

Opportunity Knocks: Improved Matching of Jobs and Workers

By Didem Tüzemen and Jonathan L. Willis

During the early phase of the labor market recovery, employment growth consisted of a modest recovery in middle-skill jobs, those hardest hit in the recession. In the later phase of the recovery, employment growth shifted strongly toward high-skill occupations. Over the past year, the labor market has seen notable improvements in the allocation of workers toward jobs that closely match their level of education.

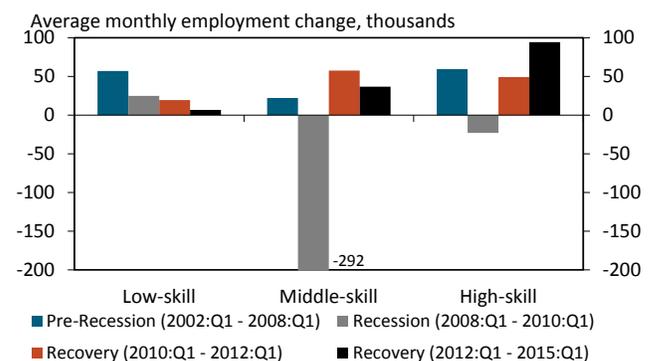
Since the end of the Great Recession, the U.S. labor market has recovered substantially: 12 million jobs have been added to private payrolls, and the unemployment rate has fallen from 10 percent to 5.4 percent. In the first phase of the recovery (2010-11), employment growth was modest and primarily concentrated in middle-skill jobs, those that were hardest hit in the recession. In the second phase of the recovery (2012-15), job gains shifted strongly toward high-skill jobs as economic conditions improved. Growth remained weak for low-skill jobs and has yet to return to pre-recession levels.

We examine the types of jobs added during the recovery using micro-level data from the Current Population Survey (CPS), commonly referred to as the household survey. Every month, the U.S. Census Bureau collects data on the labor market status of individuals from approximately 60,000 households. We use seasonally adjusted quarterly data for the 2001-15 period and restrict the sample to workers ages 16 to 64 who are not self-employed and not employed in the military or agricultural occupations.

Over the past three decades, employment growth has been concentrated in high- and low-skill occupations, and the share of middle-skill jobs has gradually declined. Computers and automated machinery have replaced workers in middle-skill occupations, which require the routine performance of procedural and rule-based tasks (Acemoglu and Autor). In contrast, technological advancements complemented the skills of workers suited for high-skill positions, which require analytical abilities, problem solving, and creativity. As with high-skill occupations, low-skill occupations are difficult to automate, since they are physically demanding and require human interaction. Low-skill jobs are typically service-oriented, such as food preparation, cleaning services, and security services. This shift in job opportunities from middle-skill jobs to high- and low-skill jobs is called job polarization.

The labor market has experienced three distinct phases since the start of the Great Recession. Prior to the Great Recession, employment growth followed the job-polarization pattern: strong growth in high- and low-skill jobs and only modest growth in middle-skill jobs (Chart 1). During the Great Recession, nearly all of the net job losses occurred in middle-skill occupations. In the first two years of the recovery, middle-skill jobs recovered modestly, but growth in high- and low-skill

Chart 1: Employment change by occupation



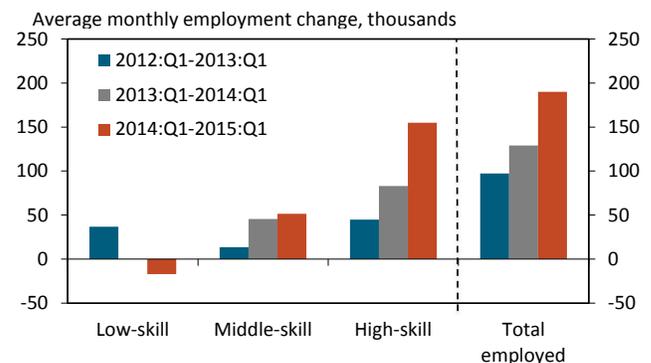
Sources: CPS and authors' calculations.

jobs remained below pre-recession averages.

The second phase of the labor market recovery, which began in 2012, has been characterized by strong growth in high-skill jobs and moderate growth in middle-skill jobs. Low-skill jobs have yet to return to pre-recession growth levels.

