemployment roll, just as one million newly employed will leave. The entire process is shown in table 3-6.

| <b>Table 3-6<br/>Return To Equilibrium Unemployment When Unemployment is Below Equilibrium Level</b> |                            |   |                                |
|--|----------------------------|---|--------------------------------|
| Total Unemployed Beginning of Period   | New Unemployed This Period | Job Finders in Present Period (1/3 of unemployed) | Total Unemployed End of Period |
| 1,000,000  | 1,000,000                  | 333,000   | 1,666,000                      |
| 1,666,000  | 1,000,000                  | 550,000   | 2,116,000                      |
| 2,116,000  | 1,000,000                  | 698,000   | 2,418,000                      |

|           |           |           |           |
|-----------|-----------|-----------|-----------|
| 2,418,000 | 1,000,000 | 798,000   | 2,620,000 |
| ↓         | ↓         | ↓         | ↓         |
| 3,000,000 | 1,000,000 | 1,000,000 | 3,000,000 |

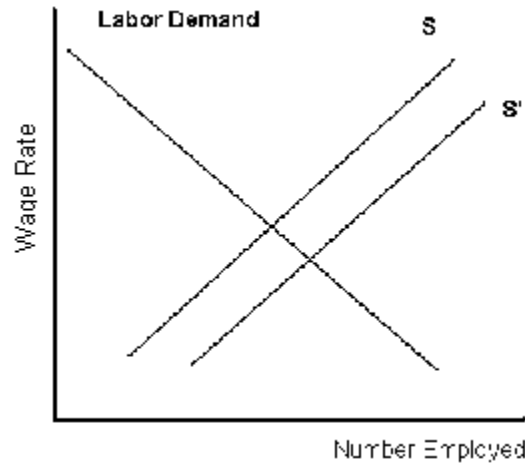
If the number of unemployed were to rise to, say, six million, then the process of job destruction and job creation would drive the number of unemployed down to three million. The first month, a million people would lose their jobs, but two million would find new jobs. Thus, the number of unemployed would shrink to five million. In the second month, 1 2/3 million would find new jobs; there would be a million new unemployed, with the net effect being to shrink the number of unemployed to 4 1/3 million. Over time, this process will bring the number of unemployed back to three million. Table 3-7 shows the process.

| <b>Table 3-7</b>   |                            |   |                                |
|--|----------------------------|---|--------------------------------|
| <b>Return To Equilibrium Unemployment When Unemployment is Above Equilibrium Level</b> |                            |   |                                |
| Total Unemployed Beginning of Period   | New Unemployed This Period | Job Finders in Present Period (1/3 of unemployed) | Total Unemployed End of Period |
| 6,000,000  | 1,000,000                  | 2,000,000   | 5,000,000                      |
| 5,000,000  | 1,000,000                  | 1,666,000   | 4,333,000                      |
| 4,333,000  | 1,000,000                  | 1,430,000   | 3,903,000                      |
| 3,903,000  | 1,000,000                  | 1,287,000   | 3,616,000                      |
| ↓  | ↓                          | ↓   | ↓                              |
| 3,000,000  | 1,000,000                  | 1,000,000   | 3,000,000                      |

Some people argue that this argument is incorrect, that there may be times when there are not enough jobs to go around. Certainly, you see vestiges of this argument when you drive around Ohio and see the signs posted by our current governor by each new state-funded construction project. The signs proudly advertise "Jobs for Ohioians", as if jobs have to be created. (In fairness to the governor, the signs look just like those used by his predecessors).

This argument is nonsense. In fact, people create their own jobs by being willing to accept lower wages. The total number of jobs is determined by the supply and demand for labor. If a person wants to enter the labor market, the effect is to shift the supply curve to the right, and thus create a new job. The process is illustrated in Figure 3-2.

Figure 3-2  
We Create our own jobs



Whenever someone enters the labor force, the effect is to shift the labor supply curve to the right, here from  $S$  to  $S'$ . As that happens, wage rates adjust so that demand and supply are in balance. The adjustment may not be instantaneous, for search is required.

Of course, it may take some time for the person to find employment, and the process requires effective search. It is not enough simply to decide that one wants a job and then sit on the front porch waiting for a job to come your way. It also requires realistic expectations (sorry, none of us will get jobs as brain surgeons). Fundamentally, we create our own jobs.

*Fact Six: Many Government Policies can affect the Equilibrium Unemployment Rate*

The easiest way to see this is to consider the data in Table 3-8, 1998 unemployment rates for several major industrial counties. These data suggest major international differences in the natural rate.

