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NEWSLETTER

October ■ 2013

Why Scarce Resources Are Sometimes Unemployed

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“Today, Apple is going to reinvent the phone.”

—Steve Jobs, former CEO of Apple, introducing the iPhone on January 9, 2007

Think about the last time you used a landline or even a pay phone to make a call. Cell phones are everywhere and we take them for granted today. But their invention and widespread production have required a specific set of resources. In fact, providing the goods and services we use every day—toothpaste, milk, electricity, shoes—requires a fairly efficient use of many resources. Those resources include the people who produce the goods and services. However, resources sometimes go unused or are not put to their best use. Some lines of production can become idle, some people can become unemployed, and mismatches can occur. How does that happen?

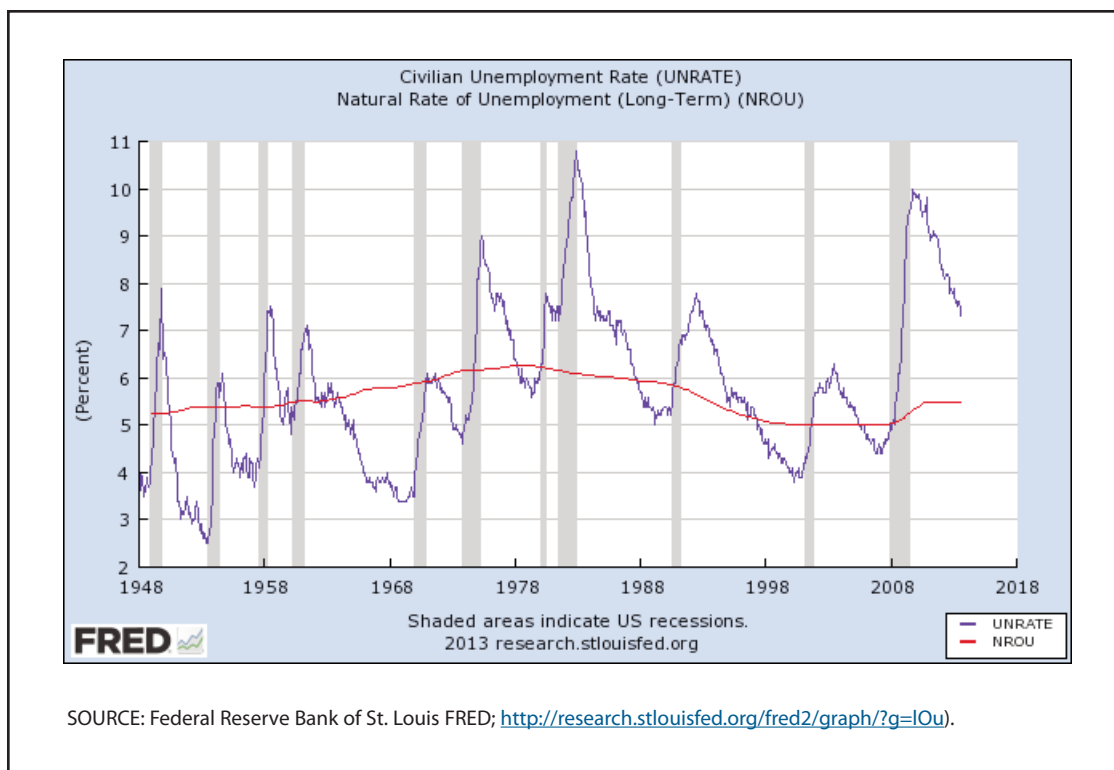
The world’s resources are limited. Ideally, the resources we do have would be put to their best use to satisfy the most people. But resources can be unused when markets fail to allocate them efficiently. Such **inefficiency** means the economy is producing less than it could with its limited supply of resources. To illustrate, imagine if an iPhone plant shut down for a few hours; it likely wouldn’t produce the same number of phones it normally produces in a full day. The factory was capable of producing a certain amount of iPhones in one day when the resources were available, but the daily goal wasn’t attained because time was not used efficiently. This situation is akin to what happens when markets operate inefficiently.

Types of Unemployment

When we talk about unemployed resources, we usually do so with respect to labor (e.g., “Uncle Billy lost his job and he is now *unemployed*”). The blue line on the chart illustrates the proportion of the labor force not being used to produce goods and services—that is, the **unemployment rate**.¹ Let’s discuss the three types of unemployment to explain why some resources, especially human resources, go unused.

