# A new look at long-term labor force projections to 2050 


#### Abstract

Among the factors affecting the composition and growth of the labor force over the next 50 years are the aging of the baby-boom generation, the stabilization of women's labor force participation rates, and increasing racial and ethnic diversity in the workforce


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With an annual growth rate of 0.6 percent over the $2005-50$ period, the labor force is projected to reach 194.8 million in 2050. Peaking at 2.6 percent during the 1970s, the growth rate of the labor force has been decreasing with the passage of each decade and is expected to continue to do so in the future. (See chart 1.)

The 0.6-percent annual growth rate from 2005 to 2050 reflects a projected population of 322.6 million and a labor force participation rate of 60.4 percent in 2050. The period to 2050 will witness the baby-boom generation ascending the age ladder until the group moves out of the labor force, bringing to an end one of the major drivers of labor force growth over the post-World War II period. (See table 1.)

Because labor force growth is one of the major determinants of long-term economic growth, projections of the labor force shed light on the future path of the economy and its ability to create goods and services. The Bureau of Labor Statistics carries out medium-term, or 10-year, labor force projections every other year. Every several years, longer term projections of the labor force are carried out to elicit possible future paths of labor force growth. Several key factors are expected to continue to affect the composition and growth of the labor force in the next 50 years:

- The impact of the aging baby-boom generation on the labor force. The impact
of the baby-boom generation on the composition and growth of the labor force will continue to be a key factor. As this large cohort ages, the increase in the share of the older labor force and, eventually, the exit of the baby-boom cohort from the workforce will be the main factor in lowering the growth of the labor force.
- The stabilization of women's labor force participation rates after years of remarkable increases. The growth rate of the labor force was much affected by the sizable increase in the labor force participation of women during the 1970s and 1980s. However, women's labor force participation rates appear to have peaked at 60 percent in 1999. Every year since then, the participation rate of women decreased, reaching 59.3 percent in 2005.
- Increasing racial and ethnic diversity. The labor force is expected to become even more diverse than it is now. Minorities, with higher population growth through immigration, higher fertility rates, and higher labor force participation rates, are projected to expand their share of the workforce considerably in the future.

The labor force of the future will be determined primarily by the dynamism of U.S. population change. The diversity of the Nation's

Chart 1. Labor force growth, by decades, 1950s to 2005 and projected to 2040s



Source: Bureau of Labor Statistics.
Table 1. Civilian labor force by age, sex, race, and Hispanic origin, 2000, 2005, and projected 2050
[Numbers in thousands]

| Age, sex, race, and ethnicity | Level |  |  | Change |  | Percent change |  | Percent distribution |  |  | Annual growth rate |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2000 | 2005 | 2050 | 2000-05 | 2005-50 | 2000-05 | 2005-50 | 2000 | 2005 | 2050 | 2000-05 | 2005-50 |
| Total, 16 years and older . | 142,583 | 149,320 | 194,757 | 6,737 | 45,437 | 4.7 | 30.4 | 100.0 | 100.0 | 100.0 | 0.9 | 0.6 |
| Age, years: |  |  |  |  |  |  |  |  |  |  |  |  |
| 16 to 24 ............................ | 22,520 | 22,290 | 25,808 | -230 | 3,518 | -1.0 | 15.8 | 15.8 | 14.9 | 13.3 | -. 2 | . 3 |
| 25 to 54 ............................ | 101,394 | 102,773 | 124,392 | 1,379 | 21,619 | 1.4 | 21.0 | 71.1 | 68.8 | 63.9 | . 3 | . 4 |
| 55 and older ....................... | 18,669 | 24,257 | 44,556 | 5,588 | 20,299 | 29.9 | 83.7 | 13.1 | 16.2 | 22.9 | 5.4 | 1.4 |
| Sex: |  |  |  |  |  |  |  |  |  |  |  |  |
| Men ................................ | 76,280 | 80,033 | 103,183 | 3,753 | 23,150 | 4.9 | 28.9 | 53.5 | 53.6 | 53.0 | 1.0 | . 6 |
| Women ............................... | 66,303 | 69,288 | 91,574 | 2,985 | 22,286 | 4.5 | 32.2 | 46.5 | 46.4 | 47.0 | . 9 | . 6 |
| Race: |  |  |  |  |  |  |  |  |  |  |  |  |
| White ................................ | 118,545 | 122,299 | 142,371 | 3,754 | 20,072 | 3.2 | 16.4 | 83.1 | 81.9 | 73.1 | . 6 | . 3 |
| Black | 16,397 | 17,013 | 26,809 | 616 | 9,796 | 3.8 | 57.6 | 11.5 | 11.4 | 13.8 | . 7 | 1.0 |
| Asian ................................ | 6,270 | 6,503 | 16,124 | 233 | 9,621 | 3.7 | 147.9 | 4.4 | 4.4 | 8.3 | . 7 | 2.0 |
| All other groups ${ }^{1} . . . . . . . . . . . . . . . . . . ~$ | 1,371 | 3,505 | 9,453 | 2,134 | 5,948 | 155.7 | 169.6 | 1.0 | 2.3 | 4.9 | 20.7 | 2.2 |
| Ethnicity: |  |  |  |  |  |  |  |  |  |  |  |  |
| Hispanic origin .................... | 16,689 | 19,824 | 47,317 | 3,135 | 27,493 | 18.8 | 138.7 | 11.7 | 13.3 | 24.3 | 3.5 | 2.0 |
| Other than Hispanic origin ... | 125,894 | 129,496 | 147,440 | 3,602 | 17,944 | 2.9 | 13.9 | 88.3 | 86.7 | 75.7 | . 6 | . 3 |
| White non-Hispanic ........... | 102,729 | 103,891 | 100,189 | 1,162 | -3,702 | 1.1 | -3.6 | 72.0 | 69.6 | 51.4 | 2 | -. 1 |

${ }^{1}$ The "all other groups" category includes (1) those classified as being of multiple racial origin and (2) the race categories of (2a) American Indian and

Alaska Native and (2b) Native Hawaiian and other Pacific Islanders. For this group, all 2000 numbers are estimates.
population has affected the size and composition of the labor force in the past and will continue to do so in the future.

Chart 2 presents a snapshot of demographic change in the United States since 1920. The chart shows the waves of change that have been the result of differing birthrates during the past eight or nine decades. The following features are evident:

- A reduction in birthrates-the "birth dearth"-in the late 1920s and early 1930s
- A surge in birthrates-the "baby boom"-in the 194664 period
- A slight reduction in birthrates again-the "baby bust"—from 1965 to 1975
- An increase in birthrates again-the "baby-boom echo"-during the late 1980s and the 1990s.

Even if all other variables are kept constant, the differing birthrates of the U.S. population throughout the past eight or
nine decades, and the resulting boom-and-bust waves of population change, would greatly influence the demographics of the present and future workforce.

The current projections of the labor force reinforce the results of previous BLS projections, revealing a population, and consequently a labor force, that possesses the following characteristics of change over the next 50 years:

- The aging of both the population and the labor force will result in a slowing down of the growth rate of the labor force.
- The share of the labor force aged 55 and older is rising rapidly, a direct result of increases in life expectancies and decreases in fertility rates of the U.S. population. By 2020, the share of the labor force held by those 55 years and older is projected to be nearly 24 percent.
- Significant numbers of the older age groups in the labor force will be retiring, resulting in a loss of much-needed skills and significant amounts of institutional knowledge.


## Chart 2. Number of live births, 1920-2005



[^0]- The share of the youth (16 to 24 years) workforce is projected to decrease until 2020 and to grow very slowly after that.
- The share of the prime-age ( 25 to 54 years) workforce is also projected to decline up to 2020 and to grow slowly after that date.
- Both the population and the labor force are projected to become even more racially and ethnically diverse.
- The median age of the labor force is expected to increase, reaching 42 years in 2020.
- The economic dependency (see pp. 37-38) of the U.S. population also will increase substantially.


## Labor force projections

BLS long-term labor force projections are carried out by applying population projections produced by the U.S. Census Bureau to BLS projections of the labor force participation rate. ${ }^{1}$ The assumptions about the population and the labor force participation rate that underlie the current BLS long-term projections of the labor force to 2050 differ from those of the previous BLS study conducted in 2002.

Assumptions about the population. The previous BLS longterm labor force projections were based on long-term Census Bureau population projections, weighted by 1990 census weights. ${ }^{2}$ The previous BLS long-term labor force projections from 2000 to 2050 were extensions of the 2000-10 interim projections. ${ }^{3}$

The current BLS labor force projections to 2050 are based on interim population projections of the Census Bureau, in turn based on Census 2000. ${ }^{4}$ The current long-term labor force projections through 2050 are extensions of the 2004-14 projections published in the November 2005 issue of the Monthly Labor Review. ${ }^{5}$

Census Bureau interim population projections are based on assumptions about future fertility and mortality rates of the U.S. population. Assumptions about immigration to the United States, which has a significant impact on population growth, are added to the assumptions about fertility and mortality. Indeed, of the preceding three factors-assumptions about fertility rates, assumptions about mortality rates, and assumptions about immigration-all of which are the basis of the calculation of the future population, none is as important or as uncertain as the assumptions about immigration.

Assumptions about the labor force participation rate. In the previous BLS long-term labor force projections, the detailed labor force participation rates were projected from 2000 to 2015, but were held constant from 2015 through 2050. As a result, any projected changes in the aggregate labor force participation rate and in the labor force between 2015 and

2050 reflected only changes in the composition of the population by age, sex, race, and ethnicity.

In the current set of long-term labor force projections, detailed labor force participation rates were projected from 2004 to 2020. Consequently, during this period, any changes projected in the labor force are the result not only of compositional changes of the population, but also of changes in the detailed labor force participation rates of the various age, sex, race, and ethnic categories. However, the latter changes are based on the past labor force behavior of those categories and are often assumed to approach zero beyond a certain point in the projection horizon. Accordingly, changes in the aggregate labor force participation rate and in the labor force between 2020 and 2050 will reflect only changes in the age, sex, race, and ethnic composition of the population.

## Major factors affecting labor force change

Population growth and changes in participation rates are the main factors in the growth of the labor force. However, most of the changes in labor force growth are a result of changes in the population. During the 2000-50 timeframe, the projected overall decline in the participation rate is expected to exert a relatively insignificant influence on the labor force, whose growth will likely be due mostly to the impact of population growth.

The Census Bureau carries out long-term population projections of the resident U.S. population. The conversion from the resident population concept of the Census Bureau to the civilian noninstitutional population concept of the BLS Current Population Survey (CPS) takes place in three steps. First the population of children under 16 years is taken out of the total resident population. Then the population of the Armed Forces, broken down into different age, sex, race, and ethnic categories, is subtracted. Finally, the institutional population is subtracted from the civilian population for all the different categories. Thus, the civilian noninstitutional population comprises all nonmilitary persons 16 years and older who are not inmates of penal or mental institutions, sanitariums, or homes for the aged.

## Population

The many demographic events since the beginning of the 20th century have led to significant changes in the size and composition of the population. Table 2 portrays the civilian noninstitutional population by age, sex, race, and ethnicity from 1990 to 2050, and chart 3 shows the noninstitutional population and the labor force in 1950, 2000, and 2050 (projected).

