UCH HAS BEEN written recently about whether the economy is growing “too fast” and whether the unemployment rate is “too low.” Using jargon such as the “natural rate” of unemployment and the “NAIRU,” pundits point to the low unemployment rate as evidence the United States is on an unsustainable economic course. To use an analogy, a person can sprint for a quarter mile, but the physical laws of nature make it impossible to do so for a marathon. Similarly, the argument goes, the current U.S. rate of unemployment is lower than the economic laws of nature will permit, and it cannot remain at this level without dire consequences for the economy.

Yet, by historical standards, the U.S. unemployment rate is not particularly low. As Chart 1 illustrates, unemployment routinely fell below its current rate during the 1950s and 1960s. Analysts cite a variety of factors to explain its subsequent upward drift, including demographic changes, increased labor-market regulation, a decline in the quality of education and a rise in female labor-market participation. The trend reversed itself in more recent times, with unemployment rates falling to levels more reminiscent of the 1950s than the 1970s. Faced with this decline, economists have lowered a benchmark estimate of sustainable unemployment from 6 percent to 5.5 percent. But is 5.5 percent low enough?

In each case, the normal workings of the economy caused labor turnover. Therefore, even a perfect world in which everyone could work at a desirable job would have at least a small amount of unemployment.

In the imperfect world in which we live, several other factors also contribute to unemployment. One is the degree to which able-bodied individuals have an incentive to work. Opinions on this topic vary widely and are sometimes controversial, but there is little doubt that at least a small number of people do not seek work as eagerly as they could. Some studies have found government welfare programs exacerbate this problem by lessening the consequences of unemployment. In any event, the unemployment rate is likely higher than it could be if everyone were highly motivated to seek work.

The job-search process can also be costly. When unemployed individuals must spend a great deal of time looking for work, or when firms must spend a great deal of time searching for applicants, unemployment will be higher than it would be if people could find jobs more quickly and easily. Technology that reduces job-search time at either end—people finding firms or firms finding people—can reduce the amount of time individuals must look for work and thereby reduce the number of people unemployed at any given time.

Finally, different individuals have different abilities to work. Through no fault of their own, some people have physical or mental impairments that do not affect their desire to work but may affect their capacity to work. To the extent that companies cannot easily accommodate their needs in the workplace, people with disabilities face special obstacles in the job-search process.

Several factors contribute to unemployment in a market economy. The first of these is the constant process of “creative destruction,” in which old firms are destroyed and new firms are created. These changes sometimes occur within a particular industry as uncompetitive firms downsize in an attempt to become more efficient or when they go out of business and are replaced by more competitive firms. Shifts from one industry to another are also important, as the decline of the American automobile industry and the rise of the computer industry illustrate.

A Closer Look at Unemployment

Understood in this way, the U.S. unemployment rate is not particularly low. As Chart 1 illustrates, unemployment routinely fell below its current rate during the 1950s and 1960s. Analysts cite a variety of factors to explain its subsequent upward drift, including demographic changes, increased labor-market regulation, a decline in the quality of education and a rise in female labor-market participation. The trend reversed itself in more recent times, with unemployment rates falling to levels more reminiscent of the 1950s than the 1970s. Faced with this decline, economists have lowered a benchmark estimate of sustainable unemployment from 6 percent to 5.5 percent. But is 5.5 percent low enough?

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process that lengthen the time they must spend seeking work. This makes the unemployment rate higher than it could be if ways were found for these individuals to perform work more easily. In an era characterized by heightened sensitivity to the physically and mentally challenged, it is especially important to acknowledge this issue and examine the extent to which it has been mitigated by the new economy of the 1990s.

Why We Should Care About Low Unemployment

Given that some unemployment is to be expected even under the best of circumstances, it is natural to ask how low the unemployment rate can go before becoming unsustainable. Until the late 1960s, most economists estimated this "natural rate" of unemployment to be approximately 4 percent.1 Rising unemployment in the 1970s convinced many that the natural rate had gone up to 6 percent, while the economic boom of the 1990s recently led the federal government to lower its estimate of the natural rate to 5.5 percent.2 However, U.S. unemployment now stands a full point below the level deemed unsustainable, and it has remained below 5.5 percent for each of the past three years. Should we be concerned?

When the unemployment rate is unusually low, firms must offer higher wages to attract workers. This may seem beneficial for everyone, but these wage increases are not accompanied by any increase in productivity. The only way companies can pay higher wages for the same output is to raise prices, which causes inflation. Indeed, it was this concern that prompted economists to coin the acronym NAIRU—nonaccelerating inflation rate of unemployment—and later suggest that the current 4.6 percent rate of unemployment is uns sustainable.

Anyone who remembers the state of the economy during the Carter administration understands the damage inflation can cause.3 Products suddenly become more expensive, but savings account balances do not magically rise to compensate. And when the inflation rate is both high and erratic, as occurred during the Carter years, people tend to spend their salaries immediately rather than save them because the next month's inflation could be even higher. This lack of saving hinders banks' ability to make loans and thereby hinders entrepreneurs' access to capital, which reduces economic growth and can even cause a recession.