**Table 3-8**  
**1998 Unemployment Rates for**  
**Different Countries**

|                |      |
|----------------|------|
| France         | 11.7 |
| Japan          | 4.1  |
| Germany        | 9.4  |
| Italy          | 12.3 |
| United Kingdom | 6.3  |
| Canada         | 8.3  |
| United States  | 4.5  |

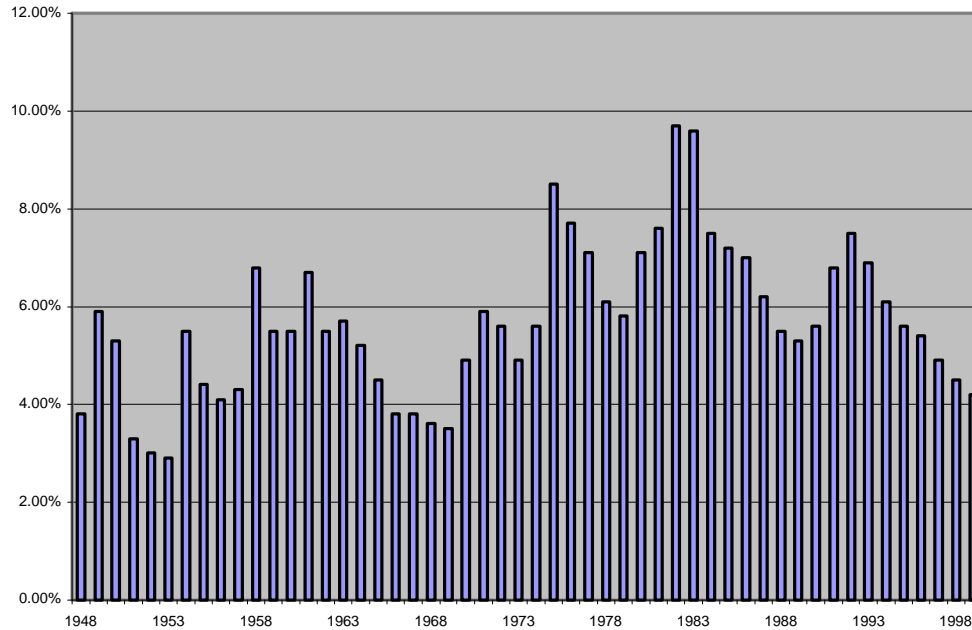
In European countries, the unemployment rates are higher than the US. Here are some possible reasons for this.

- Large safety net. Workers in Europe receive a large portion of their pay from unemployment and for much longer time than in the US. The rules about which type of jobs they have to accept are very narrow. With the generous benefits, many prefer to remain unemployed.
- Rigid labor force: In Europe, it is very difficult to fire someone, so firms are hesitant to hire. The benefits that companies are required to give each worker make it cheaper to pay overtime in many cases rather than hire a new worker.
- Different hiring policies for young people. Given the difficulty of firing, many European firms are unwilling to hire inexperienced young people. Thus, they spend much more time working as causal workers, or in the gray market.
- The Japanese unemployment rate is lower than the US, although Japan is in an economic transition following a severe recession that may change this pattern. Japan has different employment policies. Many Japanese firms will not fire or layoff any workers. In Japanese companies, many workers go to work, though they have nothing to do. Some estimates put the number of workers in this situation at over one million.

*Fact Seven: The Unemployment Rate is cyclical,  
rising and falling with the business cycle.*

Although we are talking about equilibrium unemployment in this lecture, it is important to note that the unemployment rate does fluctuate. A brief look at unemployment rates over the past 35 years will make this point.

## Unemployment by Year, 1948-1999



Most economists interpret these swings to mean unemployment can differ from the equilibrium rate, while others suggest that the equilibrium rate is just highly volatile.

### Relation to the Text

Each lecture ends with a section relating it to the text. In some cases, material is omitted, either because the text covers it well enough or because it is not worth learning. In other cases, material is added. Each of these “lectures” will end with a brief note relating the lecture to the text, describing what material is left to the student to learn alone and what material may safely be skipped.

***Which Chapters does this lecture cover?***

| Section from Stockman                          | Coverage |
|--|----------|
| Ch. 6, Equilibrium Employment and Unemployment | Covered  |

***What material is new?***

Unemployment is covered in more detail than the textbook does.

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