The civilian noninstitutional population was 189.2 million in 1990, 212.6 million in 2000, and 226.1 million in 2005, an increase of more than 13.5 million over the 2000-05 timeframe.

Table 2. Civilian noninstitutional population by age, sex, race, and ethnicity, 1990 to 2005 and projected 2010 to 2050 [Numbers in thousands]

| Age, sex, race, and ethnicity | 1990 | 2000 | 2005 | 2010 | 2020 | 2030 | 2040 | 2050 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Level |  |  |  |  |  |  |  |  |
| Total, 16 years and older ..... | 189,164 | 212,577 | 226,082 | 237,417 | 257,984 | 280,024 | 301,567 | 322,550 |
| Age, years: |  |  |  |  |  |  |  |  |
| 16 to 24 ............................... | 33,421 | 34,453 | 36,674 | 37,901 | 36,910 | 40,844 | 43,610 | 46,320 |
| 25 to 54 ............................. | 105,777 | 120,657 | 124,175 | 125,442 | 126,488 | 132,095 | 141,147 | 149,223 |
| 25 to 34 ........................... | 42,976 | 38,704 | 39,064 | 40,507 | 43,813 | 43,674 | 48,367 | 51,341 |
| 35 to 44 .......................... | 37,719 | 44,312 | 43,005 | 40,431 | 42,065 | 45,856 | 46,173 | 50,882 |
| 45 to 54 ........................... | 25,081 | 37,641 | 42,107 | 44,504 | 40,610 | 42,565 | 46,607 | 47,000 |
| 55 to 64 ............................. | 20,720 | 24,230 | 30,165 | 35,946 | 42,443 | 39,108 | 41,341 | 45,398 |
| 65 and older .......................... | 29,247 | 33,237 | 35,067 | 38,127 | 52,143 | 67,978 | 75,470 | 81,608 |
| Sex: |  |  |  |  |  |  |  |  |
| Men .................................... | 90,377 | 101,964 | 109,151 | 114,631 | 124,664 | 135,306 | 145,799 | 156,313 |
| Women ................................ | 98,787 | 110,613 | 116,931 | 122,786 | 133,320 | 144,718 | 155,768 | 166,237 |
| Race: |  |  |  |  |  |  |  |  |
| White ................................. | 160,625 | 176,220 | 184,446 | 191,253 | 203,270 | 215,142 | 225,678 | 235,187 |
| Black .................................... | 21,477 | 24,901 | 26,517 | 29,036 | 32,756 | 36,982 | 41,188 | 45,391 |
| Asian .................................. | 7,062 | 9,330 | 9,842 | 11,259 | 14,401 | 18,217 | 22,540 | 26,939 |
| All other groups ${ }^{1} . . . . . . . . . . . . . . . . . . . . ~$ |  | 2,126 | 5,277 | 5,868 | 7,558 | 9,683 | 12,161 | 15,032 |
| Ethnicity: |  |  |  |  |  |  |  |  |
| Hispanic origin ....................... | 15,904 | 23,938 | 29,133 | 32,821 | 41,926 | 52,315 | 63,352 | 74,907 |
| Other than Hispanic origin ....... White non-Hispanic. | $\begin{aligned} & 173,260 \\ & 146,535 \end{aligned}$ | 188,639 | 196,949 | 204,596 | 216,058 | 227,709 | 238,215 | 247,643 |
|  |  | 153,506 | 157,394 | 160,827 | 164,538 | 166,999 | 167,631 | 166,919 |
|  |  | 1990-2000 | 2000-05 | 2005-10 | 2010-20 | 2020-30 | 2030-40 | 2040-50 |
| Change <br> Total, 16 years and older |  | 23,413 | 13,505 | 11,335 | 20,567 | 22,040 | 21,543 | 20,983 |
| Age, years: |  |  |  |  |  |  |  |  |
| 16 to 24. |  | 1,032 | 2,221 | 1,227 | -991 | 3,934 | 2,766 | 2,710 |
| 25 to 54 |  | 14,880 | 3,518 | 1,267 | 1,046 | 5,607 | 9,052 | 8,076 |
| 25 to 34 |  | -4,272 | 360 | 1,443 | 3,306 | -139 | 4,693 | 2,974 |
| 35 to 44 |  | 6,593 | -1,307 | -2,574 | 1,634 | 3,791 | 317 | 4,709 |
| 45 to 54 .................. | $\ldots$ | 12,560 | 4,466 | 2,397 | -3,894 | 1,955 | 4,042 | 393 |
| 55 to 64 |  | 3,510 | 5,935 | 5,781 | 6,496 | -3,335 | 2,233 | 4,057 |
| 65 and older ................................................. |  | 3,990 | 1,830 | 3,060 | 14,016 | 15,835 | 7,492 | 6,138 |
| Sex: |  |  |  |  |  |  |  |  |
| Men. |  | 11,587 | 7,187 | 5,480 | 10,033 | 10,642 | 10,493 | 10,514 |
| Women. |  | 11,826 | 6,318 | 5,855 | 10,534 | 11,398 | 11,050 | 10,469 |
| Race: |  |  |  |  |  |  |  |  |
| White |  | 15,595 | 8,226 | 6,807 | 12,017 | 11,872 | 10,537 | 9,509 |
| Black ............................................ |  | 3,424 | 1,616 | 2,519 | 3,720 | 4,226 | 4,206 | 4,203 |
| Asian $\qquad$ <br> All other groups ${ }^{1}$. $\qquad$ |  | 2,268 | 512 | 1,417 | 3,141 | 3,817 | 4,323 | 4,399 |
|  |  | 2,126 | 3,151 | 2,591 | 1,690 | 2,126 | 2,478 | 2,871 |
| Ethnicity: |  |  |  |  |  |  |  |  |
| Hispanic origin. |  | 8,034 | 5,195 | 3,688 | 9,105 | 10,389 | 11,037 | 11,556 |
| Other than Hispanic origin ............................ |  | 15,379 | 8,310 | 7,647 | 11,462 | 11,651 | 10,506 | 9,427 |
| White non-Hispanic .................................... |  | 6,971 | 3,888 | 3,433 | 3,710 | 2,461 | 632 | -712 |
| Percent change <br> Total, 16 years and older |  | 12.4 | 6.4 | 5.0 | 8.7 | 8.5 | 7.7 | 7.0 |
| Age, years: |  |  |  |  |  |  |  |  |
| 16 to 2425 to 54 |  | 3.3 | 6.2 | 3.3 | -2.6 | 10.7 | 6.8 | 6.2 |
|  |  | 14.1 | 2.9 | 1.0 | . 8 | 4.4 | 6.9 | 5.7 |
| 25 to 34 ............................................ |  | -9.9 | . 9 | 3.7 | 8.2 | -. 3 | 10.7 | 6.1 |
| 35 to 44 .................................................. |  | 17.5 | -2.9 | -6.0 | 4.0 | 9.0 | . 7 | 10.2 |
| 45 to 54 ................................. |  | 50.1 | 11.9 | 5.7 | -8.7 | 4.8 | 9.5 | . 8 |
| 55 to 64 .................................................. |  | 16.9 | 24.5 | 19.2 | 18.1 | -7.9 | 5.7 | 9.8 |
| 65 and older ........................................... |  | 14.4 | 7.8 | 5.7 | 36.8 | 30.4 | 11.0 | 8.1 |

See footnotes at end of table.

Table 2. Continued-Civilian noninstitutional population by sex, age, race, and ethnicity, 1990 to 2005 and projected 2010 to 2050
[Numbers in thousands]

| Age, sex, race, and ethnicity |  | 1990-2000 | 2000-05 | 2005-10 | 2010-20 | 2020-30 | 2030-40 | 2040-50 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent change-continued |  |  |  |  |  |  |  |  |
| Sex: |  |  |  |  |  |  |  |  |
| Men ... |  | 12.8 | 7.0 | 4.9 | 8.8 | 8.5 | 7.8 | 7.2 |
| Women ................................... |  | 12.0 | 5.7 | 5.0 | 8.6 | 8.5 | 7.6 | 6.7 |
| Race: . |  |  |  |  |  |  |  |  |
| White. |  | 9.7 | 4.7 | 3.7 | 6.3 | 5.8 | 4.9 | 4.2 |
| Black ................................... |  | 15.9 | 6.5 | 9.5 | 12.8 | 12.9 | 11.4 | 10.2 |
| Asian ................................... |  | 32.2 | 5.5 | 14.4 | 27.9 | 26.5 | 23.7 | 19.5 |
|  |  | ... | ... | 87.5 | 28.8 | 28.1 | 25.6 | 23.6 |
| Ethnicity: |  |  |  |  |  |  |  |  |
| Hispanic origin . |  | 50.5 | 21.7 | 12.7 | 27.7 | 24.8 | 21.1 | 18.2 |
| Other than Hispanic origin .............. |  | 8.9 | 4.4 | 3.9 | 5.6 | 5.4 | 4.6 | 4.0 |
| White non-Hispanic .................... |  | 4.8 | 2.5 | 2.2 | 2.3 | 1.5 | . 4 | -. 4 |
|  | 1990 | 2000 | 2005 | 2010 | 2020 | 2030 | 2040 | 2050 |
| Percent distribution |  |  |  |  |  |  |  |  |
| Total, 16 years and older ..... | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Age, years: |  |  |  |  |  |  |  |  |
| 16 to 24 ................................ | 17.7 | 16.2 | 16.2 | 16.0 | 14.3 | 14.6 | 14.5 | 14.4 |
| 25 to 54 ................................ | 55.9 | 56.8 | 54.5 | 52.8 | 49.0 | 47.2 | 46.8 | 46.3 |
| 25 to 34 ............................. | 22.7 | 18.2 | 17.3 | 17.1 | 17.0 | 15.6 | 16.0 | 15.9 |
| 35 to 44 ............................ | 19.9 | 20.8 | 19.0 | 17.0 | 16.3 | 16.4 | 15.3 | 15.8 |
| 45 to 54 ............................. | 13.3 | 17.7 | 18.6 | 18.7 | 15.7 | 15.2 | 15.5 | 14.6 |
| 55 to 64 ................................ | 11.0 | 11.4 | 13.3 | 15.1 | 16.5 | 14.0 | 13.7 | 14.1 |
| 65 and older .......................... | 15.5 | 15.6 | 15.5 | 16.1 | 20.2 | 24.3 | 25.0 | 25.3 |
| Sex: |  |  |  |  |  |  |  |  |
| Men ...................................... | 47.8 | 48.0 | 48.3 | 48.2 | 48.3 | 48.3 | 48.3 | 48.5 |
| Women .................................. | 52.2 | 52.0 | 51.7 | 51.7 | 51.7 | 51.7 | 51.7 | 51.5 |
| Race: |  |  |  |  |  |  |  |  |
| White .................................... | 84.9 | 82.9 | 81.6 | 80.6 | 78.8 | 76.8 | 74.8 | 72.9 |
| Black ................................... | 11.4 | 11.7 | 11.7 | 12.2 | 12.7 | 13.2 | 13.7 | 14.1 |
| Asian ................................... | 3.7 | 4.4 | 4.4 | 4.7 | 5.6 | 6.5 | 7.5 | 8.4 |
| All other groups ${ }^{1} . . . . . . . . . . . . . . . . . . . . . ~$ | - | - | 2.3 | 2.5 | 2.9 | 3.5 | 4.0 | 4.7 |
| Ethnicity: |  |  |  |  |  |  |  |  |
| Hispanic origin ....................... | 8.4 | 11.3 | 12.9 | 13.8 | 16.3 | 18.7 | 21.0 | 23.2 |
| Other than Hispanic origin ....... | 91.6 | 88.7 | 87.1 | 86.2 | 83.7 | 81.3 | 79.0 | 76.8 |
| White non-Hispanic .............. | 77.5 | 72.2 | 69.6 | 67.7 | 63.8 | 59.6 | 55.6 | 51.7 |
| Annual growth rate (percent) |  | 1990-2000 | 2000-05 | 2005-10 | 2010-20 | 2020-30 | 2030-40 | 2040-50 |
|  |  |  |  |  |  |  |  |  |
| Total, 16 years and older .................... |  | 1.2 | 1.2 | 1.0 | . 8 | . 8 | . 7 | . 7 |
| Age, years: |  |  |  |  |  |  |  |  |
| 16 to 24 ....................... |  | . 3 | 1.3 | . 7 | -. 3 | 1.0 | . 7 | . 6 |
| 25 to 54 |  | 1.3 | . 6 | . 2 | . 1 | . 4 | . 7 | . 6 |
| 25 to 34 |  | -1.0 | . 2 | . 7 | . 8 | . 0 | 1.0 | . 6 |
| 35 to 44 |  | 1.6 | -. 6 | -1.2 | . 4 | . 9 | . 1 | 1.0 |
| 45 to 54 |  | 4.1 | 2.3 | 1.1 | -. 9 | . 5 | . 9 | . 1 |
| 55 to 64 |  | 1.6 | 4.5 | 3.6 | 1.7 | -. 8 | . 6 | . 9 |
| 65 and older .................................................. |  | 1.3 | 1.1 | 1.7 | 3.2 | 2.7 | 1.1 | . 8 |
| Sex: |  |  |  |  |  |  |  |  |
| Men ................................................. |  | 1.2 | 1.4 | 1.0 | . 8 | . 8 | . 7 | . 7 |
| Women ............................................. |  | 1.1 | 1.1 | 1.0 | . 8 | . 8 | . 7 | . 7 |
| See footnotes at end of table. |  |  |  |  |  |  |  |  |


