

### Employment outlook: 1996–2006

## BLS projections to 2006—a summary

*New projections of the occupational, industrial, and demographic structure of the labor force present a detailed look at the U.S. economy in 2006*

Charles Bowman

Every 2 years, the Bureau of Labor Statistics updates its employment outlook for the coming decade. Four articles in this issue present a detailed picture of U.S. employment trends as they are likely to evolve over the next several years. While broadly similar to the projections released in the November 1995 *Monthly Labor Review*, the revised outlook differs in numerous details concerning the occupational, industrial, and demographic structure of the U.S. work force.

The gradual slowdown in the rate of labor force expansion continues to be one of the fundamental forces shaping the employment outlook. The slowdown is itself a reflection of very long-term swings in fertility and a gradual playing out of the dramatic change in labor force participation, particularly among women, which characterized much of the 70s and 80s and led to such far-reaching social and economic changes. At the same time, immigration has become an increasingly important source of population and labor force growth, moderating to some degree the slowing of population and labor force growth.

Howard Fullerton projects that the labor force will increase by about 15 million persons (or 11 percent) over the next 10 years, reaching 149 million by 2006. (See pages 23–38.) By comparison, the labor force expanded by some 16 million persons (or 14 percent) over the past 10

years. While overall change in the labor force will be modest, significant shifts are expected in its demographic structure. Increases will be concentrated among older age groups, as baby-boom cohorts swell the ranks of workers between ages 45 and 64. For the first time in 25 years, the number of young workers (16 to 24) will be growing faster than the overall labor force. Finally, a decline is expected in the number of those in the 25 to 44 year age range over the next 10 years. The net result will be a continuation of the aging of the labor force seen in the previous decade. By 2006, the median age of the labor force will approach 41 years, a level not seen in the United States since the 1960s.

Women will continue to increase their share of the labor force, although at a slower rate than in the past. Labor force participation for women overall is projected to rise by about 2 percentage points, half the increase of the preceding decade. The increase will be particularly marked among women ages 45 to 64 who represent the leading edge of the baby-boom generation and, hence, have tended to replace women with much lower levels of labor force attachment as they moved through the age distribution. By 2006, women's share of the labor force will increase by just 1.2 percentage points, to 47.4 percent, compared with increases of 1.7 points between 1986 and 1996, and 4 points between 1976 and 1986.

Charles Bowman is chief of the Division of Industry Employment Projections, Bureau of Labor Statistics.

## Changes from past procedures used to develop projections

*Projection period.* Over the past four decades, the Bureau of Labor Statistics has developed projections in which the target year always ended in a zero or five. Projections were prepared every other year, resulting in at least two and sometimes three sets of projections being prepared for the same target year. As a consequence, the projection horizon could be as short as 10 years or as long as 15 years. This procedure caused some confusion among users as to which set of projections was the proper set to use. In addition, some concerns were raised about the validity of projections that were for a period longer than 10 years. To address these concerns, the BLS has changed its procedure. Beginning with the 1996–2006 projections presented in this issue of the *Review*, projections will always be developed for a 10-year period. Thus, the next set of projections, to be published in November 1999, will cover the 1998–2008 period.

*Alternatives.* Since the early 1980's, three alternative scenarios (low growth, moderate or base-case growth, and high growth) were developed for each major segment of the projections. While most of the analytical effort was devoted to the preparation of the moderate (base-case) alternative, the low-growth and high-growth scenarios were based on variations in key economic variables, such as labor force participation, immigration, defense expenditures, exports,

and imports. In translating these alternative assumptions into employment projections, however, no changes were made to significant structural factors that could affect industry and occupational employment, such as input-output coefficients and the industry staffing patterns.

In general, users of projections focused primarily on the moderate (base-case) industry employment and occupational employment projections. However, those who did use the low-growth and high-growth alternative projections often assumed that the difference between those alternatives represented a range within which the BLS expected the employment projection to fall. That assumption was not valid, as the procedures used to develop those alternatives were not intended for that purpose. To avoid such misinterpretations, alternative scenarios were not developed for the 1996–2006 projections. Instead, a discussion is presented of the sensitivity of selected economic variables to differences in critical assumptions.

*Basic procedures.* Methods used to develop the 1996–2006 projections are very similar to those used in recent years. These methods are discussed in the *BLS Handbook of Methods* (Bulletin 2490, April 1997, chapter 13). Additional technical information on procedures and detailed listings of key assumptions are available on the BLS internet site at <http://stats.bls.gov>

Among men, almost all groups will decline in participation, as the overall rate drops by 1.3 percentage points, about the same as in each of the preceding two decades.

