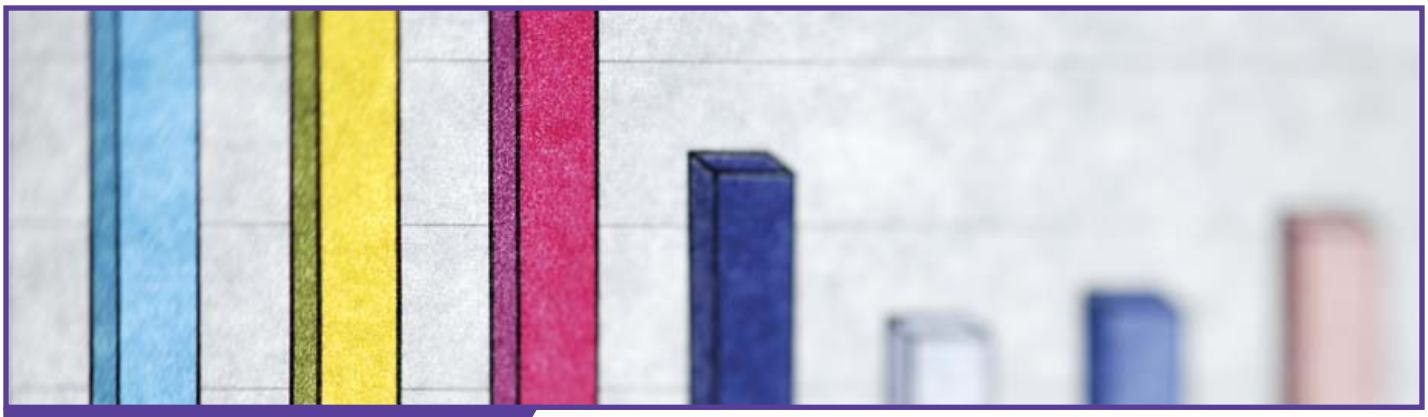

Getting started

by Dixie Sommers

In an uncertain economy, reliable information about tomorrow's labor market can be a valuable tool in career planning. Understanding the future workforce helps you prepare for your place in it.

When choosing among careers—or assisting others who are making such choices—it helps to know a few basics: the types and number of jobs likely to be available, the wages of workers in those occupations, and the typical ways of preparing for them. And that's just to get started.

The U.S. Bureau of Labor Statistics (BLS) provides this information and more. The 2012–13 *Occupational Outlook Handbook* describes hundreds of occupations in detail, cataloging data on employment, wages, projections, education, and job duties. And the January 2012 issue of the *Monthly Labor Review* includes comprehensive descriptions of the data, analysis, and methods BLS uses in the projections.

This special issue of the *Occupational Outlook Quarterly* offers a graphic summary of the latest projections, those covering the decade from 2010 to 2020.

How the recent recession affects the projections

Our usual practice is to prepare new projections every other year, with the base year of the projections decade being an even-numbered year. For this set of projections, the base year, 2010, follows a severe downturn in the U.S. economy. Total employment of wage and salary workers fell by nearly 7.8 million between 2007 and 2010. The construction and manufacturing industry sectors, along with occupations that are concentrated in these industries, were hit particularly hard.

When developing long-term projections, our focus is on long-term trends in population, labor force, productivity, and output growth. The population and the labor force have been aging and their growth rates slowing. These long-term trends are expected to continue, regardless of the fluctuations in the economy.

Readers should keep in mind, however, that the projected changes in employment between 2010 and 2020 include regaining jobs that were lost during the downturn. Total employment is projected to reach nearly 164 million by 2020, reflecting the addition of about 20 million new jobs between 2010 and 2020. About 7.8 million of these jobs are needed just to return total employment to its level before the recession.

The recession had a particularly severe impact on jobs in construction. Although employment in construction is projected to grow rapidly, it is not expected to return to its pre-recession employment level by 2020. Similarly, employment in the transportation and material moving and production occupations groups is also expected to grow, but not enough to return to 2006 levels.

Individual industry and occupation groups were affected in different ways by the recession. Some were severely affected, some mildly so, and others seem not to have been affected at all. Some industries and occupations are not expected to recover completely; others are expected to recover and have continued growth, and still others are projected to keep on growing.

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The charts for occupations, the labor force, industries, and the overall economy depict the major findings beyond the trends in total employment.