| able 2. Continued-Civilian no 2010 to 2050 | tutional p | ation by | $x$, age, | and et | y, 1990 | 005 and | ected |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| [Numbers in thousands] |  |  |  |  |  |  |  |
| Age, sex, race, and ethnicity | 1990-2000 | 2000-05 | 2005-10 | 2010-20 | 2020-30 | 2030-40 | 2040-50 |
| Annual growth rate (percent)continued |  |  |  |  |  |  |  |
| Race: ............... |  |  |  |  |  |  |  |
| White | . 9 | . 9 | . 7 | . 6 | . 6 | . 5 | . 4 |
| Black .............................................. | 1.5 | 1.3 | 1.8 | 1.2 | 1.2 | 1.1 | 1.0 |
| Asian ............................................... | 2.8 | 1.1 | 2.7 | 2.5 | 2.4 | 2.2 | 1.8 |
| All other groups ................................. | ... | ... | 13.4 | 2.6 | 2.5 | 2.3 | 2.1 |
| Ethnicity: ............................................. |  |  |  |  |  |  |  |
| Hispanic origin ................................... | 4.2 | 4.0 | 2.4 | 2.5 | 2.2 | 1.9 | 1.7 |
| Other than Hispanic origin .................. | . 9 | . 9 | . 8 | . 5 | . 5 | . 5 | . 4 |
| White non-Hispanic ......................... | . 5 | . 5 | . 4 | . 2 | . 1 | . 0 | . 0 |
| ${ }^{1}$ The "all other groups" category includes (1) those classified as being of multiple racial origin and (2) the race categories of (2a) American Indian and |  |  | Alaska Native and (2b) Native Hawaiian and other Pacific Islanders. Note: Dash indicates no data collected for category. |  |  |  |  |

The growth rate of the civilian noninstitutional population was 1.2 percent on an annual basis during 1990-2000 and 1.2 percent again between 2000 and 2005. The rate is projected to decrease to 1.0 percent over the 2005-10 period and to slow even further over the decades that follow. The civilian noninstitutional population is expected to grow at an annual rate of 0.8 percent over the $2005-50$ period, reaching 322.6 million in 2050.

Table 2 also shows the shares of the civilian noninstitutional population for several age groups. The 16- to 24-year-old age group made up 16.2 percent of the population in each of 2000 and 2005. This group's share of the population is projected to decline to 14.4 percent in 2050 . The share of the 25 - to 54 -year-old age group was 55.9 percent in 1990 and 56.8 percent in 2000 and is projected to be 46.3 percent in 2050.

The 55-years-and-older age group accounted for 26.5 percent of the civilian noninstitutional population in 1990 and 28.8 percent in 2005 and is projected to be 39.4 percent in 2050. The share of those aged 65 years and older also is expected to increase, and the share of those under 25 years is anticipated to decrease. From 1990 to 2005, the share of the former group in the population increased. In sharp contrast to the pattern for the youngest age group, the 65-year-andolder civilian noninstitutional population is expected to grow steadily and increase its share of the population from 15.5 percent in 2005 to 25.3 percent in 2050.

With the passage of each decade, immigration will continue to change the size and composition of the population in various ways. Immigration is expected to spur the growth rate of certain racial and ethnic categories, such as Asians and Hispanics. Immigration also affects the age composition of the population. Immigrants to the United States are predominantly younger than the native-born population, so their entry into the country adds to the population of the younger age groups. Immigrants offset the slow growth of the native-
born population and lower the average age of the workingage population.

The rate of growth of the Hispanic population is expected to be greater than that of all other racial and ethnic groups. Hispanics constituted 12.9 percent of the share of the civilian noninstitutional population in 2005 and are projected to increase their share to 16.3 percent in 2020 and reach 23.2 percent by 2050.

## Labor force participation

Table 3 shows the labor force participation rates of the different age, sex, race, and ethnic groups for the years 1990, 2000, and 2005 and the projected rates through 2050. The civilian labor force participation rate is the proportion of the civilian noninstitutional population that is in the labor force. Overall, changes in the labor force participation rate over time are fairly consistent across the different age, sex, race, and ethnic groups. The overall labor force participation rate was 66.5 percent in 1990 and peaked at 67.1 percent during the period from 1997 to 2000. Every year after 2000, the rate declined gradually, from 66.8 percent in 2001 to 66.0 percent in 2004 and 2005. According to the BLS projections, the overall participation rate will continue its gradual decrease each decade and reach 60.4 percent in 2050.

Labor force participation rate by sex. Men and women have differed in their labor force participation rates throughout the history of U.S. labor markets and have affected the overall labor force participation rates in different ways. Historically, the labor force participation rate of men has been decreasing since the 1950s as a result of various factors. For example, the Social Security Act was amended in 1960 to make individuals under 50 years eligible for disability payments. In contrast, the labor force participation rate of women has increased

Chart 3. Population and labor force, in millions, 1950, 2000, and projected 2050


Source: Bureau of Labor Statistics.

Table 3. Civilian labor force participation rates by age, sex, race, and ethnicity, 1990 to 2005 and projected 2010 to 2050
[Percent]

