December 21, 2018

Measuring Job Openings in the U.S. Labor Market

Introduction

The number of job openings is an economic indicator that can provide information about the potential strength or weakness of the labor market. It is often used in addition to two other commonly cited labor market indicators: the unemployment rate and total employment. The unemployment rate—the number of individuals without a job but looking for work, as a share of the labor force—measures excess labor supply, while total employment—the number of filled jobs—is one measure of labor demand. While these two measures provide information about the strength of the labor market, neither directly measures the number of job openings.

Interest in job openings, or job vacancies, has increased recently and is cited frequently in the media and during congressional hearings. Part of this interest is due to the number of job openings in the United States reaching its highest level since the data collection started in 2000—7.1 million—in August 2018. Additionally, the number of job openings recently surpassed the number of unemployed persons, which has not occurred since data started being collected in 2000. This change has caused Congress, the media, and the public to direct more attention to job openings.

How Are Job Openings Data Collected?

The number of job openings has long been used as supplementary information in estimating the health of the labor market. From 1951 to 2008, the Conference Board produced a Help-Wanted Advertising Index (HWI) of print advertisements, which measured the change in the number of help-wanted advertisements in 51 major U.S. newspapers, serving as a proxy for the change in job openings. From April 1969 to December 1973, the Bureau of Labor Statistics (BLS) reported monthly job openings rates as part of its Labor Turnover Survey (LTS), but the job openings questions of the LTS were discontinued in 1973 due to funding cuts. Following a few standalone pilot programs to conduct ongoing surveys of job openings, BLS began consistently collecting data on job openings in 2000 through the Job Openings and Labor Turnover Survey (JOLTS). JOLTS collects monthly data from a sample of 16,000 business establishments. In addition to job openings, data on new hires (i.e., new employees, not internal transfers or promotions), and job separations (i.e., employees whose positions were eliminated or who quit, retired, or were laid off or fired) are collected.

Job openings are defined in JOLTS as the total number of positions open on the last business day of the month. A job opening exists if:

- a specific position exists and there is work available for that position;
- the job could start within 30 days, and
- the establishment is actively recruiting outside workers.

JOLTS does not include the following when recording job openings: positions open only to internal transfers, promotions or demotions, or recalls from layoffs; openings for positions with start dates more than 30 days in the future; positions for which employees have been hired but the employees have not yet reported for work; and positions to be filled by employees of temporary help agencies, employee leasing companies, outside contractors, or consultants.

Current Trends in Job Openings

The number of job openings reported by JOLTS rose throughout the early 2000s, fell during the recession of 2007–2009, and then steadily increased to above pre-recession levels. In August 2018, job openings hit a high of 7.1 million. The job openings rate, calculated as the number of job openings divided by the sum of the number of nonfarm employees and the number of job openings, has followed a trend similar to the number of job openings. The rate was 3.4 when data collection began in December 2000, bottomed out at 1.7 in the summer of 2009, and has been steadily climbing since, reaching a high of 4.7 in August 2018.

Increases in job openings typically indicate a growing economy with high levels of job creation when combined with a declining unemployment rate. Job openings may signal other economic trends depending on changes in other indicators. A high and increasing number of job openings may be a sign of full employment, especially when the unemployment rate is extremely low, or it may be an indication of a mismatch between supply and demand in the labor market if openings only increase in certain economic sectors or geographic areas.

High levels of job openings may also occur when the economy is not expanding rapidly. For example, the cost of advertising job openings has decreased with the growth of the internet. With new technology, it is easier for firms to keep a vacancy open longer (with almost costless advertising for the position) while waiting for the employee with the optimal combination of skills and salary requirements for the open job.

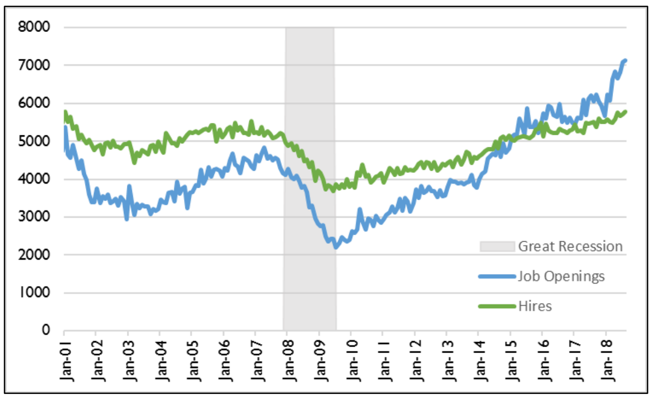
Combining the job openings data with hires and unemployment data may provide additional context and insight into the underlying trends in the labor market.