First, some human resources may be unemployed because it takes time for skilled workers to find a job that uses their skills. This is known as **frictional unemployment**. For example, when students graduate from college, it may take some time for them to find a suitable job or they may need to relocate to find a job in their field. When these graduates are actively seeking work but not working, they are considered frictionally unemployed. In other words, they have skills that employers are seeking, but it takes some time for them and a prospective employer to realize they are a match. During this time, their human resources (i.e., labor) go unused.

Second, human resources may be unemployed because they do not possess the skills employers are seeking. This is known as **structural unemployment**. For example, in the early days of the telephone, switchboard operators (also known as telephone operators) literally had to manually connect two lines to complete a phone call. The United States had 373,000 switch-



board operators in 1968² but only 10,710 as of May 2012.³ Switchboard operators gradually became unemployed because of technological advancements. Technology allowed people to connect automatically and switchboard operators were no longer necessary to connect the phone lines. In other words, the switchboard operators' skills were no longer needed. Operators needed time to learn new skills and become employable again; during this period their human resources (i.e., labor) went unused.

Because the economy is dynamic, there is always some level of frictional and structural unemployment, which is known as the **natural rate of unemployment**. However, there is a major difference between frictional and structural unemployment. Those who are frictionally unemployed have useful, transferable skills. Those who are structurally unemployed do not.

Let's look at the chart again. Notice the difference between the natural rate of unemployment (the red line) and the current unemployment rate (the blue line). The difference between these two lines shows the third type of unemployment—**cyclical unemployment**. This type of unemployment occurs when the economy has slowed, fewer goods and services are being purchased, and, as a result, fewer workers are needed to produce those goods and services. Think about the economy during the Great Recession of 2007-09. Because the economy was slowing, people started cutting back on expenses such as cell phones. If people stopped buying new cell phones, Apple might have to cut back on the number of people employed to make iPhones or stores to sell them. In this case, you might go to the mall and see a former Apple store sitting vacant as an unused resource. And the people who worked in that store would consequently be unemployed—unused resources.

Finally, it is important to note that resources can be unused altogether or they can be used in a less-than-optimal manner. **Underemployment** occurs when scarce resources are not put

to their best use in the production of goods and services. To continue our example of Apple, let's consider Steve Jobs. Imagine if he had taken a position with a local fast-food restaurant after dropping out of college instead of cofounding Apple. In that case, he would have been underemployed because his talent and skills could have been better used elsewhere. In other words, if his efforts and time were taken up working in a fast-food restaurant, it is likely he never would have developed new products such as the iPhone.

Conclusion

In general, resources go unused whenever the market operates inefficiently. When this occurs, resources remain unemployed. Usually, unemployment is discussed in terms of labor. It is important to keep in mind there are three types of unemployment—frictional, structural, and cyclical—all of which can cause resources to remain unused. Of course, it is also possible that other resources remain idle, too. In a recession, if an automobile plant closes, the plant, tools, and equipment are unused and the former workers are unemployed. ■

NOTES

¹ The unemployment rate represents the number of unemployed as a percentage of the labor force. For a discussion of this topic, please listen to volume 1, episode 5, "Unemployment—The Economic Lowdown Podcast Series" (http://www.stlouisfed.org/education_resources/economic-lowdown-podcast-series/unemployment/).

² Data source: U.S. Department of Labor, Bureau of Labor Statistics. "Occupational Employment Statistics 1960-66. Bulletin 1579." January 1968. Chap. 2, Table 6, p. 8.

³ Data source: Bureau of Labor Statistics. "Occupational Employment and Wages, May 2012, 43-2021 Telephone Operators" (<http://www.bls.gov/oes/current/oes432021.htm>).

GLOSSARY

Cyclical unemployment: Deviation of unemployment from its natural rate. It rises with economic downturns and falls when the economy improves.

Frictional unemployment: Temporary unemployment caused when experienced or skilled workers change jobs.

Inefficiency: The inability to produce goods or services without wasting resources, or when it is possible to reallocate resources in a way that would generate greater consumer satisfaction.

Natural rate of unemployment: The normal rate of unemployment around which the unemployment rate fluctuates.

Structural unemployment: A situation that occurs when jobs exist but workers looking for employment lack the necessary skills or experience for these jobs.

Underemployment: A situation that occurs when scarce resources are not put to their highest-valued use in the production of goods and services.

Unemployment rate: The percentage of the labor force that is unemployed. It is calculated as follows:

$$\text{Unemployment rate} = \frac{\text{Number of unemployed}}{\text{Labor force}} \times 100.$$

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