

Charting the projections: 2000-10



For over half a century, the Bureau of Labor Statistics has developed projections of occupational employment, industry employment, economic growth, and the labor force. These projections provide information about future employment trends that aids decisionmakers in a variety of activities, including:

- ◆ Career counseling and career choice
- ◆ Training and education planning
- ◆ Policymaking and planning.

The charts in this issue of the *Quarterly* are presented in five sections. An introductory section includes charts showing total employment. Each of the remaining sections focuses on one of four primary components of the projections: occupational employment, industry employment, economic growth, or labor force. Because of rounding, numbers do not always sum to totals and percent distributions may not equal 100.

Developing the projections

The Bureau's employment projections are developed in a series of steps. First, the Bureau generates a view of the economy, incorporating projections of the labor force and assumptions about the level of unemployment, exports and imports, consumer spending, and other economic variables. Next, a model is used to project the overall demand for goods and services—the gross domestic product (GDP). Finally, the projected demand is translated into industry and occupational employment projections, using models that incorporate assumptions about changes in technology and in employers' staffing patterns and business practices.

Assumptions underlying the projections are supported by historical trends, and none is highly speculative. The impact of some trends, such as businesses' growing reliance on computers, is projected to continue increasing. Other long-term trends, such as job declines in agricultural production, are projected to have less impact. The employment projections developed from the models form the basis of the employment outlook discussions in the *Occupational Outlook Handbook*.

Charting the projections

Over the 2000-10 decade, the projected growth or decline in an occupation, an industry, the overall economy, or the labor force is expressed in the following charts as a number or a percent. Numeric growth or decline shows the projected change as a number—the actual difference expected over the projections decade. Percent growth or decline shows the rate of change over the projections decade. It is the difference between the number in the projection year and the number in the reference (or base) year, divided by the number in the base year.

Both percent and numeric change in employment are useful measures of job opportunities. Occupations growing

at a fast rate usually have better employment prospects; large occupations with projected numeric gains may offer more favorable conditions for mobility and advancement.

Highlights of the 2000-10 projections

The Bureau's projections contain considerable detail about the structure of the economy, the demographic makeup of the labor force, and changes in employment for nearly 700 occupations and more than 250 industries. Most projections are continuations of long-term trends. The following are of special significance.

Introduction: Employment projections

- ◆ Employment is projected to grow by 22 million, about the same as over the previous decade. However, growth in percentage terms will be slower—15 percent from 2000 to 2010, compared with 17 percent between 1990 and 2000.

Occupational employment

- ◆ Nearly half of all job openings are projected to be in service and professional and related occupations, accounting for 13.5 and 12.2 million jobs, respectively. These openings will result from employment growth—the creation of new jobs—and from the need to replace existing workers who retire or leave an occupation permanently for other reasons.
- ◆ Employment is projected to grow in occupations in every education and training category. Nearly 8 million new jobs are expected in occupations usually requiring short-term on-the-job training; another 4 million will be in occupations that usually require a bachelor's degree. The remaining 10 million jobs are spread among other education and training categories, but most are in occupations that usually require less than a bachelor's degree for entry.
- ◆ Of the projected 20 fastest growing occupations, 9 are computer related, including the 7 fastest growing ones. Fast-growing computer industries and the increasing importance of computers and computer networks in nearly every industry will sustain the rapid growth in these occupations through 2010.

Industry employment

- ◆ Industry employment growth is projected to be concentrated in the service-producing sector of the economy. The services and retail trade industry divisions within this sector will account for about 76 percent of all job growth, or nearly 17 million wage-and-salary jobs.
- ◆ Within services, four industry groups are expected to account for almost half of all wage-and-salary growth in the economy: health services, business services, education services, and engineering and management services.

- ◆ In the goods-producing sector, employment is expected to grow in construction and manufacturing by about 1.4 million jobs and to decline in mining by 55,000 jobs. Employment in apparel; Federal Government, except Postal Service; and private households will experience the largest declines: 103,000, 145,000, and 226,000 jobs, respectively.