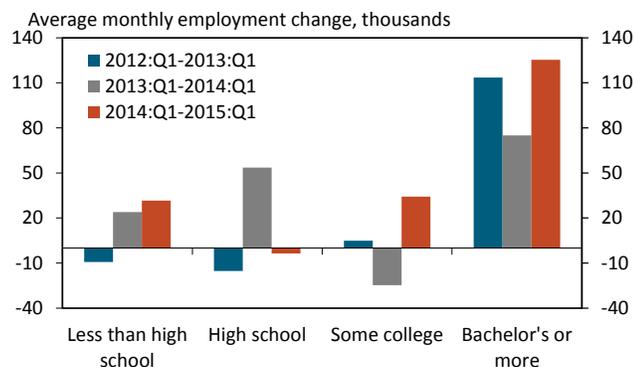
Growth in high- and middle-skill jobs has improved in each of the past three years. Total employment growth, as measured by the household survey, has increased from an average monthly change of 97,000 in the 2012:Q1-2013:Q1 period to 190,000 in the 2014:Q1-2015:Q1 period (Chart 2). Increased employment in high-skill jobs has predominantly driven this growth, accounting for 82 percent of total net employment growth in the 2014-15 period. Employment growth has also steadily increased for middle-skill jobs over the past three years. For these jobs, the average monthly change in the 2014-15 period was more than double that of the pre-recession period (2002:Q1-2008:Q1). Low-skill jobs remained the one segment of the labor market that has yet to return to pre-recession growth levels.

Chart 2: Employment change by occupation in the recovery



Sources: CPS and authors' calculations.

Chart 3: Employment change by educational attainment



Sources: CPS and authors' calculations.

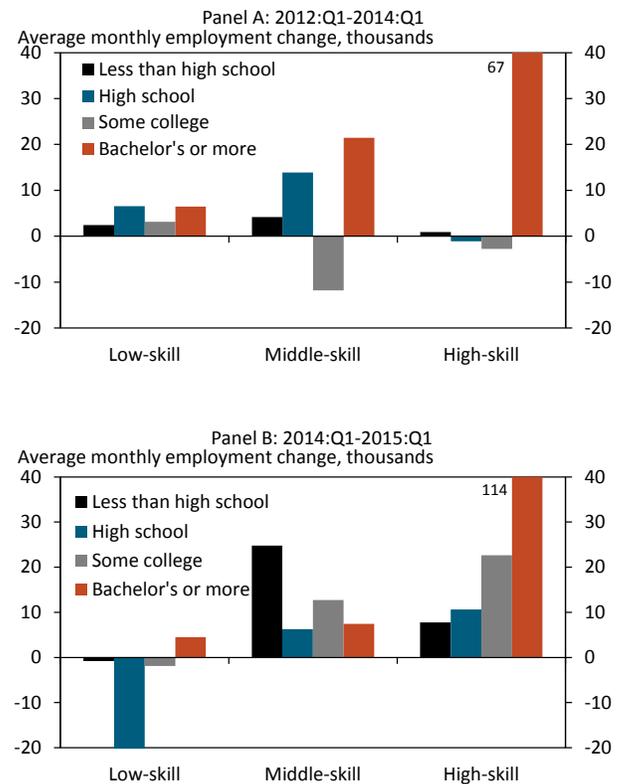
Demand in the labor market over the past three years has been strongest for highly educated workers. A breakdown of workers by educational attainment shows that employment growth has been greatest for workers with a bachelor's degree or higher (Chart 3). Employment growth has been weaker and more sporadic for workers with lower levels of education. Over the past year, employment growth edged higher for workers with less than a high school education and workers with some college education.

While employment growth has steadily improved over the past three years, it has not necessarily resulted in the best long-term matches of workers and jobs. The top panel of Chart 4 shows that primarily the highest educated workers filled middle-skill jobs in the 2012:Q1-2014:Q1 period. Workers with some college education experienced net employment growth only in low-skill occupations. And only workers with a bachelor's degree or higher found job opportunities in high-skill occupations.

Over the past year, however, workers have been employed in positions better aligned with their training. The bottom panel of Chart 4 shows that the pattern of employment growth by occupation and educational attainment has shifted in the 2014:Q1-2015:Q1 period. Employers continued to hire those with the greatest education levels for high-skill jobs, but workers with lower levels of education also found opportunities in high-skill occupations. Workers with a bachelor's degree no longer dominated growth in middle-skill jobs. In fact, workers with less than a high school education experienced the strongest growth in middle-skill jobs. Workers with a high school education shifted notably away from low-skill jobs toward middle- and high-skill jobs.

Over the two phases of labor market recovery, conditions have improved slowly but surely. In the past year, workers found job opportunities that more closely matched their educational attainment, signaling improvement in labor market allocation.

Chart 4: Employment change by occupation and educational attainment in the recovery



Sources: CPS and authors' calculations.

References

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* Didem Tüzemen is an economist at the Federal Reserve Bank of Kansas City. Jonathan L. Willis is a vice president and economist at the bank. The views expressed are those of the authors and do not necessarily reflect the positions of the Federal Reserve Bank of Kansas City or the Federal Reserve System.