| Age, sex, race, and ethnicity | 1990 | 2000 | 2005 | 2010 | 2020 | 2030 | 2040 | 2050 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total, 16 years and older | 66.5 | 67.1 | 66.0 | 65.9 | 64.5 | 61.7 | 60.8 | 60.4 |
| Age, years <br> 16 to 24 | 67.3 | 65.4 | 60.8 | 59.5 | 56.5 | 56.3 | 56.2 | 55.7 |
| 16 to 19 | 53.7 | 52.0 | 43.7 | 40.8 | 35.9 | 35.4 | 35.1 | 34.5 |
| 20 to 24 | 77.8 | 77.8 | 74.6 | 74.7 | 73.8 | 73.5 | 73.3 | 73.1 |
| 25 to 54 | 83.5 | 84.0 | 82.8 | 83.1 | 83.7 | 83.5 | 83.4 | 83.4 |
| 25 to 34 | 83.6 | 84.6 | 82.8 | 84.5 | 85.6 | 85.1 | 84.9 | 84.7 |
| 35 to 44 ............................ | 85.2 | 84.8 | 83.8 | 83.2 | 82.8 | 82.7 | 82.8 | 82.9 |
| 45 to 54 | 80.7 | 82.5 | 81.7 | 81.7 | 82.6 | 82.5 | 82.4 | 82.5 |
| 55 and older ......................... | 30.1 | 32.4 | 37.2 | 40.1 | 41.9 | 37.1 | 35.3 | 35.1 |
| 55 to 64 ............................ | 55.9 | 59.3 | 62.9 | 64.0 | 67.0 | 66.4 | 66.7 | 66.2 |
| 55 to 59 ......................... | 67.0 | 68.9 | 71.4 | 72.8 | 75.2 | 75.0 | 74.9 | 74.8 |
| 60 to 64 ......................... | 44.8 | 47.2 | 52.4 | 53.7 | 58.3 | 57.9 | 57.6 | 57.4 |
| 60 to 61 ...................... | 55.1 | 57.1 | 59.4 | 61.8 | 66.0 | 65.9 | 65.7 | 65.5 |
| 62 to 64 ...................... | 38.0 | 40.2 | 46.7 | 47.8 | 52.8 | 52.2 | 51.7 | 51.6 |
| 65 and older ....................... | 11.8 | 12.9 | 15.1 | 17.5 | 21.5 | 20.2 | 18.1 | 17.7 |
| 65 to 74 ......................... | 16.7 | 19.2 | 22.4 | 25.0 | 28.6 | 27.9 | 27.3 | 27.6 |
| 65 to 69 ...................... | 21.0 | 24.5 | 28.3 | 31.1 | 36.1 | 35.9 | 35.7 | 35.7 |
| 70 to 74 ...................... | 11.3 | 13.5 | 16.3 | 16.9 | 19.2 | 18.9 | 18.4 | 18.1 |
| 75 and older ...................... | 4.3 | 5.3 | 6.4 | 8.2 | 10.8 | 10.6 | 10.1 | 9.4 |
| Sex, and age in years |  |  |  |  |  |  |  |  |
| Men | 76.4 | 74.8 | 73.3 | 72.6 | 70.0 | 67.4 | 66.5 | 66.0 |
| 16 to 24 | 71.8 | 68.6 | 62.9 | 60.4 | 56.3 | 56.2 | 56.2 | 55.8 |
| 16 to 19 ........................... | 55.7 | 52.8 | 43.2 | 40.0 | 34.3 | 34.0 | 33.7 | 33.3 |
| 20 to 24 ............................ | 84.4 | 82.6 | 79.1 | 77.1 | 75.0 | 74.8 | 74.6 | 74.4 |
| 25 to 54 ............................... | 93.4 | 91.6 | 90.5 | 90.7 | 90.4 | 90.1 | 90.0 | 90.2 |
| 25 to 34 ............................ | 94.1 | 93.4 | 91.7 | 94.7 | 95.4 | 95.0 | 94.7 | 94.5 |
| 35 to 44 | 94.3 | 92.7 | 92.1 | 91.3 | 90.2 | 90.0 | 90.1 | 90.2 |
| 45 to 54 | 90.7 | 88.6 | 87.7 | 86.5 | 85.1 | 85.2 | 85.1 | 85.5 |
| 55 and older .......................... | 39.4 | 40.1 | 44.2 | 46.1 | 46.4 | 41.8 | 40.1 | 39.7 |
| 55 to 64 | 67.8 | 67.3 | 69.3 | 68.7 | 69.1 | 69.0 | 69.4 | 69.0 |
| 55 to 59 ... | 79.9 | 77.1 | 77.6 | 77.2 | 76.4 | 76.3 | 76.2 | 76.1 |
| 60 to 64 ... | 55.5 | 55.0 | 58.0 | 58.6 | 61.3 | 61.6 | 61.8 | 61.5 |
| 60 to 61 ...................... | 68.8 | 66.0 | 65.6 | 65.3 | 66.2 | 66.5 | 66.5 | 66.3 |
| 62 to 64 ...................... | 46.5 | 47.0 | 52.5 | 53.6 | 57.7 | 58.1 | 58.4 | 58.1 |
| 65 and older ....................... | 16.3 | 17.7 | 19.8 | 22.3 | 26.1 | 24.7 | 22.4 | 21.9 |
| 65 to 74 ......................... | 21.4 | 24.6 | 27.2 | 29.7 | 32.8 | 32.2 | 31.9 | 32.2 |
| 65 to 69 | 26.0 | 30.3 | 33.6 | 36.3 | 40.8 | 40.9 | 41.0 | 41.0 |
| 70 to 74 ...................... | 15.4 | 18.0 | 20.7 | 20.6 | 22.4 | 22.2 | 21.9 | 21.7 |
| 75 and older ....................... | 7.1 | 8.1 | 9.4 | 11.6 | 14.5 | 14.3 | 13.2 | 12.0 |
| Women $\qquad$ | 57.5 | 59.9 | 59.3 | 59.7 | 59.4 | 56.5 | 55.5 | 55.1 |
| 16 to 24 | 62.9 | 63.0 | 58.6 | 58.6 | 56.7 | 56.4 | 56.3 | 55.7 |
| 16 to 19 | 51.6 | 51.2 | 44.2 | 41.5 | 37.5 | 36.9 | 36.4 | 35.7 |
| 20 to 24 ............................ | 71.3 | 73.1 | 70.1 | 72.3 | 72.6 | 72.1 | 72.1 | 71.8 |
| 25 to 54 ............................... | 74.0 | 76.7 | 75.3 | 75.7 | 77.1 | 76.9 | 76.8 | 76.6 |
| 25 to 34 ............................ | 73.5 | 76.1 | 73.9 | 74.5 | 76.0 | 75.4 | 75.2 | 75.0 |
| 35 to 44 ............................ | 76.4 | 77.2 | 75.8 | 75.4 | 75.5 | 75.6 | 75.6 | 75.7 |
| 45 to 54 ........................... | 71.2 | 76.8 | 76.0 | 77.1 | 80.1 | 79.9 | 79.7 | 79.5 |
| 55 and older ......................... | 22.9 | 26.1 | 31.4 | 35.0 | 38.1 | 33.0 | 31.2 | 31.0 |
| 55 to 64 | 45.2 | 51.9 | 57.0 | 59.7 | 65.0 | 64.0 | 64.2 | 63.6 |
| 55 to 59 ......................... | 55.3 | 61.4 | 65.6 | 68.7 | 74.2 | 73.8 | 73.7 | 73.5 |
| 60 to 64 ................................ | 35.5 | 40.2 | 45.8 | 49.2 | 55.5 | 54.4 | 53.7 | 53.4 |
| 60 to 61 ...................... | 42.9 | 49.0 | 53.8 | 58.5 | 65.8 | 65.2 | 64.9 | 64.7 |
| 62 to 64 ...................... | 30.7 | 34.1 | 40.0 | 42.4 | 48.3 | 46.8 | 45.5 | 45.4 |
| 65 and older ...................... | 8.6 | 9.4 | 11.5 | 13.9 | 17.9 | 16.6 | 14.6 | 14.3 |
| 65 to 74 ......................... | 13.0 | 14.9 | 18.4 | 21.0 | 25.0 | 24.1 | 23.3 | 23.4 |
| 65 to 69 ...................... | 17.0 | 19.5 | 23.7 | 26.6 | 31.9 | 31.5 | 30.8 | 30.7 |
| 70 to 74 ...................... | 8.2 | 10.0 | 12.8 | 13.8 | 16.4 | 16.1 | 15.4 | 14.9 |
| 75 and older ...................... | 2.7 | 3.6 | 4.5 | 6.0 | 8.2 | 8.1 | 7.8 | 7.4 |
| Race and sex |  |  |  |  |  |  |  |  |
| White ...................................... | 66.9 | 67.3 | 66.3 | 66.4 | 64.6 | 61.7 | 60.9 | 60.5 |
| Men ..................................... | 77.1 | 75.5 | 74.1 | 73.4 | 70.6 | 67.9 | 67.0 | 66.7 |
| Women ................................. | 57.4 | 59.5 | 58.9 | 59.6 | 58.8 | 55.9 | 54.9 | 54.6 |

See footnotes at end of table.

Table 3. Continued-Civilian labor force participation rates by age, sex, race, and ethnicity, 1990 to 2005 and projected 2010 to 2050
[Percent]

| Age, sex, race, and ethnicity | 1990 | 2000 | 2005 | 2010 | 2020 | 2030 | 2040 | 2050 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Race and sex-continued |  |  |  |  |  |  |  |  |
| Black . | 64.0 | 65.8 | 64.2 | 63.1 | 63.3 | 60.9 | 59.9 | 59.1 |
| Men. | 71.0 | 69.2 | 67.3 | 65.3 | 63.4 | 61.4 | 60.6 | 59.6 |
| Women ................. | 58.3 | 63.1 | 61.6 | 61.3 | 63.2 | 60.5 | 59.3 | 58.6 |
| Asian | 65.4 | 67.2 | 66.1 | 66.4 | 65.7 | 63.0 | 61.0 | 59.9 |
| Men | 75.0 | 76.1 | 74.8 | 75.3 | 74.1 | 71.3 | 69.5 | 68.4 |
| Women ........................... | 57.4 | 59.2 | 58.2 | 58.6 | 58.5 | 56.1 | 54.1 | 52.8 |
| All other groups ${ }^{1} . . . . . . . . . . . . . .$. | - | - | 67.0 | 64.1 | 63.9 | 62.6 | 62.9 | 62.9 |
| Men ............................... | - | - | 72.0 | 71.6 | 71.0 | 69.9 | 70.3 | 70.3 |
| Women ........................... | - | - | 62.3 | 56.9 | 56.9 | 55.5 | 55.6 | 55.5 |
| Ethnicity and sex |  |  |  |  |  |  |  |  |
| Hispanic ........................... | 67.4 | 69.7 | 68.0 | 68.4 | 68.7 | 66.4 | 64.5 | 63.2 |
| Men ...... | 81.4 | 81.5 | 80.1 | 78.7 | 76.9 | 74.4 | 72.2 | 70.7 |
| Women ........ | 53.1 | 57.5 | 55.3 | 58.0 | 60.5 | 58.5 | 56.8 | 55.8 |
| White non-Hispanic ............ | 66.8 | 66.9 | 66.0 | 66.1 | 63.9 | 60.8 | 60.1 | 60.0 |
| Men ............................... | 76.5 | 74.6 | 72.9 | 72.5 | 69.4 | 66.3 | 65.6 | 65.5 |
| Women ................... | 57.8 | 59.8 | 59.5 | 60.0 | 58.8 | 55.5 | 54.8 | 54.8 |

${ }^{1}$ The "all other groups" category includes (1) those classified as being of multiple racial origin and (2) the race categories of (2a) American Indian and

Alaska Native and (2b) Native Hawaiian and other Pacific Islanders. Note: Dash indicates no data collected for category.
significantly since the 1950s and has compensated for the decline in the labor force participation rate of men. The overall labor force participation rate consists of the joint contributions of the labor force participation rates of both men and women, which take into account their age structure or their population weights in each age, race, and ethnic category.

1. Men. The participation rate of men has been continually decreasing, having registered 76.4 percent in 1990, 74.8 percent in 2000 , and 73.3 percent in 2005 . The rate is projected to be 70.0 percent in 2020 and 66.0 percent in 2050.
2. Women. Women's labor force participation, a low 33.9 percent in 1950, increased significantly during the 1970s and 1980s and reached 57.5 percent in 1990. In 1999, the women's participation rate reached a peak of 60 percent. By 2000, however, the rate had declined slightly to 59.9 percent, and since then it has been displaying a pattern of slow decline in each successive period, falling to 59.3 percent in 2005 . The participation rate of women is projected to be 59.4 percent in 2020 and 55.1 percent in 2050. Looking back at women's participation rates during the past three decades reveals that the peak appears to have been reached and the rapid increase of the 1970-80 era is over. Although women's participation has fast approached that of men, the women's participation rate is expected to remain below the men's rate through 2050.

The women's labor force participation rate is not expected to be high enough to offset the decline in the men's participation rate in the future. As a result, the overall labor force participation rate is expected to decline gradually in the coming years.

Labor force participation rate by age. The labor force participation rate differs among the various age groups, reflecting a number of factors that come into play at different ages.

1. Youths 16 to 24 years. The youth labor market consists of the teenage group of 16 - to 19-year-olds and young adults aged 20 to 24 years. The labor force participation rates of the two groups have been different from each other in the past. The different shares of students and nonstudents in the two age groups has been part of the explanation for the difference in their participation rates. Because students are less likely to participate in the labor force, increases in school attendance at the secondary and college levels and, especially, increases in school attendance during the summer, significantly reduce the labor force participation rate of youths. The labor force participation rate of the 16 - to 19 -year-old group was 53.7 percent in 1990, declined to 52.0 percent in 2000, and fell further to 43.7 percent in 2005 . The Bureau projects that the downward trend in the participation rate of 16 - to 19-year-olds will continue and the rate will reach 34.5 percent in 2050.

The labor force participation rate of 20- to 24-year-olds was 77.8 percent in both 1990 and 2000. In 2005, the rate declined significantly, to 74.6 percent.

The rise in school attendance during the past couple of decades has been a major contributor to the decrease in the labor force participation rate of both youth groups. ${ }^{6}$ The participation rate of the 20- to 24-year age group is projected to decrease further, to 73.8 percent in 2020 and 73.1 percent in 2050. The decrease in the labor force participation rate of youths-especially 16- to 19-year-old men-has been a major contributor to the decrease in the overall labor force participation rate.
2. Prime-aged workers 25 to 54 years. Historically, all age cohorts in this group have exhibited strong attachment to the labor market. The group's participation rate was 83.5 percent in 1990, 84.0 percent in 2000, and 82.8 percent in 2005 . The rate is projected to be 83.4 percent in 2050 .

