

HELP WANTED

**Employers are having
a hard time hiring.
Not enough workers or
not the right skills?**

By Jessie Romero

Before every meeting of the Federal Open Market Committee, the Fed publishes a new Beige Book, a compilation of qualitative economic information from each Federal Reserve district. In the most recent one, the Richmond Fed's business contacts reported that "labor demand strengthened and job openings increased as employers struggled to find qualified workers." The language would have been familiar to regular readers: Six years earlier, the Beige Book had noted that "[Fifth] District employment improved somewhat, but both manufacturers and professional services firms continued to report problems finding qualified workers."

It's not surprising that employers are having a hard time finding workers today, when the unemployment rate is the lowest it's been in nearly five decades. But why were they having trouble finding workers in 2012, when the unemployment rate had been stuck above 8 percent for several years?

Many people attributed persistently high unemployment after the Great Recession to "skill mismatch" — the idea that the people looking for work didn't have the qualifications employers were seeking — and there was considerable concern that such mismatch would be a permanent feature of the labor market. Today, however, things look quite different: Many lower-skill occupations, once the hardest hit, are now in high demand, and employers are increasingly willing to train. Is skill mismatch a thing of the past?

It's Getting Hot, Hot, Hot

In September 2018, the unemployment rate dropped to 3.7 percent — its lowest reading since December 1969. At the same time, the Congressional Budget's Office estimate of the "natural" rate of unemployment, which is widely viewed as the benchmark for full employment, was 4.6 percent. (Even in a healthy economy, there will always be some level of unemployment as workers transition between jobs. The natural rate is the lowest rate that can be maintained without accelerating inflation.)

That's not the only indication the labor market is tight. In 2000, the Bureau of Labor Statistics (BLS) began tracking data on labor market turnover, including job openings. In April of this year, for the first time ever, there were more vacancies than there were people looking for work, and the gap has continued to grow. (See chart.)

Qualitative data also suggest it's hard to find workers. In recent surveys of business activity in Maryland and the Carolinas conducted by the Richmond Fed, the monthly indexes that measure employers' ability to find workers reached their lowest readings ever. (The surveys began in 2008.) Nationally, nearly 40 percent of small-business owners reported having unfilled job openings in September, according to a survey conducted by the National Federation of Independent Business; the previous peak was 34 percent in 1999.

"A few years ago, our contacts talked about not being able to find people with specific skills," says Sonya Waddell, the Richmond Fed's director of regional research. "Now, they talk about not being able to find anyone at all."

Labor market tightness isn't evenly distributed across industries, however. The job openings rate for accommodation and food service workers was 6 percent in August 2018, for example, while the rate for educational services was just 3.2 percent. Economists at ZipRecruiter, an online recruitment firm, analyzed responses to job postings and found 118 applicants for every administrative position advertised but just 12 responses per truck driving job and nine per nursing job. Even within industries there is variation; in the Census Bureau's Quarterly Survey of Plant Capacity Utilization, just 3.5 percent of textile manufacturers reported an "insufficient supply of labor" as a constraint in the second quarter of 2018. But 32 percent of wood manufacturers were constrained by their inability to find workers.

There are geographic differences as well. Across Virginia as a whole, the unemployment rate has averaged 3.1 percent in 2018, well below the national average. But

in some western and southern counties, the rate has been around 6 percent; in many northern counties, it's averaged about 2.5 percent. In North Carolina, average county unemployment rates for 2018 range from 7.7 percent in Scotland County, which has lost several thousand manufacturing jobs over the past two decades, to 3.1 percent in Buncombe County, home to tourist destination Asheville.

Baffled by Beveridge

Still, 7.7 percent unemployment is a significant improvement from the end of the Great Recession, when unemployment in Scotland County topped 17 percent. Nationally, the unemployment rate reached 10 percent in October of 2009 and remained above 7 percent until the end of 2013. Historically, high unemployment has been associated with few job openings (because employers aren't interested in hiring) and low unemployment with plentiful job openings, a relationship known as the Beveridge curve. But as the economy began to recover in 2009 and firms started posting jobs, the unemployment rate remained several percentage points higher than the Beveridge curve would have predicted.