Occupations

- The office and administrative support occupations group is expected to add the most new jobs and produce the largest number of job openings. (See pages 9–10.)
- Among all occupations, personal care aides and home health aides are expected to have the fastest employment growth. (See page 11.)
- Registered nurses, retail salespersons, and home health aides are expected to gain the most new jobs. Each of these occupations will add more than 700,000 jobs. (See page 12.)
- Most job openings for workers entering an occupation come from the need to replace workers who have left the occupation, rather than from the need to fill newly created jobs. The 20 occupations that are expected to have the most openings from growth and replacement needs are diverse. The list includes occupations from nine different groups, with the largest number from the office and administrative support occupations group and the sales and related occupations group. (See page 13.)
- The 20 occupations expected to have the most openings also range widely in 2010 median annual wages, from nearly $65,000 for registered nurses to about $18,000 for combined food preparation and serving workers, including fast food. (See page 13.)
- With these projections, BLS introduces a new way of depicting the education needed for entry into an occupation. The charts group occupations by typical entry-level education, from graduate degree to less than a high school diploma, and they also indicate whether workers typically need experience in a related occupation and whether they need training on the job after employment. In general, workers in occupations that typically need more education, experience, and training earn higher wages. (See pages 14–23.)
- Wage and salary employment of farmers, ranchers, and other agricultural managers is projected to decline. However, this occupation also had the most self-employed workers in 2020. (See pages 24–25.)

The labor force

- By 2020, the number of people in the labor force—those working or looking for work—is expected to increase by more than 10 million. This is a smaller gain than the more than 11 million people added to the labor force during the previous decade. (See page 27.)
- As the baby-boom generation ages, the number of people in the labor force ages 65 and older is projected to grow very rapidly, about 11 times faster than for the total labor force. The number in the 55- to 64-year-olds group is expected to grow nearly four times as fast as the total labor force. At the same time, younger age groups in the labor force are expected to either decline or increase at much slower rates. (See page 28.)
- Labor force participation rates are projected to decline slightly for both men and women by 2020, when about 68 percent of men and 57 percent of women are expected to be in the labor force. The annual growth of the labor force participation rate for women (0.7 percent) is expected to be slightly higher than that for men (0.6 percent). (See page 29.)
- The labor force will continue to become more diverse. The share of the labor force that is Asian, black, or in other non-white race groups is expected to increase to 21 percent, up from 19 percent a decade earlier. And Hispanics are expected to constitute nearly 19 percent of the labor force in 2020, up from 15 percent in 2010. (See pages 30 and 32.)

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About the sections

The charts project 2010–20 changes in occupational employment, the labor force, industry employment, and the overall economy. You will get the most out of the charts if you understand how BLS publishes data in these areas.

"Occupation" classifies jobs according to the type of work performed. People who provide routine health care to individuals in their homes are in the occupation of home health aides, for example.

"Industry," on the other hand, classifies jobs in businesses according to the type of good produced or service provided. For example, any job in hospice care services—from home health aide to secretary—is classified as part of the home health care services industry.

"Labor force" is a measure of the number of people available for work. It includes both individuals who are employed and those who are unemployed (those not working but actively looking for a job).

"Overall economy" includes several concepts. The most important is the value of final goods produced and services provided, which is known as the gross domestic product, or GDP.

Reading the charts

The charts in this issue provide graphic answers to some basic questions about employment: How many new jobs will there be? How fast is the number of jobs changing? How many job openings will be available for new entrants to the labor force?

How many new jobs will there be? Charts that show numeric change illustrate how many new jobs there will be (the actual number of jobs gained or lost over the projections decade). In general, the occupations and industries with the greatest numeric increases are those that already have large numbers of workers.

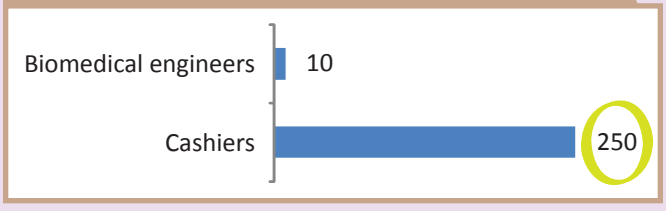
How fast is the number of jobs changing? Charts showing percent change illustrate how fast the number of jobs is changing (the rate of job growth or decline during the decade). The fastest rates of growth are usually found in occupations and industries that have fewer workers.

Fast growth does not always mean many new jobs. See, for example, the charts below. They show the projected increase in employment for cashiers compared with that for biomedical engineers. In numeric terms, as shown in the chart at upper left, more than 25 times as many new jobs are projected for cashiers as for biomedical engineers between 2010 and 2020.

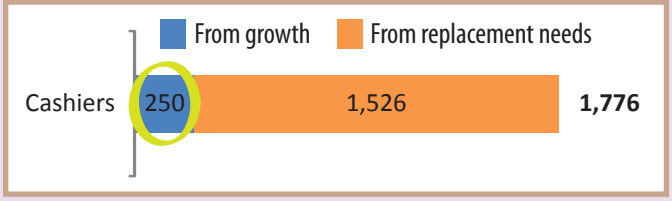
Percent change tells a different story. As the chart at lower left shows, employment of biomedical engineers is expected to grow more than 8 times faster than that of cashiers—even though biomedical engineers are projected to gain fewer jobs.

