Macroeconomics

Topic 5: "Explain what factors determine the level of unemployment."

Reference: Gregory Mankiw's *Principles of Macroeconomics*, 2nd edition, Chapter 14.

What is unemployment and how is it measured?

This topic asks you to explain the causes of unemployment. In order to do that you first must know what we mean by unemployment and how the unemployment rate is measured.

Each month, the Bureau of Labor Statistics of the US Government surveys a sample of the US population and asks them about their employment status during the last week. The precise definitions can be complicated, but the basic idea is that each adult (aged 16 and older) in the survey is put into one of three categories: Employed, unemployed and not in the labor force. If the person worked at a full-time or part-time job they are classified as employed. If the person didn't work, but wanted to work and was looking for work, they are classified as unemployed. If the person did not want to work, for example, if they were a full-time student or retired, they are classified as being not in the labor force.

When calculating the extent of unemployment in the economy we only want to include the people who want to work. The total number of people who want to be work is called the labor force and can be defined as the sum of the employed and unemployed:

Labor Force = Number of Employed + Number of Unemployed (seeking work)

We can then define the unemployment rate as the percentage of the labor force that is unemployed:

Unemployment Rate = ((Number of Unemployed)/(Labor Force))*100

The following problem uses these formulas:

Problem: In April of 2002, the Bureau of Labor Statistics released the following data (in thousands):

Number of Employed:	133,976
Number of Unemployed:	8,594
Not in the Labor Force:	70,922

Calculate the Labor Force and the Unemployment Rate.

Answer: Labor Force = 133,976 + 8,594 = 142,570
Unemployment Rate = (8,594/142,570)*100 = 6.0%

Classifying types of unemployment

People are unemployed for a number of different reasons, and so we divide unemployment into three different types:

Frictional unemployment (which is also called job search unemployment in some textbooks) is short-run unemployment that results from the activity of searching for a new job. An example of this is someone who moves to California because they believe there are better job opportunities there, but is unemployed for a few weeks until they find a new job. Structural unemployment is chronic (persistent) unemployment that happens when wages in labor markets do not balance supply and demand. An example of this is when an individual has limited job skills and so no firm is willing to give them a job, even at the lowest wage they can legally offer. Cyclical unemployment is short-term unemployment that is associated with the ups and downs of the economy. An example of this is when the economy enters a recession and workers are laid-off, but with the expectation that they will go back to work when the economy picks-up.

Next, we will go through the definitions in more detail.

What causes frictional unemployment?

Frictional unemployment is unemployment that results from the activity of searching for a new job. Essentially, labor markets are about matching firms with workers. For example, there might be a company that is looking for a programmer with certain computer skills and you might have those skills. It is in the labor market where you and the company find each other. However, this can be a difficult task. The company has to evaluate many candidates to find the worker with the best qualifications, and you need to find the company with the right opening that makes the best offer. Doing all this searching takes time, and sometimes it means spending time unemployed. After all, it might be in your best interest to turn down a low-paying job, even when you are unemployed, if you believe that you can find a higher-paying job in the near future.
In a market economy, there are always some companies going out of business and other companies starting up. This starts people searching for new jobs and starts companies searching for new workers, which means that there will always be some unemployment in the economy.

What causes structural unemployment?

Structural unemployment is chronic (persistent) unemployment that happens when wages in labor markets do not balance supply and demand. To see why structural unemployment occurs we must look at why the wage rate does not adjust. One reason for this could be laws that restrict the lowest level of wages that firms can offer - the minimum wage. Imagine that you are a worker without much in the way of job skills. Because of this, you are not very productive, and the most that an employer would offer you is $3 per hour for an entry level job. However, if the minimum wage is $6 per hour then the employer won’t hire you. You are considered unemployed because you want to work at the market wage of $6, but no employer will hire you at that wage. Because of this, we would expect that lower average skill levels, or a higher minimum wage, would mean that there will be more structural unemployment in the economy.

Unions can have a similar effect on unemployment. Often unions restrict the supply of labor, by limiting the number of workers eligible for a job, in order to get a higher wage. This produces a higher income for those who have jobs, but results in structural unemployment for those that do not. These unemployed workers would like to work for the higher wage (or even a lower wage), but businesses are not willing to hire them at the high wage and are not allowed by the union to offer them a lower.

What causes cyclical unemployment?

Taken together, structural and frictional unemployment make up what is called the <u>natural rate of unemployment</u>. The word natural does not necessarily mean that it is desirable (after all, we would like to reduce structural unemployment); it just means that this is the rate of unemployment that we would expect to have in the economy on average.

However, sometimes the economy is growing faster than average and sometimes slower, and this will affect the amount of unemployment. When the economy is booming, unemployment falls, and when the economy is in a recession, unemployment rises. Unemployment due to the temporary ups and downs of the economy is called <u>cyclical unemployment</u>. Formally, cyclical unemployment is defined as the deviation of unemployment from its natural rate.