The position of the Beveridge curve is determined by how efficiently the labor market pairs available workers with available jobs, what economists call "matching efficiency." Multiple factors influence matching efficiency, including employers' recruiting processes, how people search for jobs, and policies such as unemployment insurance or at-will employment. The rightward shift of the Beveridge curve after 2009 suggested that overall matching efficiency had declined significantly. (See chart.)

Skill mismatch made intuitive sense as an explanation for this decline. Roughly half of the job losses resulting from the 2007-2009 recession were in construction and manufacturing, and it seemed reasonable to assume that unemployed roofers and forklift drivers were not finding (or even looking for) jobs in the industries that fared relatively better, such as education and health care. And even as manufacturers, for example, did begin to look for new employees, they frequently said they were unable to find applicants with the necessary skills and training.

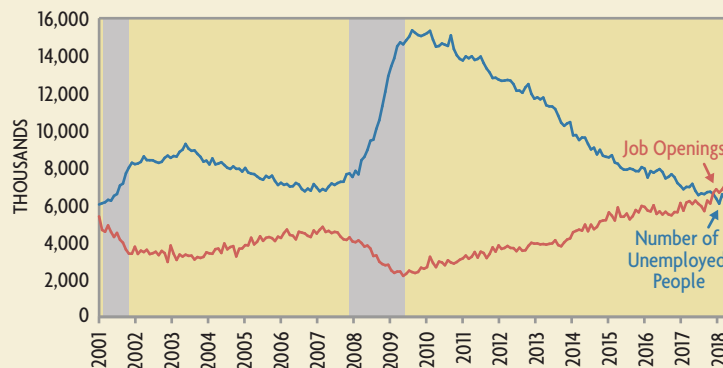
In the short term, skill mismatch was a product of the recession. But many observers also viewed it as a symptom of longer-term trends in technology and education that were operating to the detriment of lower-skilled workers — and were unlikely to reverse. "In simple terms, the skills people have don't match the jobs available," said Dennis Lockhart, former president of the Atlanta Fed, in a 2010 speech. "Coming out of this recession there may be a more or less permanent change in the composition of jobs."

Making the Match

How large a role did skill mismatch actually play in the labor market during and after the Great Recession? Although it no longer appears to have been the primary factor driving unemployment, some research suggests its role was

Tightening Up

There are more job openings than people looking for work

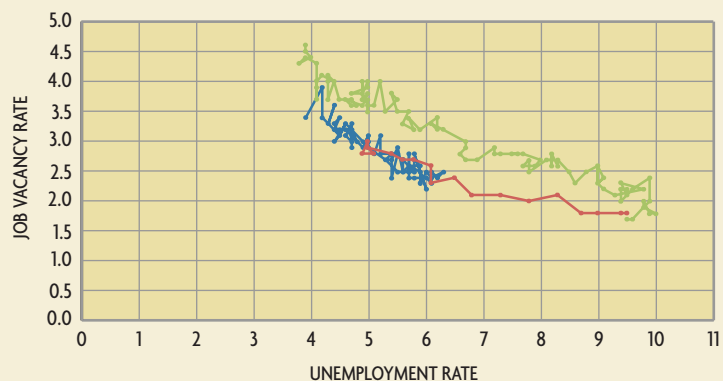


NOTE: Shaded areas denote recessions.

SOURCE: Bureau of Labor Statistics via Federal Reserve Economic Data (FRED)

A Bend in the "Beveridge Curve"

After the Great Recession, the unemployment rate was high relative to the number of job openings



● Pre-Great Recession (Jan. 2007-Nov. 2007)
 ● Great Recession (Dec. 2007-June 2009)
 ● Post-Great Recession (July 2009-Present)

SOURCE: Bureau of Labor Statistics via Federal Reserve Economic Data (FRED)

nontrivial. In a 2014 article, Ayşegül Şahin of the University of Texas at Austin, Joseph Song of Bank of America Merrill Lynch, Giorgio Topa of the New York Fed, and Giovanni Violante of Princeton University found that mismatch across occupations and industries could account for up to one-third of the rise in unemployment between 2006 and 2009. The authors speculated that the remainder could be explained by weak demand for labor and extended unemployment benefits, among other culprits.