How many job openings will there be? Some charts go beyond showing the expected change in the total number of jobs and show how many job openings are expected for workers who are new to an occupation. Job openings for workers new to an occupation include not only openings from growth in the number of jobs but also openings from the need to replace workers who retire or leave an occupation for some other reason. The chart below at right shows how many job openings for cashiers are expected to result from job growth and how many are expected to result from the need to replace existing cashiers who leave the occupation.

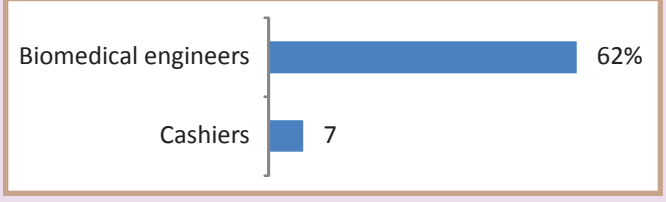
Numeric employment growth in two occupations, projected 2010–20, in thousands of jobs



Job openings for cashiers, projected 2010–20, in thousands of openings



Percent employment growth in two occupations, projected 2010–20



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Industries

- Job growth over the 2010–20 decade will be concentrated in service-providing industries. In 2020, service-providing industries are expected to account for 131 million out of 150 million wage and salary jobs overall. (See page 34.)
- The health care and social assistance sector is projected to gain the most new jobs, more than 5.6 million, as well as to be the fastest growing, increasing by 34 percent over the decade. Employment is expected to grow slowly in mining but to decline in manufacturing and the federal government. (See page 36.)
- Among detailed industries, the home health care services industry is projected to be the fastest growing, with an increase of 81 percent. The next fastest growing detailed industry, individual and family care services, is projected to grow by 70 percent over the decade. (See page 37.)
- Among goods-producing industries, the construction sector is projected to gain the most new jobs, 1.8 million. All of this growth is to regain jobs lost during the 2007–09 recession, however, and the construction sector is not projected to regain enough jobs to return to its employment level before the recession. (See page 38.)

Overall economy

- The overall growth in the economy, as measured by gross domestic product (GDP), is projected to increase by 3.0 percent per year, on average, between 2010 and 2020. This is much faster than the 1.6 percent annual growth for 2000–10, which was pulled down by two recessions during the decade, including the severe 2007–09 downturn. Slow growth rates for most components of GDP reflect that downturn and the fact that the economy had not fully recovered by 2010. (See page 42.)

How we develop the BLS projections

BLS economists in the Office of Occupational Statistics and Employment Projections develop the projections in a number of steps, first analyzing broad trends and then examining several hundred industries and occupations.

We begin with how much the U.S. population and labor force are expected to grow over the next 10 years. We use population projections from the U.S. Census Bureau, which take into account trends in births, deaths, and immigration. We combine the population projections with our own estimates of what portion of the population will be in the labor force, based on historical trends for each age, gender, and race or ethnic group. The result is a projection of the labor force—an estimate of the total supply of workers in the future economy.

We then create a model of an economy that is operating at full potential, given the labor force and several other factors. Using this framework, we estimate the dollar value of each industry's total output of goods or services. Some of these goods and services are sold to other industries; for example, steel is used in making cars. Other output—such as the cars themselves or the repair services for maintaining them—is sold directly to consumers.

We also study trends in productivity—the amount of output produced per hour of work—and use this information to translate projected output into the number of jobs needed in each industry to produce these goods and provide these services.

Next, we project how the jobs in each industry will be distributed by occupation. To do this, we make extensive use of the BLS Occupational Employment Statistics survey, as well as of information from other sources for sectors that are not covered by the survey, to depict how employment in each of nearly 300 industries is distributed across more than 700 occupations. (For the 2010–20 projections, we used 2010 employment data.) We analyze how this distribution is likely to change over the decade by studying trends in technology, changing skill requirements, and other factors. Using this analysis, along with the survey data and our industry employment projections, we project employment by occupation—in this set of projections, for 2020.

Our projection methods are based on the fact that employment trends in most occupations are closely tied to the trends in particular industries. For example, in 2010, about 59 percent of registered nurses worked in hospitals. So an increase in the demand for hospital services between 2010 and 2020 will increase the need for these workers. Based on changes in demand, we project that the real output of the hospital industry will increase over the decade, and about 389,200 more registered nurses will be needed in hospitals to provide this output. As a result, this industry is projected to account for about 55 percent of the roughly 711,900 new jobs for registered nurses.