

January 7, 2016

What Occupational Projections Say about Entry-Level Skill Demand

On December 8, 2015, the U.S. Bureau of Labor Statistics (BLS) released its [latest projections](#) of labor force needs facing the U.S. economy from now until 2024.

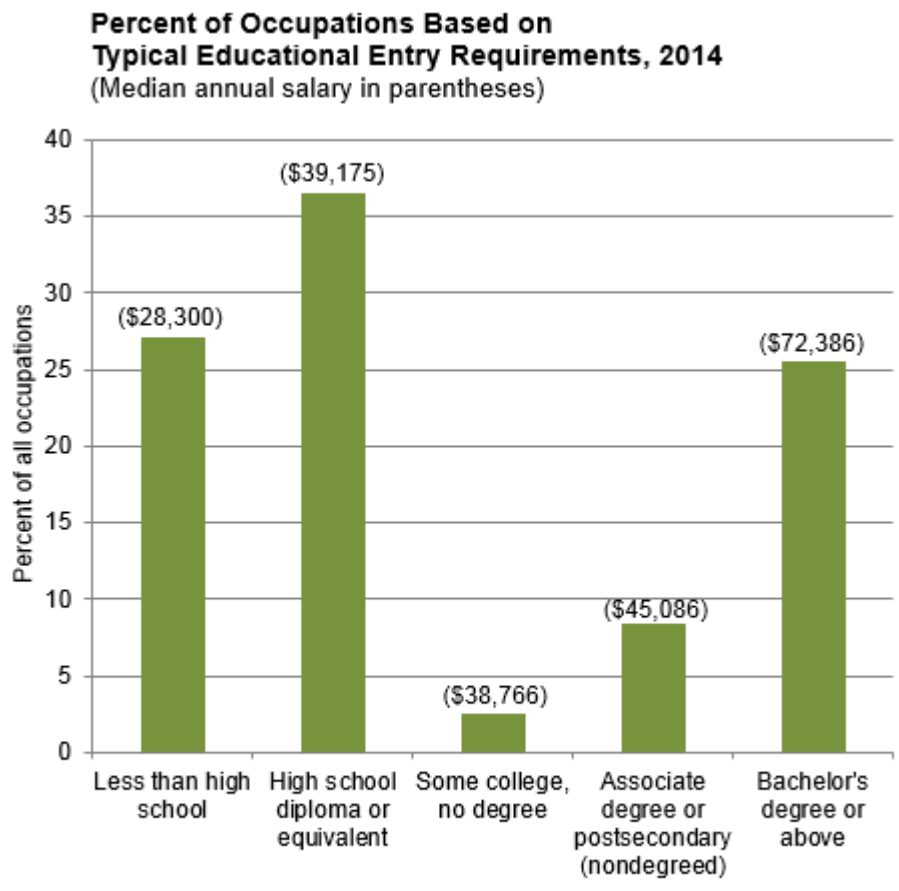
Every two years, the BLS undertakes an extensive assessment of worker demand based on a number of factors: projected growth in the overall economy, dynamics of economic growth (such as which industries are growing fastest), labor force demographics (for example, the aging of the labor force), and expected changes in the labor force participation rate. Total worker demand includes both the number of workers needed to meet economic growth as well as the number of workers needed to replace current workers expected to retire.

A number of observations about these projections have already been identified. For example: overall employment growth [will be slower](#), health care jobs [will continue growing](#), and computer programmer jobs [will lose ground](#).

In addition to the number of workers that will be in demand in different occupations in the U.S. economy, the BLS reports the skills that are needed for entry into those occupations—skills pertaining to both education levels and on-the-job training. As I perused this report, I was surprised at how much attention the press pays to the *growth* in high-skilled jobs at the expense of attention paid to those occupations requiring less skill but actually employ the greatest *number* of workers.

To be clear, the BLS does not *project* the educational requirements that will be needed for entering each occupation in 2024. It merely reports the most common education, training, and experience requirements needed to enter each occupation in the base year (in this case, 2014). Also it's important to note that these estimates of education needed to *enter* an occupation do not necessarily (and almost surely do not) match the *average* education of workers in that occupation at any given time, as those averages will reflect workers of many different ages and experience. The BLS gives a [detailed description](#) of how it identifies the entry-level educational and training requirements for each occupation. With those caveats in mind, let's take a look at the current distribution of jobs across the most common educational requirement for entering occupations.

The chart below tells us that, together, the typical entry-level requirement of a high school degree or less corresponds to nearly 64 percent of all jobs in the U.S. economy in 2014, while those typically requiring at least a bachelor's degree for entry represent 25.6 percent of jobs. The projected distribution of jobs in 2024 looks nearly identical: entry-level requirements (based on 2014 assessments) for 63 percent of all jobs requiring a high school degree or less and 26.2 percent requiring a bachelor's degree or more.



Source: U.S. Bureau of Labor Statistics, Occupational Projections, 2014-24, <http://www.bls.gov/emp/>

To be sure, the growth in higher-skill jobs far outpaces that for low- or middle-skill jobs. The number of jobs requiring a bachelor's degree or more for entry (in 2014) is expected to grow by 34 percent, whereas the number of jobs requiring less than a bachelor's degree is expected to grow by only 6 percent. This difference in growth rates reflects, in part, an expected continuation of the

phenomenon of declining middle-skill jobs that my Atlanta Fed colleagues (and others) [have discussed](#) previously. Although labeled "middle-skill," entry into these occupations (such as office support and many manufacturing occupations) is not likely to require more than a high school degree.

However, even though the *growth* in low- and middle-skill jobs is expected to be slower than in higher-skill jobs, the total *number* of job openings based on predicted growth and replacement needs between 2014 and 2024 is expected to be nearly 32 million for jobs requiring less than a bachelor's degree for entry (based on 2014 assessments), with 30 million of those requiring only a high school degree or less. The total number of job openings requiring at least a bachelor's degree is expected to be about 12 million. In other words, the number of jobs requiring a high school degree or less in order to enter is twice as large as the number of jobs that require a college degree to enter.

The other side of this story, however, is that those jobs typically requiring less education at entry don't pay nearly as much as jobs requiring higher levels of education. The dollar figures in parentheses on the chart reflect the median annual salary of jobs with the different entry-level educational requirements. What we see is that while the majority of U.S. jobs require a high school degree or less at entry, those jobs pay less than half of what a job requiring at least a college degree pays.

So let's say a worker wants good job prospects (with a large number of job openings over the next decade), doesn't want to go to college, and wants to optimize chances for the highest salary possible. What is this worker to do? Fortunately, some of my colleagues at the Atlanta Fed, Cleveland Fed, and Philadelphia Fed have produced a [report](#) identifying what they call "opportunity occupations," which they define as those paying salaries higher than the geographically-adjusted national median for at least 70 percent of adults who have less than a college education. Some jobs among their top opportunity occupations are nurses, bookkeepers, first-line supervisors of retail workers, truck drivers, computer user support specialists, police officers, and electricians and workers in several other construction trades. Their report also identifies the U.S. metropolitan areas possessing a high share of opportunity occupations.

Even though the share of jobs in the U.S. economy requiring less than a college degree at entry is getting smaller (very slowly), the largest number of jobs in the economy is, by far, jobs requiring less than a college degree at entry, and those jobs offer a wide range of options that pay above the national median wage.



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January 7, 2016 in [Education](#), [Employment](#), [Labor Markets](#) | [Permalink](#)