Regis Barnichon of the San Francisco Fed and Andrew Figura of the Federal Reserve Board also have found a role for mismatch. In a 2015 article, they measured mismatch as dispersion in the labor market, or how much variation there is in the tightness of different submarkets, such as the market for nurses versus the market for construction workers. More dispersion indicates more mismatch. They calculated that rising dispersion contributed to about one-third of the decline in matching efficiency between 2008 and 2012.

The other factor driving the decrease in matching efficiency was a change in the composition of job seekers. In general, during recessions, the pool of unemployed workers becomes more concentrated with people who have a lower likelihood of finding a job, such as workers on a permanent layoff or who have been unemployed for a long time. This was especially true in the Great Recession, when employers were much less likely to use temporary layoffs than in previous downturns and long-term unemployment reached unprecedented levels.

Barnichon and Figura's study covered 1976 through 2012, and they found that dispersion and composition effects increased during all the recessions during that time period. What was unique about the Great Recession was how large those effects were and how long they lasted. Even after the severe recession in 1981-1982, matching efficiency rebounded fairly quickly. But after the Great Recession ended, it remained historically low three years later.

Other research, however, suggests that the decline in matching efficiency wasn't especially large compared to previous recessions. In a 2017 article, Andreas Hornstein of the Richmond Fed and Marianna Kudlyak of the San Francisco Fed studied not only unemployed workers, but also people out of the labor force — that is, people unable to work or no longer looking for work. (A person who has not looked for work during the past four weeks is technically considered out of the labor force rather than unemployed.) Although those out of the labor force are less likely to transition into employment than those who are unemployed, they are a much larger group in absolute terms. According to previous research by Hornstein, Kudlyak, and Fabian Lange of McGill University, people out of the labor force account for about two-thirds of new transitions to employment.

During the Great Recession, the entire pool of nonemployed people shifted more toward people out of the labor force. Once Hornstein and Kudlyak accounted for this change, the decline in efficiency looked comparable to declines in previous recessions. "If the composition of the search pool shifts toward groups who always have a lower job finding rate, average search effectiveness declines," says Hornstein. "This shows up as reduced 'matching efficiency' even though the 'effectiveness' of the labor market in matching vacancies and unemployed has not changed."

Love the One You're With

A few years ago, employers might not have been willing to hire an applicant who didn't check every box

— but they're changing their tune as the labor market has tightened. In the September Beige Book, most districts reported that employers in their regions were devoting more resources to training. In a survey conducted in early 2017 by the *Wall Street Journal* and the consulting group Vistage International, two-thirds of the businesses surveyed said they were spending more or significantly more time training new employees than they had a year ago.

Employers also have been expanding their applicant pool — for example, by relaxing skill requirements. The labor-market research firm Burning Glass Technologies recently analyzed 15 million online job postings and found that the number of jobs requiring a college degree fell from 34 percent in 2012 to 30 percent in 2018, and the number requiring three or more years of experience fell from 29 percent to 23 percent. Amazon, the country's second-largest employer after Walmart, advertises that its hiring process requires "No resume. No interview."

In addition, anecdotal evidence is growing that employers are more amenable to former offenders. The *New York Times* recently profiled a company that is hiring inmates as apprentices even before they are released; similar stories have been reported in Los Angeles, Boston, and Allentown, Pa., to name just a few. In a recent speech, Richmond Fed President Tom Barkin noted that he had spoken with an employer in the Fifth District who had relaxed its views on employees with criminal backgrounds.

Will this continue? In the short term, the economic outlook is rosy. But productivity growth — the ultimate determinant of long-run economic growth — has lagged during the past decade, which suggests the gas currently fueling the economy could be stimulus whose effects might dissipate over the next few years. In addition, although the Beveridge curve has largely looped back to its pre-recession position, it still remains further to the right than it was for much of the postwar era. According to research by Thomas Lubik of the Richmond Fed and Luca Benati of the University of Bern (Switzerland), with each successive recession since the 1950s, matching efficiency has gone down — the unemployment rate implied by a given job vacancy rate has increased. A likely explanation for these successive rightward movements is technological change whose effects on the labor market are hastened by recessions. A large body of research has documented how such change has tended to benefit workers with more skills and more education. These forces might be masked by a hot economy for a time, but if things cool off, some workers, especially the more recent entrants to employment, might once again find themselves without a match. **EF**

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