

# Getting started

by Dixie Sommers

**I**n almost anything you do, you're more likely to succeed if you have a plan. Deciding on a career is no exception.

If you're making a decision about education, training, or a career—or if you are helping someone else who is making such decisions—you need to know what is going on in the labor market. How many jobs are likely to be available in the career you want? How much will those jobs pay? What kind of training will you need?

Projections and related information from the U.S. Bureau of Labor Statistics (BLS) provide the answers to these questions. In a changing economy, these projections help you to glimpse the future—and to plan for it.

This special issue of the *Occupational Outlook Quarterly* provides a graphic summary of the latest projections, those covering the decade from 2006 to 2016. We also invite readers to examine our detailed profiles of occupations in the 2008-09 *Occupational Outlook Handbook* and of industries in the 2008-09 *Career Guide to Industries*. The November 2007 issue of the *Monthly Labor Review* includes more detailed descriptions of the data, analysis, and methodology that BLS uses in the projections. (For details about these and related publications, see “Other BLS publications describing the 2006–16 projections” on page 39.)

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# Highlights of the 2006-16 projections

The charts depict trends and major findings in four areas: occupations, industries, the labor force, and the overall economy.

## Occupations

◆ By 2016, the total number of jobs is projected to reach 166 million, reflecting the addition of nearly 16 million new jobs between 2006 and 2016. (See page 8.)

◆ Among occupational groups, the professional and related occupations group and the services group are expected to increase the fastest and gain the most new jobs. (See page 10.)

◆ Within the professional and related occupations group, healthcare practitioner and technical occupations are projected to gain the most jobs, about 1.4 million. Education, training, and library occupations are projected to gain nearly 1.3 million jobs. (See page 12.)

◆ Although network systems and data communications analyst is expected to be the fastest growing occupation, most of the other 20 fastest growing occupations are related to healthcare. This growth reflects increased demand for healthcare by an aging population. (See page 13.)

◆ Three occupations—registered nurse, retail salesperson, and customer service representative—are expected to gain the most new jobs: more than half a million each. (See page 14.)

◆ Most job openings for workers entering an occupation come from the need to replace other workers, rather than from the need to fill newly created jobs. The 20 occupations expected to have the most openings from growth and replacement include jobs in a variety of fields, such as healthcare, sales, and office support. (See page 15.)

◆ Job growth is expected in occupations that require every level of education and training, but workers who have more preparation often qualify for higher paying occupations. (See pages 16–27.)

## Industries

◆ Job growth over the 2006-16 decade is projected to be concentrated in service-providing industry sectors. In 2016, these sectors are expected to account for 130 million out of 153 million wage and salary jobs overall. (See page 31.)

◆ Among goods-producing industries, construction is projected to gain about 781,000 jobs. Employment in manufacturing is expected to decline. (See page 34.)

◆ The professional and business services sector and the healthcare and social assistance sector are projected to gain the most new jobs—more than 4 million each—and to grow at the fastest rates. (See pages 34 and 35.)

◆ Two business-related detailed industries—management, scientific, and technical consulting services and employment services—are expected to provide the most new jobs. Management, scientific, and technical consulting services is also projected to be the fastest growing detailed industry. (See pages 36 and 37.)

## Labor force

◆ By 2016, the number of people working or looking for work is expected to reach 164 million. The labor force is projected to grow by 13 million people between 2006 and 2016, more than 4 million fewer workers than were added to the labor force during the previous decade. (See page 40.)

◆ As the baby-boom generation ages, the number of people in the labor force aged 55 to 64 years is projected to grow by 37 percent, about 5 times the average for all age groups. (See page 42.)

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## Defining the sections

The charts project 2006-16 changes in occupational employment, industry employment, the labor force, and the overall economy. You will get the most out of the charts if you understand how BLS defines these areas.

“Occupation” is a way of classifying jobs according to the type of work performed. People who supervise children are in the occupation of childcare worker, for example.

“Industry,” on the other hand, is a way of classifying jobs and businesses according to the type of good produced or service provided. For example, any job in a child daycare center—from childcare worker to cook—is classified as part of the child daycare 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 provide graphic answers to some basic questions about employment: how many new jobs there will be, how fast the number of jobs is changing, and how many job openings will be available for new entrants to the labor force.

**How many new jobs there will be.** Charts that show numeric change, such as the one below at upper left, illustrate how many new jobs there will be. This change is the number of jobs expected to be gained or lost over the 2006–16 decade.

**How fast the number of jobs is changing.** Charts showing percent change, such as the one below at lower left, illustrate how fast the number of jobs is changing—that is, the rate of job growth or decline during the decade.