Historically, the Fed is seen as raising interest rates when unemployment is deemed too low in order to slow economic growth and reduce inflationary pressures. Chart 2 plots unemployment and inflation during the 1985–94 period and suggests that low unemployment was generally accompanied by high inflation. If the American economy were behaving in 1998 as it did then, the current 4.6 percent rate of unemployment would be accompanied by an inflation rate of almost 5 percent and the current 1.6 percent rate of inflation would produce an unemployment rate of almost 9 percent. If the so-called Phillips curve depicted in Chart 2 were an immutable law of economics, the current rate of unemployment would provoke grave concern about inflationary pressures.

But something is different now. The low unemployment of the late 1990s has been accompanied by extraordinarily low inflation, as Chart 2 illustrates. While it was fashionable in the early months of below-5 percent unemployment to predict inflation was about to surface, it now appears something in the American economy has changed. What was thought to be "unsustainable" in the past now appears sustainable. But what is different about the 1990s?

Changes to the Welfare System

The American welfare system, begun in 1936, was designed to help destitute individuals survive the Great Depression. From this laudable goal sprang hundreds of programs to help the needy, from food stamps to Medicaid to a myriad of smaller programs. And what could be wrong with trying to improve the well-being of the poor?

The problem with welfare programs was best captured by Joseph Schumpeter when he said the real tragedy of unemployment is not lack of employment per se but "unemployment plus the impossibility of providing adequately for the unemployed without impairing the conditions of further economic development."4 When the government helps those who do not work, it inevitably creates an incentive for others to collect welfare instead of going to work. Economic research is divided on how large these effects can be, but the basic point remains: there is no way to help the poor without encouraging at least a small number of people to become poor. When people who could work decide to join the welfare rolls, economic output must fall because fewer workers are available to produce it. Hence Schumpeter's discouraging conclusion that welfare programs harm the economy.

In 1996 President Clinton signed a welfare-reform bill designed to assist those who need it but end assistance to those who do not. The legislation imposed a five-year lifetime limit on welfare recipiency. It also mandated that no one could receive welfare for more than two years without doing something—such as attending classes or participating in government-run jobs programs—in exchange. Shortly before its passage, the bill's opponents complained bitterly that welfare reform would simply "punish those least able to cope,"5 but data from the past few years tell a different story. As Chart 3 illustrates, welfare recipiency has fallen dramati-
An alternative source of income (such as welfare) is available to anyone for as long as they are unemployed, there is less incentive to find work as quickly as possible. On the other hand, when the alternative to work becomes less generous, people who are unemployed have a greater incentive to find new jobs quickly. This both lowers the unemployment rate and reduces the natural rate of unemployment.

Advances in Computer and Communications Technology

Much has been written about the so-called digital divide, which separates computer-savvy individuals from others. Those who understand computers will prosper, the theory goes, while those who do not will lack the most basic skills needed to work in the information age. This theory makes sense in certain circumstances, but it misses two features of the information age that make the workplace more accessible to everyone: a reduction in job-search costs and an increase in opportunities for the disabled.

One signature feature of the information age is the ability to instantly search help-wanted ads from across the country and make resumes available to employers in all parts of the nation. Until recently, individuals often searched for work by traveling from city to city or spending hours in a library perusing a few major newspapers. Today, anyone with access to the Internet can instantly search job listings from around the country. Thousands of companies now post their help-wanted ads on the Internet, and there are more than 200 Internet sites at which job seekers can check job listings or post resumes. The box entitled “Job-Search Sites on the Web” lists a sampling of these sites.

Help-wanted ads in cyberspace would not mean much if ordinary people did not use the Internet daily. As Chart 5 indicates, however, Internet use has soared from essentially zero in 1991 to 35 percent of the population today. In fact, it is estimated that more than 3 million people use the Internet to look for work on any given day. And as the Internet becomes available through television sets and other devices, even those who know nothing about operating a computer will be able to surf the Web for information. The box entitled “Comments from Online Job-Seekers” contains anecdotes from ordinary people who used these sites to find jobs quickly and easily.

Advances in computer technology also enable those with special needs to find jobs more quickly. Indeed, technological advances have historically helped enable the physically and mentally challenged to become more productive and employable. Those who lack the strength to carry cargo on their backs or lack the experience with animals to haul it via horses can load it into a truck using a cargo mover and then drive it to its ultimate destination.
Those who lack the manual dexterity to sew can set up a sewing machine and produce clothes. There are many other examples of how machinery has helped reduce the need for physical skills, and, in each case, people who previously lacked the requisite qualifications to work suddenly became as employable as those whose arms were strong or whose fingers were nimble.