Both men and women have contributed to the strong labor force participation rates of this age group in the past. The participation rate of 25 - to 54 -year-old men was 90.5 percent in 2005 and is projected to be 90.7 percent in 2010 and to decrease slightly to 90.2 percent in 2050. The participation rate of 25- to 54-year-old women, by contrast, is expected to increase from its 2005 level of 75.3 percent to 75.7 percent in 2010 and 76.6 percent in 2050.
3. Workers 55 years and older. As workers move out of the prime-age category, reach the older age cohorts, and go through early and normal retirement, their labor force participation rate decreases dramatically.

The participation rate of the 55- to 64-year-old age group increased sharply from 55.9 percent in 1990 to 59.3 percent in 2000 and 62.9 percent in 2005 . Still, the participation rate of the group in 2005 was lower by nearly 19 percentage points than the rate of those aged 45 to 54 years, which stood at 81.7 percent the same year.

A review of the historical data shows that, as a result of a variety of factors, the labor force participation rate of the 55-years-and-older age group has increased significantly since the end of the 1980s. The continued gradual increase in the labor force participation rate of this group, multiplied by the sheer number of baby boomers in the group, is expected to affect the overall labor force participation rate and keep it from declining further in the future.

Compared with all other age groups of the labor force, the 55-years-and-older group has the most potential to increase its labor force participation rate further, and that may contribute to an increase in the growth of the labor force in the future.
4. Race and ethnicity. Changes in the labor force participation rates of the different racial and ethnic categories
vary over time. However, judging by past data, differences in labor force participation by race and ethnic origin usually are not as great as those by the age and sex categories.

Hispanics have a younger population relative to other racial and ethnic groups and thus have higher aggregate labor force participation rates. Hispanic men have the highest labor force participation rate of any labor force group, in large part reflecting their young age structure.

The participation rate of Hispanics was 67.4 percent in 1990, 69.7 percent in 2000, and 68.0 percent in 2005 . The rate is projected to be 68.7 percent in 2020. As a result of aging of the Hispanic population, the Hispanic labor force participation rate is expected to decline and reach 63.2 percent in 2050.

Asians have high participation rates as well. Their participation rate was 65.4 percent in 1990, 67.2 percent in 2000, and 66.1 percent in 2005. The Asian rate is expected to be 65.7 percent in 2020 and 59.9 percent in 2050.

The labor force participation rate of blacks stood at 64.0 percent in 1990, 65.8 percent in 2000, and 64.2 percent in 2005. The black participation rate is projected to be 63.3 percent in 2020 and 59.1 percent in 2050 . The decline in the labor force participation rate of blacks between 2020 and 2050 is the result of the changing age structure of the black population.

## The projected labor force

As the various age, sex, race, and ethnicity groups experience changes in their populations and participation rates, the labor force also experiences change. The U.S. labor force was 125.8 million in 1990, 142.6 million in 2000, and 149.3 million in 2005. The labor force is projected to reach 166.4 million in 2020 and 194.8 million in 2050.

The labor force and its rate of growth on an annual basis, both in the past and projected to 2050, are shown in table 4. The annual growth of the labor force peaked at 2.6 percent during the 1970-80 period, mainly the result of the continued entry of the baby-boom generation into the job market, but also a consequence of the significant acceleration of the labor force participation rate of women. The growth of the labor force has declined since that period. The annual growth rate of the labor force was 1.3 percent during 1990-2000, slowing to 0.9 percent from 2000 to 2005 . The rate is projected to be 0.6 percent over the 2000-50 timeframe.

The discussion that follows breaks down the projected labor force by the different age, sex, racial, and ethnic categories.

Projected labor force by sex. Projections of the labor force by sex are based on past participation rates and shares of the population and therefore differ between men and women.

1. Men. The number of men in the labor force has always

Table 4. Civilian labor force by age, sex, race, and ethnicity, 1990 to 2005 and projected 2010 to 2050

| [Numbers in thousands] |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age, sex, race, and ethnicity | 1990 | 2000 | 2005 | 2010 | 2020 | 2030 | 2040 | 2050 |
| Level |  |  |  |  |  |  |  |  |
| Total, 16 years and older $\qquad$ | 125,840 | 142,583 | 149,320 | 156,511 | 166,355 | 172,910 | 183,427 | 194,757 |
| Age, years: |  |  |  |  |  |  |  |  |
| 16 to 24 ..................... | 22,492 | 22,520 | 22,290 | 22,567 | 20,852 | 22,979 | 24,518 | 25,808 |
| 16 to 19 .................. | 7,792 | 8,270 | 7,164 | 6,898 | 6,047 | 6,541 | 6,841 | 7,195 |
| 20 to 24 ....... | 14,700 | 14,250 | 15,127 | 15,668 | 14,805 | 16,439 | 17,677 | 18,612 |
| 25 to 54 ..................... | 88,322 | 101,394 | 102,773 | 104,269 | 105,873 | 110,241 | 117,656 | 124,392 |
| 25 to 34 .................. | 35,929 | 32,756 | 32,341 | 34,241 | 37,510 | 37,169 | 41,045 | 43,462 |
| 35 to 44 .................. | 32,145 | 37,566 | 36,030 | 33,657 | 34,834 | 37,942 | 38,228 | 42,165 |
| 45 to 54 .................. | 20,248 | 31,072 | 34,402 | 36,372 | 33,530 | 35,130 | 38,383 | 38,766 |
| 55 and older ................ | 15,026 | 18,669 | 24,257 | 29,675 | 39,629 | 39,689 | 41,253 | 44,556 |
| 55 to 64 ...... | 11,575 | 14,357 | 18,979 | 23,013 | 28,427 | 25,986 | 27,594 | 30,076 |
| 65 and older ............. | 3,451 | 4,312 | 5,278 | 6,663 | 11,202 | 13,704 | 13,659 | 14,481 |
| 65 to 74 ............... | 2,952 | 3,505 | 4,212 | 5,259 | 8,970 | 10,456 | 9,574 | 10,343 |
| 75 and older ......... | 498 | 807 | 1,066 | 1,404 | 2,232 | 3,248 | 4,085 | 4,138 |
| Men, 16 years |  |  |  |  |  |  |  |  |
| and older .................... | 69,011 | 76,280 | 80,033 | 83,179 | 87,215 | 91,144 | 96,948 | 103,183 |
| 16 to 24 ..................... | 11,960 | 11,789 | 11,644 | 11,509 | 10,416 | 11,497 | 12,289 | 12,960 |
| 16 to 19 .................. | 4,094 | 4,268 | 3,590 | 3,435 | 2,924 | 3,172 | 3,330 | 3,516 |
| 20 to 24 .................. | 7,866 | 7,521 | 8,054 | 8,074 | 7,491 | 8,325 | 8,958 | 9,444 |
| 25 to 54 ..................... | 48,456 | 54,206 | 55,385 | 56,138 | 56,638 | 59,054 | 63,032 | 66,773 |
| 25 to 34 .................. | 19,872 | 17,844 | 17,837 | 19,050 | 20,744 | 20,542 | 22,676 | 24,050 |
| 35 to 44 .................. | 17,481 | 20,093 | 19,495 | 18,221 | 18,844 | 20,498 | 20,645 | 22,778 |
| 45 to 54 .................. | 11,103 | 16,269 | 18,053 | 18,867 | 17,049 | 18,013 | 19,711 | 19,945 |
| 55 and older ............... | 8,594 | 10,285 | 12,904 | 15,533 | 20,161 | 20,593 | 21,628 | 23,450 |
| 55 to 64 .................. | 6,627 | 7,796 | 10,045 | 11,879 | 14,165 | 13,136 | 14,093 | 15,416 |
| 65 and older ............ | 1,967 | 2,489 | 2,859 | 3,654 | 5,996 | 7,456 | 7,534 | 8,034 |
| 65 to 74 ............... | 1,664 | 2,018 | 2,346 | 2,875 | 4,773 | 5,641 | 5,276 | 5,780 |
| 75 and older ......... | 303 | 471 | 612 | 779 | 1,223 | 1,815 | 2,258 | 2,254 |
| Women, 16 years |  |  |  |  |  |  |  |  |
| 16 to 24 .......................... | 10,532 | 66,731 | 69,288 10,647 | 11,057 | 10,437 | 11,482 | 12,229 | 12,848 |
| 16 to 19 .................. | 3,698 | 4,002 | 3,574 | 3,463 | 3,122 | 3,369 | 3,510 | 3,679 |
| 20 to 24 .................. | 6,834 | 6,729 | 7,073 | 7,594 | 7,314 | 8,113 | 8,719 | 9,169 |
| 25 to 54 ..................... | 39,866 | 47,188 | 47,387 | 48,132 | 49,235 | 51,187 | 54,625 | 57,620 |
| 25 to 34 .................. | 16,058 | 14,912 | 14,503 | 15,191 | 16,765 | 16,627 | 18,370 | 19,412 |
| 35 to 44 .................. | 14,663 | 17,473 | 16,535 | 15,436 | 15,989 | 17,444 | 17,583 | 19,387 |
| 45 to 54 .................. | 9,145 | 14,803 | 16,349 | 17,505 | 16,481 | 17,116 | 18,672 | 18,820 |
| 55 and older ............... | 6,431 | 8,384 | 11,253 | 14,143 | 19,468 | 19,097 | 19,625 | 21,106 |
| 55 to 64 .................. | 4,948 | 6,561 | 8,934 | 11,134 | 14,262 | 12,849 | 13,500 | 14,660 |
| 65 and older ............ | 1,483 | 1,823 | 2,319 | 3,009 | 5,206 | 6,248 | 6,125 | 6,446 |
| 65 to 74 ............... | 1,288 | 1,487 | 1,866 | 2,384 | 4,197 | 4,814 | 4,298 | 4,562 |
| 75 and older ......... | 195 | 336 | 454 | 625 | 1,009 | 1,433 | 1,827 | 1,884 |
| Race: |  |  |  |  |  |  |  |  |
| White ......................... | 107,447 | 118,545 | 122,299 | 126,941 | 131,333 | 132,849 | 137,354 | 142,371 |
| Men ........................ | 59,638 | 64,466 | 66,694 | 68,596 | 70,211 | 71,450 | 74,044 | 76,920 |
| Women ................... | 47,809 | 54,079 | 55,605 | 58,345 | 61,121 | 61,400 | 63,310 | 65,451 |
| Black ........................ | 13,740 | 16,397 | 17,013 | 18,334 | 20,739 | 22,519 | 24,661 | 26,809 |
| Men ....................... | 6,802 | 7,702 | 7,998 | 8,576 | 9,460 | 10,430 | 11,561 | 12,651 |
| Women ................... | 6,938 | 8,695 | 9,014 | 9,758 | 11,279 | 12,088 | 13,100 | 14,158 |
| Asian ........................ | 4,652 | 6,270 | 6,503 | 7,473 | 9,457 | 11,476 | 13,759 | 16,124 |
| Men ....................... | 2,570 | 3,362 | 3,500 | 3,946 | 4,901 | 5,917 | 7,101 | 8,348 |
| Women .................... | 2,082 | 2,908 | 3,002 | 3,526 | 4,556 | 5,559 | 6,658 | 7,776 |
| All other groups ${ }^{1} . . . . . . . . . . . . . ~$ | - | 1,371 | 3,505 | 3,764 | 4,826 | 6,066 | 7,653 | 9,453 |
| Men ....................... | - | 754 | 1,840 | 2,061 | 2,643 | 3,347 | 4,242 | 5,264 |
| Women .................... | - | 617 | 1,665 | 1,703 | 2,183 | 2,719 | 3,411 | 4,188 |

See footnotes at end of table.