Significant compositional shifts are also expected along racial/ethnic lines. Although white non-Hispanics are expected to continue to account by far for the largest share of the labor force in 2006 (73 percent, compared with 75 percent in 1996 and 80 percent in 1986), their rate of growth is considerably below that for the black, Asian, and Hispanic groups. Continued rapid growth of the Hispanic population makes it likely that this group will become the second largest ethnic grouping, replacing blacks, by 2006 or shortly thereafter. The remaining group, Asians and others, also will grow relatively fast, but still will remain a small part of the total.

As the natural increase of the population slows, immigration has become a major factor in determining the prospects for labor force growth. The projections included here are largely based on the Census Bureau's middle population assumptions which include net immigration of 820,000 persons per year. Given the uncertainty surrounding immigration levels over the next decade, an alternative scenario is

presented based on the Census Bureau's high immigration (1.2 million immigrants per year) assumption. The results are a labor force that is not only larger, but one which is younger and has a different ethnic mix and higher overall participation rate.

The outlook for economic growth is the subject of the article by Tom Boustead. (See pages 6–22.) He explores, among other issues, the effects of the labor force slowdown on potential output and total employment. Overall, real gross domestic product is projected to increase 2.1 percent per year over the projection period, compared with 2.3 percent over the preceding 10-year period. The slowdown reflects lower employment growth, partially offset by a modest improvement in productivity. While changes in the underlying data make exact comparisons impossible, this is 0.1 or 0.2 higher than the previously projected trend for gross domestic product.

One of the most striking features of the macroeconomic outlook is the growing internationalization of the U.S. economy. By 2006, exports and imports are each expected to approach 20 percent of gross domestic product. Investment spending also shows strong growth, nearly 50 percent faster than the overall economy. Both of these trends are fueled in

large part by strong demand for computers and a broad array of other high technology products.

The projected growth of gross domestic product, slower labor force growth, and a favorable inflation outlook combine to allow the unemployment rate to remain at relatively low levels. The trade and Federal budget deficits also respond favorably to projected economic conditions, with the trade deficit reduced substantially in real terms and the Federal budget deficit virtually eliminated.

Instead of the high- and low-growth alternative scenarios which accompanied earlier projection studies, Boustead analyzes the sensitivity of the macroeconomic outlook to variations in a large number of exogenous and behavioral variables. These results provide users with a glimpse of how different assumptions might affect the growth of the economy and also how variations in key behavioral variables such as productivity, inflation, or the exchange rate might affect other aspects of the economy.

Mirroring the slowdown in labor force growth, total employment is expected to expand more slowly in the 1996–2006 period than in the preceding 10 years. As James Franklin shows in the article on industry trends, the economy is expected to add 18.6 million new jobs by 2006, compared with a gain of 21 million between 1986 and 1996. (See pages 39–57) As was the case in the previous BLS projection, all of this growth occurs in the service-producing sector, including net gains of 3.6 million in business services, 3.2 million in health services, and 2.3 million in retail trade. Although manufacturing shows a slight decline overall, some industries, particularly those benefiting from strong exports and capital spending, show moderation or even reversal of previously projected employment declines.

While the overall picture of industrial structure has not changed dramatically, a number of sectors do show significant changes from previous projections. The computer and data processing services sector, for example, is now expected to add 1.3 million jobs, twice the number previously projected.

The growth and shifting industrial structure of the U.S. economy has major implications for the pattern of occupa-

tional demand over the next 10 years. In the final article, George Silvestri presents a detailed description and analysis of these implications. (See pages 58–83.) At the major group level, professionals; managers; technicians; and service, marketing, and sales workers all are expected to increase their share of total employment. Meanwhile, occupational groups such as administrative support; precision production, craft and repair; and fabricators, laborers and operators will experience a declining share.

The shifting industrial structure has a major impact on the relative growth of occupations. The three fastest growing occupations, for example, are computer specialties, reflecting, in large part, the expected rapid expansion of the computer and data processing services industry. Similarly, as a result of rapid employment growth in health services, half of the 30 fastest growing occupations are health care related.

The projections also show that differing growth prospects among occupations have important implications for education. While the economy will continue to generate large numbers of jobs at all educational levels, the results also show that employment in occupations requiring an associate degree or higher will grow considerably faster than those with lesser educational requirements.

THE NEW BLS PROJECTIONS describe an economy which is gradually slowing in response to demographic factors, but is nevertheless expected to produce 18 million new jobs by 2006— as well as a much larger number of job openings to meet replacement needs. The effects of the long-term trend towards service-producing activities is evident, as computer and health-related occupations dominate the list of the fastest growing jobs. On the other hand, the decline in manufacturing jobs seems to have come to at least a temporary halt, as the growing internationalization and computerization of the economy provides significant demand for technology-related manufactured products. Finally, while the economy will generate job opportunities at all educational and skill levels, the increasing role of technology means that the fastest growing jobs are most likely to be those requiring relatively more extensive education and training. □