In the information age, technological advances have enabled physically and mentally challenged individuals whose lives were largely unassisted by the inventions of the industrial age to be as productive as other employees. One example of this is in the fast-food industry, where workers can take orders from customers without knowing how to add or even how to read; workers simply touch computer-generated pictures of food items to relay an order to the kitchen. And with the advent of voice-recognition technology, even people who lack the necessary qualifications to read or even how to read; workers simply touch computer-generated pictures of food items to relay an order to the kitchen. And with the advent of voice-recognition technology, even people who lack the manual dexterity to perform unassisted, and anyone who could not find a job in his or her own city might have had to spend weeks or even months drifting from one place to another in search of work. In the information age, however, the disabled can (with the help of technology) perform almost any job as well as and sometimes better than the nondisabled, and it is not uncommon for people to find jobs for which they are well-suited within a matter of days by searching the Internet. This dramatically cuts the time unemployed people must spend searching for work and thereby reduces the rate of unemployment.

**Job-Search Sites on the Web**

Here are 24 of the numerous Internet sites dedicated to facilitating the job-search process.

- CareerMosaic: www.careermosaic.com
- CareerPath: www.careerpath.com
- CareerWeb: www.cweb.com
- Career Avenue: www.careeravenue.com
- Career Central: www.careercentral.com
- Career Connector: www.careerconnector.com
- Career Exposure: www.carerexposure.com
- Career Journal: www.careerjournal.com
- Career Magazine: www.careermag.com
- Career Marketplace: www.careermarketplace.com
- Career Matrix: www.careermatrix.com
- Career Resource Center: www.careers.org
- Career Shop: www.careershop.com
- Career America: www.careeramerica.com
- Career Builder: www.careerbuilder.com
- CareerCast Inc.: www.careercast.com
- Career City: www.careercity.com
- Career Exchange: www.careerexchange.com
- Career Exposure: www.careerexposure.com
- CareerFairs.com: www.careerfairs.com
- CareerGuide: www.careerguide.com
- CareerMart: www.careermart.com
- CareerPark: www.careerpark.com
- CareerSite: www.careersite.com

Computers and the Internet affect the unemployment rate by shortening the time people spend looking for work and increasing the ability of physically and mentally challenged individuals to find jobs. In the past, individuals with special needs might have had to search a very long time until they found a job they could perform unassisted, and anyone who could not find a job in his or her own city might have had to spend weeks or even months drifting from one place to another in search of work. In the information age, however, the disabled can (with the help of technology) perform almost any job as well as and sometimes better than the nondisabled, and it is not uncommon for people to find jobs for which they are well-suited within a matter of days by searching the Internet. This dramatically cuts the time unemployed people must spend searching for work and thereby reduces the rate of unemployment.

**Comments from Online Job-Seekers**

"Who would have ever thought that I would land a career within my major two months prior to graduating from college? I received over twenty responses within just one week after putting my resume online." —Anonymous, Job Link USA

"I was in the middle of making a transition from New York to California after my husband’s company relocated. That's when I decided to try [the Web site] Job Link USA. Job Link USA sent my resume to thirty companies prior to my relocation. Thanks to Job Link USA I was hired the next week." —Anonymous, Job Link USA

"I found an interesting job posting on the Monster Board [Web site] and in less than a week had the job of my life!! This was the EASIEST I have ever found employment and will recommend it to everyone looking for their perfect job!" —Kim Porcher, Monster Board

"Within 3 days [after posting resume on Web], I received a call from a prospective employer. A week later I was interviewing at their company headquarters in Boston, and two weeks later...received a job offer for moving to San Francisco." —Babak Ardalan, Monster Board

**Conclusion**

For the past several years, the American unemployment rate has been lower than many analysts thought possible yet has not triggered the inflation many analysts regarded as inevitable. This article suggests that welfare reform and information-age technologies may have fundamentally changed the American economy, so that unemployment rates deemed low by the standards of the 1970s and 1980s can be maintained without creating inflationary pressures. This does not mean there is no longer any unemployment rate below which inflation is likely to occur, nor does it mean the Fed should stop watching for signs of inflation. It does mean that changes in technology and government policy are important contributors to low unemployment and that recent changes in these areas are likely at least partially responsible for the remarkably low rate of unemployment in the American economy today.

—Jason Saving

**Notes**

The author thanks Mike Cox for his helpful observations and Ricardo Lloredes for his research assistance.

1. Economists use two similar concepts when discussing unsustainable unemployment: the natural rate of unemployment (the rate that would hold if all markets functioned optimally) and the NAIRU (the lowest rate of unemployment consistent with stable inflation).


3. The late 1970s were also characterized by high unemployment.


8. The state of the art in this area is a computer chip that enables users to manipulate physical objects with their minds. Should future scientific research prove fruitful, there may come a time in which people with any form of physical disability can work as efficiently as those without. See Warren King, “New Implant Allows Disabled to ‘Will’ Computer Functions,” Dallas Morning News, October 11, 1998. p. A13.