Table 4. Continued-Civilian labor force by age, sex, race, and ethnicity, 1990 to 2005 and projected 2010 to 2050 [Numbers in thousands]


See footnotes at end of table.

Table 4. Continued-Civilian labor force by age, sex, race, and ethnicity, 1990 to 2005 and projected 2010 to 2050

| [Numbers in thousands] |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age, sex, race, and ethnicity | 1990-2000 | 2000-05 | 2005-10 | 2010-20 | 2020-30 | 2030-40 | 2040-50 |
| Change-continued |  |  |  |  |  |  |  |
| Black ......................................... | 2,657 | 616 | 1,321 | 2,405 | 1,780 | 2,142 | 2,148 |
| Men .......................................... | 900 | 296 | 578 | 884 | 970 | 1,131 | 1,090 |
| Women .................................... | 1,757 | 319 | 744 | 1,521 | 809 | 1,012 | 1,058 |
| Asian .......................................... | 1,656 | 233 | 970 | 1,984 | 2,019 | 2,283 | 2,365 |
| Men ........................................ | 792 | 138 | 446 | 955 | 1,016 | 1,184 | 1,247 |
| Women .................................... | 864 | 94 | 524 | 1,030 | 1,003 | 1,099 | 1,118 |
|  |  | $\ldots$ | 259 | 1,062 | 1,240 | 1,587 | 1,800 |
| Men | $\ldots$ | $\ldots$ | 221 | 582 | 704 | 895 | 1,022 |
| Women ................................. | ... | $\ldots$ | 38 | 480 | 536 | 692 | 777 |
| Ethnicity: |  |  |  |  |  |  |  |
| Hispanic origin ............................ | 5,969 | 3,135 | 2,618 | 6,353 | 5,939 | 6,108 | 6,475 |
| Men ....................................... | 3,377 | 2,062 | 963 | 3,139 | 3,276 | 3,339 | 3,502 |
| Women .................................. | 2,593 | 1,072 | 1,655 | 3,214 | 2,663 | 2,769 | 2,974 |
| Other than Hispanic origin ........... | 10,774 | 3,602 | 4,573 | 3,491 | 616 | 4,409 | 4,855 |
| Men ....................................... | 3,892 | 1,691 | 2,183 | 897 | 653 | 2,465 | 2,733 |
| Women .................................. | 6,881 | 1,913 | 2,389 | 2,594 | -37 | 1,944 | 2,121 |
| White non-Hispanic ..................... | 4,911 | 1,162 | 2,381 | -1,085 | -3,707 | -771 | -520 |
| Men | 1,309 | 452 | 1,103 | -1,109 | -1,667 | -304 | -143 |
| Women ................................... | 3,602 | 710 | 1,278 | 24 | -2,039 | -468 | -377 |
| Percent change <br> Total, 16 years and older | 13.3 | 4.7 | 4.8 | 6.3 | 3.9 | 6.1 | 6.2 |
| Age, years: |  |  |  |  |  |  |  |
| 16 to 24 | . 1 | -1.0 | 1.2 | -7.6 | 10.2 | 6.7 | 5.3 |
| 16 to 19 ................................. | 6.1 | -13.4 | -3.7 | -12.3 | 8.2 | 4.6 | 5.2 |
| 20 to 24 .................................. | -3.1 | 6.2 | 3.6 | -5.5 | 11.0 | 7.5 | 5.3 |
| 25 to 54 .................................... | 14.8 | 1.4 | 1.5 | 1.5 | 4.1 | 6.7 | 5.7 |
| 25 to 34 .................................. | -8.8 | -1.3 | 5.9 | 9.5 | -. 9 | 10.4 | 5.9 |
| 35 to 44 .................................. | 16.9 | -4.1 | -6.6 | 3.5 | 8.9 | . 8 | 10.3 |
| 45 to 54 .................................. | 53.5 | 10.7 | 5.7 | -7.8 | 4.8 | 9.3 | 1.0 |
| 55 and older ............................... | 24.2 | 29.9 | 22.3 | 33.5 | . 2 | 3.9 | 8.0 |
| 55 to 64 .................................. | 24.0 | 32.2 | 21.3 | 23.5 | -8.6 | 6.2 | 9.0 |
| 65 and older ............................ | 24.9 | 22.4 | 26.2 | 68.1 | 22.3 | -. 3 | 6.0 |
| 65 to 74 ............................. | 18.7 | 20.2 | 24.9 | 70.6 | 16.6 | -8.4 | 8.0 |
| 75 and older .......................................... | 62.0 | 32.1 | 31.7 | 59.0 | 45.5 | 25.8 | 1.3 |
| Men, 16 years and older ................. | 10.5 | 4.9 | 3.9 | 4.9 | 4.5 | 6.4 | 6.4 |
| 16 to 24 .................................... | -1.4 | -1.2 | -1.2 | -9.5 | 10.4 | 6.9 | 5.5 |
| 16 to 19 .................................. | 4.3 | -15.9 | -4.3 | -14.9 | 8.5 | 5.0 | 5.6 |
| 20 to 24 .................................. | -4.4 | 7.1 | . 2 | -7.2 | 11.1 | 7.6 | 5.4 |
| 25 to 54 .................................... | 11.9 | 2.2 | 1.4 | . 9 | 4.3 | 6.7 | 5.9 |
| 25 to 34 .................................. | -10.2 | . 0 | 6.8 | 8.9 | -1.0 | 10.4 | 6.1 |
| 35 to 44 | 14.9 | -3.0 | -6.5 | 3.4 | 8.8 | . 7 | 10.3 |
| 45 to 54 .................................. | 46.5 | 11.0 | 4.5 | -9.6 | 5.7 | 9.4 | 1.2 |
| 55 and older .............................. | 19.7 | 25.5 | 20.4 | 29.8 | 2.1 | 5.0 | 8.4 |
| 55 to 64 .................................. | 17.6 | 28.8 | 18.3 | 19.2 | -7.3 | 7.3 | 9.4 |
| 65 and older ............................ | 26.5 | 14.9 | 27.8 | 64.1 | 24.4 | 1.0 | 6.6 |
| 65 to 74 .............................. | 21.3 | 16.3 | 22.6 | 66.0 | 18.2 | -6.5 | 9.6 |
| 75 and older ........................ | 55.4 | 29.9 | 27.2 | 57.0 | 48.4 | 24.4 | -. 2 |
| Women, 16 years and older ............ | 16.7 | 4.5 | 5.8 | 7.9 | 3.3 | 5.8 | 5.9 |
| 16 to 24 .................................... | 1.9 | -. 8 | 3.9 | -5.6 | 10.0 | 6.5 | 5.1 |
| 16 to 19 .................................. | 8.2 | -10.7 | -3.1 | -9.8 | 7.9 | 4.2 | 4.8 |
| 20 to 24 .................................. | -1.5 | 5.1 | 7.4 | -3.7 | 10.9 | 7.5 | 5.2 |
| 25 to 54 .................................... | 18.4 | . 4 | 1.6 | 2.3 | 4.0 | 6.7 | 5.5 |
| 25 to 34 .................................. | -7.1 | -2.7 | 4.7 | 10.4 | -. 8 | 10.5 | 5.7 |
| 35 to 44 ................................ | 19.2 | -5.4 | -6.6 | 3.6 | 9.1 | . 8 | 10.3 |
| 45 to 54 ................................ | 61.9 | 10.4 | 7.1 | -5.9 | 3.9 | 9.1 | . 8 |

See footnotes at end of table.

Table 4. Continued-Civilian labor force by sex, age, race, and ethnicity, 1990 to 2005 and projected 2010 to 2050
[Numbers in thousands]


Table 4. Continued-Civilian labor force by sex, age, race, and Hispanic origin, 1990 to 2005 and projected 2010 to 2050
[Numbers in thousands]