Economic growth

- ◆ Gross domestic product (GDP), which measures the output of goods and services in the economy, is projected to grow by an annual average rate of 3.4 percent. While personal consumption expenditures increase to nearly 70 percent of GDP, there will be continued significant increases in imports, exports, and investment. Government expenditures will continue to steadily decline in proportion to other components of the economy.
- ◆ Investment is expected to grow 5.2 percent annually between 2000 and 2010—more than 1½ times the rate of the economy as a whole.
- ◆ Money spent on consumer goods and services is expected to increase. Driving this growth are the rapidly increasing purchases of computers and telephone services, with expected annual growth rates of 22.1 and 7.6 percent, respectively, over the projections decade. Increasing availability and expanded use of computers, information technology, and telecommunications also will spur increased annual business investment in computers, at 15.2 percent, and software, at 12.6 percent.

Labor force

- ◆ The labor force is projected to grow by 17 million workers over the 2000-10 decade, compared with 15 million over the previous decade. The growth rate of 12 percent will be about the same as during the 1990-2000 period.
- ◆ In 2010, the population and, therefore, the labor force will be older. The aging baby-boom generation—those born between 1946 and 1964—will cause the 55- to 64-year-old age group to swell, with 11 of 17 million men and 10 of 18 million women employed. Although men will continue to have higher participation rates, women in all age groups will have higher rates than in the previous 10 years.
- ◆ Despite accounting for fewer than 2.5 million new members of the labor force, the number of workers of Asian and other races and ethnic origins except Hispanic is expected to grow faster—37 percent—than any other group in the labor force. Workers of Hispanic origin will increase their numbers in the labor force nearly as fast, at 36 percent; those of black, non-Hispanic origin will increase their presence by 17 percent. The number of workers of white, non-Hispanic origin—who make up the largest share of the labor force—is expected to grow by about 6 percent.

Other Bureau publications presenting information on the 2000-10 projections

This issue of the *Quarterly* is one of several Bureau publications presenting projections data. The others provide more detail or approach the projections from another point of view.

- ◆ The November 2001 issue of the *Monthly Labor Review* contains five articles related to the projections. The first article summarizes the Bureau's 2000-10 projections and is followed by four more detailed articles, each of which includes statistical tables and focuses on one major component: labor force, economic growth, industry employment, or occupational employment.
- ◆ The 2002-03 edition of the *Occupational Outlook Handbook* (Bulletin 2540) assesses job prospects for about 275 occupations or occupational groupings, covering 7 of every 8 jobs in the Nation. It also discusses work activities, working conditions, earnings, and the types of education, training, and personal qualifications people need to enter and succeed in each occupation.
- ◆ The 2002-03 edition of the *Career Guide to Industries* (Bulletin 2541) presents occupational information from an industry perspective. For 40 major industries, it provides details on employment, working conditions, occupations in the industry, training and advancement, earnings, and job outlook.
- ◆ *Occupational Projections and Training Data* (Bulletin 2542), the statistical supplement to the *Occupational Outlook Handbook*, is designed for use in educational planning, career development, and counseling. In addition to statistical tables presenting occupational employment change for the 2000-10 period, it includes estimates of job openings stemming from the need to replace workers who leave an occupation permanently. It also presents data on recent completions of education and training programs by field of training. The publication ranks nearly 700 occupations by employment growth, annual job openings due to growth, earnings, and replacement and unemployment rates.
- ◆ "The job outlook in brief" focuses on the occupations covered in the *Occupational Outlook Handbook*. It presents 2000 employment data and a short description of prospective employment trends and job competition. It will appear in the spring 2002 *Quarterly* and will be reprinted and sold by both the U.S. Government Printing Office and the U.S. General Services Administration's Consumer Information Center.
- ◆ "The job outlook for college graduates" will appear in the fall 2002 *Quarterly*. It will discuss the supply and demand situation for college graduates for the 2000-10 period.

Subscriptions to the *Quarterly* are \$28 for 2 years and \$14 for 1 year; single copies are \$5.50. Subscriptions to the *Monthly Labor Review* are \$45 per year or \$13 for single issues. The price of the other publications discussed above had not been determined at press time. Once the publications are in print, price and ordering information will be available from the Chicago Regional Office of the Bureau of Labor Statistics, (312) 353-1880. Most of the publications will be available online; you also may find price and ordering information at the employment projections Web site: <http://www.bls.gov/emp>.