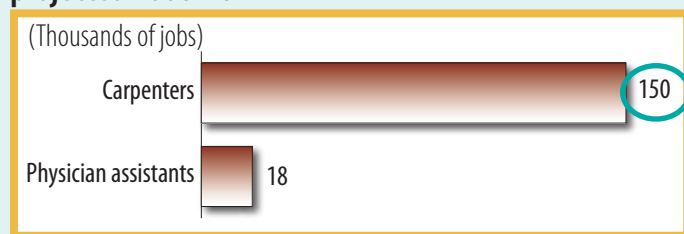
But fast growth does not always mean many new jobs. Occupations and industries with the greatest numeric increases are those that already have large numbers of workers. Occupations and industries with the fastest growth usually have fewer workers.

Physician assistants, for example, held about 66,000 jobs in 2006. The 27-percent increase projected for this occupation over the 2006–16 decade translates into about 18,000 new jobs, significantly fewer than the 150,000 jobs expected in the larger but slower growing occupation of carpenter.

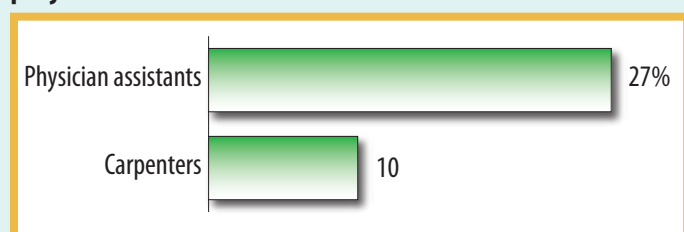
**How many job openings there will be.** Some charts go beyond showing the expected growth in the total number of jobs. Charts such as the one below at right show how many job openings are expected for workers who are new to an occupation. Job openings for these workers include not only openings from growth in the number of jobs but also openings from the need to replace workers who retire or leave an occupation permanently for other reasons.

Carpenters, for example, are projected to have 348,000 job openings over the 2006–16 decade. That total includes 150,000 openings expected to result from growth and 198,000 expected from the need to replace existing carpenters who leave the occupation.

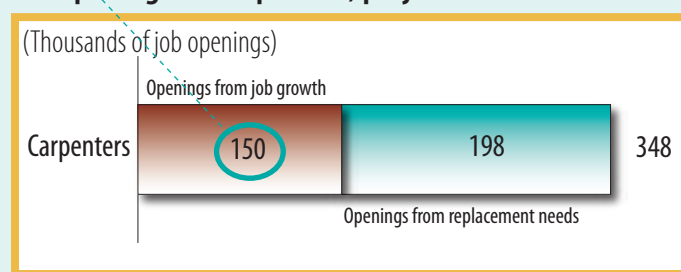
### Numeric employment growth in two occupations, projected 2006-16



### Percent employment growth in two occupations, projected 2006-16



### Job openings for carpenters, projected 2006-16



(Continued from page 3)

◆ The number of Hispanics in the labor force is projected to increase by 30 percent, compared to a 5-percent increase for non-Hispanics. (See page 46.)

## Overall economy

◆ Gross domestic product (GDP), which measures the dollar value of all final goods and services in the economy, is projected to grow at an annual rate of 2.8 percent. (See page 50.)

◆ Personal consumption expenditures—the dollar value of what we spend as individual consumers—are projected to continue to account for more than two-thirds of GDP in 2016. (See page 50.)

◆ Exports are expected to grow at an average annual rate of 5.5 percent a year, about twice as fast as the overall economy. (See page 50.)

◆ The services components of personal consumption expenditures are projected to increase by 3.1 percent annually. Growth will be driven, in part, by an increase in medical care and insurance services. (See page 51.)

◆ The goods components of personal consumption expenditures are projected to grow an average of 2.5 percent a year between 2006 and 2016. (See page 51.)

◆ Business purchases of computers are projected to grow 16 percent a year. (See page 52.)

## 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 specific 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, sex, and race or ethnic group. The result is a projection of the labor force—the total supply of workers to the future economy.

We then create a model of an economy that is operating at full potential, given the size of the labor force, an assumed unemployment rate, and several other factors. Using this framework, we estimate the dollar value of each industry's total output of goods or services. Some of this output is used by 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 worker—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. This survey shows how 2006 employment in each of nearly 300 industries is distributed across more than 700 occupations. 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 2016 employment by occupation.

Our projection methods are based on the fact that employment trends in most occupations are closely tied to the changing fortunes of particular industries. For example, any employment increase in the air transportation industry will increase the employment of pilots and flight engineers because 73 percent of these workers are in that industry. Based on changes in demand, we project that the real output of the air transportation industry will increase 5.1 percent a year over the decade, and more pilots and flight engineers will be needed to provide this output. As a result, this industry is projected to account for about 77 percent of the roughly 14,000 new jobs for aircraft pilots and flight engineers.