| Age, sex, race, and ethnicity | 1990 | 2000 | 2005 | 2010 | 2020 | 2030 | 2040 | 2050 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distributioncontinued |  |  |  |  |  |  |  |  |
| 35 to $44 \ldots \ldots . . . . . . . . . . .$. | 13.9 | 14.1 | 13.1 | 11.6 | 11.3 | 11.9 | 11.3 | 11.7 |
| 45 to 54 ................ | 8.8 | 11.4 | 12.1 | 12.1 | 10.2 | 10.4 | 10.7 | 10.2 |
| 55 and older ............. | 6.8 | 7.2 | 8.6 | 9.9 | 12.1 | 11.9 | 11.8 | 12.0 |
| 55 to 64 ............... | 5.3 | 5.5 | 6.7 | 7.6 | 8.5 | 7.6 | 7.7 | 7.9 |
| 65 and older ........... | 1.6 | 1.7 | 1.9 | 2.3 | 3.6 | 4.3 | 4.1 | 4.1 |
| 65 to $74 \ldots . . . . . . . . . . . .$. | 1.3 | 1.4 | 1.6 | 1.8 | 2.9 | 3.3 | 2.9 | 3.0 |
| 75 and older ....... | . 2 | . 3 | . 4 | . 5 | . 7 | 1.0 | 1.2 | 1.2 |
| Women, 16 years |  |  |  |  |  |  |  |  |
| and older ................... | 45.2 8.4 | 46.5 7.5 | 46.4 7.1 | 46.9 7.1 | 47.6 6.3 | 47.3 6.6 | 47.1 | 47.0 |
|  | 2.9 | 2.8 | 2.4 | 2.2 | 1.9 | 1.9 | 1.9 | 6.6 1.9 |
| 20 to 24 .................... | 5.4 | 4.7 | 4.7 | 4.9 | 4.4 | 4.7 | 4.8 | 4.7 |
| 25 to 54 ................... | 31.7 | 33.1 | 31.7 | 30.8 | 29.6 | 29.6 | 29.8 | 29.6 |
| 25 to 34 ................ | 12.8 | 10.5 | 9.7 | 9.7 | 10.1 | 9.6 | 10.0 | 10.0 |
| 35 to 44 ................ | 11.7 | 12.3 | 11.1 | 9.9 | 9.6 | 10.1 | 9.6 | 10.0 |
| 45 to $54 \ldots . . . . . . . . . . . . . . . ~$ | 7.3 | 10.4 | 10.9 | 11.2 | 9.9 | 9.9 | 10.2 | 9.7 |
| 55 and older ............. | 5.1 | 5.9 | 7.5 | 9.0 | 11.7 | 11.0 | 10.7 | 10.8 |
| 55 to 64 ................. | 3.9 | 4.6 | 6.0 | 7.1 | 8.6 | 7.4 | 7.4 | 7.5 |
| 65 and older ........... | 1.2 | 1.3 | 1.6 | 1.9 | 3.1 | 3.6 | 3.3 | 3.3 |
| 65 to $74 \ldots . . . . . . . . . .$. | 1.0 | 1.0 | 1.2 | 1.5 | 2.5 | 2.8 | 2.3 | 2.3 |
| 75 and older ....... | . 2 | . 2 | . 3 | 4 | . 6 | . 8 | 1.0 | 1.0 |
| Race: |  |  |  |  |  |  |  |  |
| White ...................... | 85.4 | 83.1 | 81.9 | 81.1 | 78.9 | 76.8 | 74.9 | 73.1 |
| Men ...................... | 47.4 | 45.2 | 44.7 | 43.8 | 42.2 | 41.3 | 40.4 | 39.5 |
| Women .................. | 38.0 | 37.9 | 37.2 | 37.3 | 36.7 | 35.5 | 34.5 | 33.6 |
| Black ...................... | 10.9 | 11.5 | 11.4 | 11.7 | 12.5 | 13.0 | 13.4 | 13.8 |
| Men ..................... | 5.4 | 5.4 | 5.4 | 5.5 | 5.7 | 6.0 | 6.3 | 6.5 |
| Women .................. | 5.5 | 6.1 | 6.0 | 6.2 | 6.8 | 7.0 | 7.1 | 7.3 |
| Asian ...................... | 3.7 | 4.4 | 4.4 | 4.8 | 5.7 | 6.6 | 7.5 | 8.3 |
| Men ..................... | 2.0 | 2.4 | 2.3 | 2.5 | 2.9 | 3.4 | 3.9 | 4.3 |
| Women .................. | 1.7 | 2.0 | 2.0 | 2.3 | 2.7 | 3.2 | 3.6 | 4.0 |
| All other groups'......... | - | - | 2.3 | 2.4 | 2.9 | 3.5 | 4.2 | 4.9 |
| Men ...................... | - | - | 1.2 | 1.3 | 1.6 | 1.9 | 2.3 | 2.7 |
| Women .................. | - | - | 1.1 | 1.1 | 1.3 | 1.6 | 1.9 | 2.2 |
| Ethnicity: |  |  |  |  |  |  |  |  |
| Hispanic origin ........... | 8.5 | 11.7 | 13.3 | 14.3 | 17.3 | 20.1 | 22.3 | 24.3 |
| Men ..................... | 5.2 | 7.0 | 8.0 | 8.3 | 9.7 | 11.2 | 12.4 | 13.5 |
| Women .................. | 3.3 | 4.7 | 5.2 | 6.1 | 7.6 | 8.9 | 9.9 | 10.8 |
| Other than Hispanic |  |  |  |  |  |  |  |  |
| origin ................... | 91.5 | 88.3 | 86.7 | 85.7 | 82.7 | 79.9 | 77.7 | 75.7 |
| Men ..................... | 49.6 | 46.5 | 45.6 | 44.9 | 42.8 | 41.5 | 40.5 | 39.5 |
| Women ................. | 41.8 | 41.8 | 41.2 | 40.8 | 39.9 | 38.4 | 37.3 | 36.2 |
| White non-Hispanic ... | 77.7 | 72.0 | 69.6 | 67.9 | 63.2 | 58.7 | 54.9 | 51.4 |
| Men ..................... | 42.7 | 38.6 | 37.2 | 36.2 | 33.4 | 31.1 | 29.2 | 27.4 |
| Women ................. | 35.0 | 33.4 | 32.4 | 31.7 | 29.9 | 27.6 | 25.7 | 24.0 |
|  |  | 1990-2000 | 2000-05 | 2005-10 | 2010-20 | 2020-30 | 2030-40 | 2040-50 |
| Annual growth rate (percent) Total, 16 years and older |  | 1.3 | . 9 | . 9 | . 6 | 4 | . 6 | . 6 |
| Age, years:       <br> 16 to 24 0 -2 2 -8 1.0 7 |  |  |  |  |  |  |  |  |
| 16 to 19 ................................. |  | . 0 | -.2 -2.8 | . 2 | -.8 -1.3 | 1.0 .8 | . 7 | . 5 |
| 20 to 24 ......................... | .......... | -. 3 | 1.2 | . 7 | -. 6 | 1.1 | . 7 | . 5 |
| 25 to 54 ................................... |  | 1.4 | . 3 | . 3 | . 2 | . 4 | . 7 | . 6 |
|  |  | -. 9 | -. 3 | 1.1 | 9 | -. 1 | 1.0 | . 6 |
|  |  | 1.6 | -. 8 | -1.4 | . 3 | . 9 | . 1 | 1.0 |

[^1]| $2050$ <br> [Numbers in thousands] |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age, sex, race, and ethnicity | 1990-2000 | 2000-05 | 2005-10 | 2010-20 | 2020-30 | 2030-40 | 2040-50 |
| Annual growth rate (percent)continued |  |  |  |  |  |  |  |
| 45 to 54 ................................... | 4.4 | 2.1 | 1.1 | -. 8 | . 5 | . 9 | . 1 |
| 55 and older ................................ | 2.2 | 5.4 | 4.1 | 2.9 | . 0 | . 4 | . 8 |
| 55 to 64 .................................... | 2.2 | 5.7 | 3.9 | 2.1 | -. 9 | . 6 | . 9 |
| 65 and older ......................................................... | 2.3 | 4.1 | 4.8 | 5.3 | 2.0 | . 0 | . 6 |
| 65 to 74 ................................ | 1.7 | 3.7 | 4.5 | 5.5 | 1.5 | -. 9 | . 8 |
| 75 and older .......................... | 4.9 | 5.7 | 5.7 | 4.7 | 3.8 | 2.3 | . 1 |
| Men, 16 years and older ................... | 1.0 | 1.0 | . 8 | . 5 | . 4 | . 6 | . 6 |
| 16 to 24 ...................................... | -. 1 | -. 2 | -. 2 | -1.0 | 1.0 | . 7 | . 5 |
| 16 to 19 ................................... | . 4 | -3.4 | -. 9 | -1.6 | . 8 | . 5 | . 5 |
| 20 to 24 | -. 4 | 1.4 | . 0 | -. 7 | 1.1 | . 7 | . 5 |
| 25 to 54 ...................................... | 1.1 | . 4 | . 3 | . 1 | . 4 | . 7 | . 6 |
| 25 to 34 ................................... | -1.1 | . 0 | 1.3 | . 9 | -. 1 | 1.0 | . 6 |
| 35 to 44 | 1.4 | -. 6 | -1.3 | . 3 | . 8 | . 1 | 1.0 |
| 45 to 54 ........................................................... | 3.9 | 2.1 | . 9 | -1.0 | . 6 | . 9 | . 1 |
| 55 and older ................................. | 1.8 | 4.6 | 3.8 | 2.6 | . 2 | . 5 | . 8 |
| 55 to 64 | 1.6 | 5.2 | 3.4 | 1.8 | -. 8 | . 7 | . 9 |
| 65 and older ........................................................ | 2.4 | 2.8 | 5.0 | 5.1 | 2.2 | . 1 | . 6 |
| 65 to 74 ................................ | 1.9 | 3.1 | 4.2 | 5.2 | 1.7 | -. 7 | . 9 |
| 75 and older .......................... | 4.5 | 5.4 | 4.9 | 4.6 | 4.0 | 2.2 | . 0 |
| Women, 16 years and older | 1.6 | . 9 | 1.1 | . 8 | . 3 | . 6 | . 6 |
| 16 to 24 | . 2 | -. 2 | . 8 | -. 6 | 1.0 | . 6 | . 5 |
| 16 to 19 | . 8 | -2.2 | -. 6 | -1.0 | . 8 | . 4 | . 5 |
| 20 to 24 ................................... | -. 2 | 1.0 | 1.4 | -. 4 | 1.0 | . 7 | . 5 |
| 25 to 54 ...................................... | 1.7 | . 1 | . 3 | . 2 | . 4 | . 7 | . 5 |
| 25 to 34 | -. 7 | -. 6 | . 9 | 1.0 | -. 1 | 1.0 | . 6 |
| 35 to 44 ................................... | 1.8 | -1.1 | -1.4 | . 4 | . 9 | . 1 | 1.0 |
| 45 to 54 .................................... | 4.9 | 2.0 | 1.4 | -. 6 | . 4 | . 9 | . 1 |
| 55 and older ................................ | 2.7 | 6.1 | 4.7 | 3.2 | -. 2 | . 3 | . 7 |
| 55 to 64 ................................... | 2.9 | 6.4 | 4.5 | 2.5 | -1.0 | . 5 | . 8 |
| 65 and older .............................. | 2.1 | 4.9 | 5.3 | 5.6 | 1.8 | -. 2 | . 5 |
| 65 to 74 | 1.4 | 4.6 | 5.0 | 5.8 | 1.4 | -1.1 | . 6 |
| 75 and older ......................... | 5.6 | 6.2 | 6.6 | 4.9 | 3.6 | 2.5 | . 3 |
|  |  |  |  |  |  |  |  |
| White | 1.0 | . 6 | . 7 | . 3 | . 1 | . 3 | . 4 |
| Men ......................................... | . 8 | . 7 | . 6 | . 2 | . 2 | . 4 | . 4 |
| Women .................................... | 1.2 | . 6 | 1.0 | . 5 | . 0 | . 3 | . 3 |
| Black ......................................... | 1.8 | . 7 | 1.5 | 1.2 | . 8 | . 9 | . 8 |
| Men ......................................... | 1.3 | . 8 | 1.4 | 1.0 | 1.0 | 1.0 | . 9 |
| Women .................................... | 2.3 | . 7 | 1.6 | 1.5 | . 7 | . 8 | . 8 |
| Asian .......................................... | 3.1 | . 7 | 2.8 | 2.4 | 2.0 | 1.8 | 1.6 |
| Men | 2.7 | . 8 | 2.4 | 2.2 | 1.9 | 1.8 | 1.6 |
| Women .................................... | 3.4 | . 6 | 3.3 | 2.6 | 2.0 | 1.8 | 1.6 |
| All other groups ${ }^{1}$. | $\ldots$ | 1.4 | 2.5 | 2.3 | 2.4 | 2.1 | 2.2 |
| Men | ... | 2.3 | 2.5 | 2.4 | 2.4 | 2.2 | 2.4 |
| Women .................................. | $\ldots$ | . 5 | 2.5 | 2.2 | 2.3 | 2.1 | 2.1 |
| Ethnicity: |  |  |  |  |  |  |  |
| Hispanic origin ............................. | 4.5 | 3.5 | 2.5 | 2.5 | 1.9 | 1.6 | 1.5 |
| Men ........................................ | 4.2 | 3.8 | 1.6 | 2.2 | 1.9 | 1.6 | 1.4 |
| Women ..................................... | 5.0 | 3.0 | 3.9 | 3.0 | 1.9 | 1.7 | 1.5 |
| Other than Hispanic origin ............. | . 9 | . 6 | . 7 | . 3 | . 0 | . 3 | . 3 |
| Men | . 6 | . 5 | . 6 | . 1 | . 1 | . 3 | . 4 |
| Women .................................... | 1.2 | . 6 | . 8 | . 4 | . 0 | . 3 | . 3 |
| White non-Hispanic |  |  | . 5 | -. 1 | -. 4 | -. 1 | -. 1 |
| Men | 2 | . 2 | . 4 | -. 2 | -. 3 | -. 1 | . 0 |
| Women .................................... . | 8 | . 3 | . 5 | . 0 | -. 4 | -. 1 | -. 1 |
| ${ }^{1}$ The "all other groups" category includes (1) those classified as of multiple racial origin and (2) the race categories of (2a) American Indian and Alaska Native and (2b) |  |  |  | Native Hawaiian and other Pacific Islanders. <br> Nоте: Dash indicates no data collected for category. |  |  |  |

been more than the number of women. The men's labor force was 69.0 million in 1990, 76.3 million in 2000, and 80 million in 2005 and is projected to be 87.2 million in 2020 and 103.2 million in 2050.
2. Women. Historically, the growth rate of women in the labor force has been higher than that of men. Concomitant with the significant increases in the labor force participation rate of women in the 1970-80 period, the women's labor force has increased. The labor force of women stood at 56.8 million in 1990 and reached 66.3 million in 2000. The labor force of women is projected to grow to 79.1 million in 2020 and 91.6 million in 2050.