Job Openings and Hires

The JOLTS data also include the number of hires, defined as all additions to the payroll during the month. Job openings and hires are closely related—when a person is hired to an open position, the corresponding job opening disappears. Because of this relationship, an increase in hires may be a sign that labor shortages represented by the job openings indicator are being resolved. Consequently, these two variables are often compared as shown in **Figure 1.**

Figure 1. Total U.S. Nonfarm Job Openings and Hires

(In thousands)



Source: Bureau of Labor Statistics, Job Openings and Labor Turnover Survey (JOLTS)

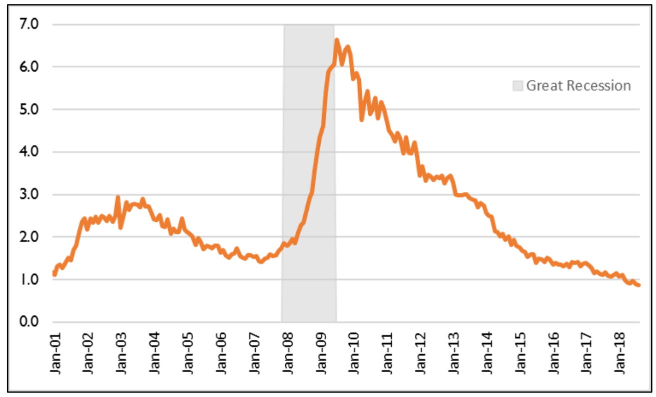
The relationship between job openings and hires has changed in recent years. From 2000 to 2015, the number of hires had always been larger than the number of job openings; however, after 2015 job openings have consistently exceeded hires. In September 2018, the gap between the number of job openings (7.1 million) and the number of hires (5.8 million) reached its highest level since openings first surpassed hires in 2015. This gap may indicate the economy's declining ability to address the potential labor shortages represented by the high level of job openings.

The Number of Unemployed Workers and Job Openings

It is intuitive to expect job openings to be filled by unemployed persons (defined as people who are not working but are currently searching for work). Because of this relationship, the unemployment to job openings ratio—the number of unemployed persons divided by the number of job openings (shown in **Figure 2**)—is often used as a proxy measure to provide information on the labor market's ability to resolve labor shortages.

During the 2007–2009 recession, this ratio rose rapidly, indicating multiple workers available for each existing job opening. During the most recent recovery, this ratio has been steadily decreasing. By April 2018, the ratio fell below 1.0 for the first time since the JOLTS series began. This means that theoretically there is a job available for every unemployed person in the labor market. Note that "unemployed" only includes people currently searching for work in the past month. It does not count individuals out of the labor force (people not working and not actively searching for work) or those involuntarily working fewer hours than they would prefer. The persistence of a high level of job openings may indicate an unmet demand for workers. This could be a result of a mismatch (e.g., skill, compensation, geographical) between unemployed job seekers and prospective employers or it may indicate a shortage of workers currently in the labor market and available to fill openings.

Figure 2. Unemployed Persons per Job Opening



Source: Bureau of Labor Statistics, Job Openings and Labor Turnover Survey (JOLTS), and Current Population Survey (CPS)

The Relationship between Job Openings, Hires, and Unemployment

While detailed examination of the numerous causes of a possible labor shortage is beyond the scope of this In Focus, there are several factors that may play a role in determining the relationship between the numbers of job openings, hires, and unemployed persons. Demographic changes, such as an aging population and a declining fertility rate, may reduce the size of the labor force and contribute to a gap between supply of and demand for workers. Changes in immigration patterns may affect the supply of available workers, particularly in sectors in which immigrant labor traditionally constitutes a sizeable share of the labor force (e.g., agriculture). Changes in demand for certain skills (e.g., cybersecurity) may create gaps between the demand in certain occupations and the availability of skilled workers needed to fill these jobs. Changes in the health of the labor force, such as the ongoing opioid epidemic, may contribute to, and also be a consequence of, decreased labor force participation or impaired performance of workers in the labor market. Some argue that wage growth has been insufficient to attract potential workers into the labor force, making it more difficult to meet the demand seen in hires and openings. Changing preferences on the part of workers and the desire for very specific sets of skills on the part of employers may also contribute to potential labor shortages.

David H. Bradley, Specialist in Labor Economics
Boris Granovskiy, Analyst in Education Policy

IF11054

Disclaimer

This document was prepared by the Congressional Research Service (CRS). CRS serves as nonpartisan shared staff to congressional committees and Members of Congress. It operates solely at the behest of and under the direction of Congress. Information in a CRS Report should not be relied upon for purposes other than public understanding of information that has been provided by CRS to Members of Congress in connection with CRS's institutional role. CRS Reports, as a work of the United States Government, are not subject to copyright protection in the United States. Any CRS Report may be reproduced and distributed in its entirety without permission from CRS. However, as a CRS Report may include copyrighted images or material from a third party, you may need to obtain the permission of the copyright holder if you wish to copy or otherwise use copyrighted material.