Projected labor force by age. As with projections by sex, projections of the labor force by age are based on the various age groups' past participation rates and shares of the population and therefore differ among those age groups.

1. Youths 16 to 24 years. The youth labor force is conveniently broken down into two groups: 16- to 19-year-olds and 20to 24-year-olds. Historical data show that the labor forces of these two groups have been growing at different rates. As discussed earlier, the difference can be partially explained by the share of students and nonstudents in each group. The labor force of 16- to 19-year-olds was 7.8 million in 1990, 8.3 million in 2000, and 7.2 million in 2005; it is projected to decrease until 2020 and then gradually increase, reaching 7.2 million again in 2050.

The increase in school attendance of youths, especially 16 - to 19-year-olds, has been the main reason the youth labor force as a whole has been decreasing. The labor force of 20- to 24 -year-olds, which stood at 14.7 million in 1990, contributed to the decrease by falling to 14.3 million in 2000, but then rose to 15.1 million in 2005. The labor force of 20 - to 24 -year-olds is projected to grow by an average of 0.5 percent annually from 2005 to 2050, enabling it to reach 18.6 million in 2050.
2. Prime-aged workers 25 to 54 years. Of all the age groups, the prime-aged workers have the strongest ties to the labor market. Their labor force numbered 88.3 million in 1990, 101.4 million in 2000, and 102.8 million in 2005. The Bureau projects that, by 2050, the prime-aged workforce will reach 124.4 million. The group made up 70.2 percent of the total labor force in 1990 and increased to a 71.1-percent share in 2000, but then decreased to 68.8 percent in 2005. By the year 2000, all the baby boomers were in the group of prime-aged workers. With the passage of each year after 2000, the baby boomers started entering the next group: those 55 years and older. The share of 25 - to 54 -year-olds is expected to be about 64 percent of the total labor force in 2050.
3. Workers 55 years and older. The number of persons 55 years and older who are working is on an upward trend, with
an annual growth rate several times the rate of the overall labor force. There were 15 million workers 55 years and older in 1990, accounting for nearly 12 percent of the labor force. Ten years later, in 2000, the group reached 18.7 million, or 13.1 percent of the labor force. In 2005, this age group reached 24.3 million, or 16.2 percent of the labor force. The sizable increase in the labor force 55 years and older is again attributable to the baby boomers, who swell the size of the labor force whichever age category they are in. In 2020, the 55-years-and-older age group will reach 39.6 million and have a 23.8 percent share of the labor force. By 2050, the group will number more than 44.6 million workers and constitute 23.0 percent of the labor force. Within this age group, the 55- to 64-year-olds are projected to be 28.4 million in 2020 and the 65- to 74 -year-olds are expected to be nearly 9 million then.

Projected labor force by race and ethnicity. As the main engine of U.S. population growth, immigration will further diversify the population and the labor force in the coming years. In addition, immigrants are more likely than their nativeborn counterparts to be labor force participants. That phenomenon, in turn, will be another generator of diversity in the labor force.

The Hispanic labor force, 10.7 million in 1990, 16.7 million in 2000, and nearly 20 million in 2005, is projected to continue its strong presence in the U.S. labor force and reach 47.3 million in 2050, 24.3 percent of the total labor force. The annual growth rate of the Hispanic labor force is expected to average 2.0 percent during the 2005-50 projection period.

The Asian labor force also is expected to grow at an annual rate of 2.0 percent during the same timeframe. The Asian labor force is projected to reach 9.5 million in 2020 and 16.1 million, or 8.3 percent of the total workforce, in 2050.

The black labor force is projected to increase at an annual growth rate of 1.0 percent over the 2005-50 projection period and reach 20.7 million in 2020 and 26.8 million in 2050, nearly 14 percent of the total labor force.

The white non-Hispanic share of the total labor force is projected to decrease from nearly 70 percent in 2005 to 51.4 percent in 2050, a result of the faster growth rate of other racial and ethnic groups in the U.S. workforce. In addition, the retirement of the baby boomers, a group that has a large share of white non-Hispanics-especially white non-Hispanic menwill further lower the white non-Hispanic share of the total labor force. The lower fertility rate of the white non-Hispanic group, compared with those of the other racial and ethnic categories, will add lesser numbers to the white non-Hispanic population and hence to their labor force.

## Implications of an aging labor force

Median age. The age of the labor force can be measured in
various ways. Two such measures are the median age and the labor force shares of younger, prime-age, and older workers. The median age is defined as that age than which half the population is older and half is younger. From the beginning of the 20th century, demographic changes have had major impacts on the median age of the U.S. population. With increases in life expectancies and decreases in fertility, the median age of the U.S. population, as well as that of the labor force, has increased significantly. According to the Census Bureau, the median age of the population increased by $2 \frac{1}{2}$ years between 1990 and 2000, reaching 35.3 years in the latter year. Oddly (though not contradictorily), during the same period the 65-years-and-older population increased at a slower rate than the overall population, as a result of the "birth dearth" of the late 1920s and early 1930s. ${ }^{7}$

At 40.5 years in 1962, the median age of the labor force was the highest ever attained before the baby boomers entered the labor force. The median age dropped steadily until 1980, when it began rising as the baby boomers began exiting the younger age groups. The overall median age of the labor force is projected to continue to increase in the future and reach 42 years in 2020. With the early retirement of the baby-boom generation at 62 years and normal retirement at 65 , the median age of the labor force is projected to decrease slowly after 2020, reaching 41.6 years by 2050. (See table 5.)

Although the median age of both the population and the labor force is increasing, the median age of the population is increasing more than that of the labor force. Because the labor force participation rates of older persons are much lower than the rates of younger workers, the median age of the labor force is less than the median age of the population. Still, the growth of the older population, combined with the increase in
its participation rates, is projected to increase the overall median age of the labor force to 42 years in 2020. Men's median age is projected to be 41.4 years that year, while women's median age is expected to reach 42.7 years.

The median age of the white non-Hispanic labor force continues to be higher than that of other racial and ethnic categories. This trend is expected to continue, and the median age of the white non-Hispanic labor force is projected to be 43.8 years in 2020. Compared with white non-Hispanic groups, the black and Hispanic groups have a lower median age, reflecting their younger age profile and higher fertility. Still, the median age of minorities in the labor force is expected to increase. The median age of Hispanics is projected to be 38.6 years in 2020. The median age of the black labor force was 38.8 years in 2005 and is projected to be 39.5 years in 2020. Similarly, the median age of Asians, which was 39.5 years in 2005, is anticipated to reach 43.8 years in 2020.

Economic dependency ratio. The economic dependency ratio is the number of persons in the total population (including the Armed Forces overseas and children) who are not in the labor force, per 100 of those who are in the labor force. The modern human life cycle begins with nearly 20 years of economic dependency in childhood and ends with another 20 or so years of economic dependency in old age, with 40-plus years in between in which workers produce more than they consume and reallocate the surplus to members of other age groups for consumption. ${ }^{8}$

Table 6 shows the economic dependency ratio by age for 1990 and 2000 and projected to 2050. For every 100 persons in the labor force in 2000, about 94 persons were not in the labor force. Of the latter group, approximately 44 were children, 28

Table 5. Median age of the labor force, 1990 to 2005 and projected 2010 to 2050

| Sex, race, and ethnicity | 1990 | 2000 | 2005 | 2010 | 2020 | 2030 | 2040 | 2050 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sex: Total ................... | 36.4 | 39.3 | 40.8 | 41.5 | 42.0 | 41.9 | 41.8 | 41.6 |
| Men | 36.5 | 39.2 | 40.6 | 41.1 | 41.4 | 41.6 | 41.4 | 41.3 |
| Women ............................ | 36.2 | 39.4 | 41.0 | 41.9 | 42.7 | 42.4 | 42.2 | 42.0 |
| Race: |  |  |  |  |  |  |  |  |
| White .............................. | 36.6 | 39.7 | 41.2 | 42.0 | 42.6 | 42.3 | 42.1 | 41.9 |
| Black | 34.8 | 37.4 | 38.8 | 38.8 | 39.5 | 39.8 | 40.0 | 40.2 |
| Asian | 35.8 | 37.9 | 39.5 | 41.4 | 43.8 | 44.0 | 43.6 | 43.8 |
| Ethnicity: |  |  |  |  |  |  |  |  |
| Hispanic origin ................... | 32.3 | 34.0 | 35.2 | 36.8 | 38.6 | 38.7 | 38.9 | 39.3 |
| White non-Hispanic ............ | 37.0 | 40.6 | 42.3 | 43.2 | 43.8 | 43.5 | 43.4 | 43.0 |

Table 6. Economic dependency ratio, 1990 to 2000 and projected 2010 to 2050
[Per hundred in the labor force]

| Age group | 1990 | 2000 | 2010 | 2020 | 2030 | 2040 | 2050 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total population ....... | 98.3 | 93.9 | 95.6 | 100.1 | 108.5 | 112.0 | 114.0 |
| Under 16 years .................. | 45.8 | 44.1 | 41.8 | 42.7 | 43.8 | 44.2 | 44.8 |
| 16 to 64 years .................. | 30.5 | 28.3 | 32.5 | 31.5 | 31.6 | 31.9 | 32.4 |
| 65 years and older ............. | 22.1 | 21.6 | 21.3 | 25.9 | 33.1 | 35.9 | 36.8 |

were 16 to 64 years old, and 22 were older than 64 years. (See chart 4.)

The economic dependency ratio attributed to children has decreased in the last couple of decades and will decrease even further until 2010. The ratio for 16- to 64 -year-olds decreased from 1990 to 2000 and is projected to be 32 persons in 2050.

The dependency ratio of those 65 years and older has been increasing steadily in the past and is expected to rise yet further in the future. The economic dependency ratio of this group, which was about 22 (persons not working) in 2000, is projected to increase to approximately 26 in 2020 and then increase rapidly to about 37 in 2050.

## Qualifications to the projections

As noted earlier, labor force growth in the future is the result of either

1. The projected growth in the labor force participation rates of the different age, sex, racial, and ethnic categories or
2. The projected growth in the populations of the different age, sex, racial, and ethnic categories.

The bls long-term labor force projections, which are subject to certain assumptions, point to a lessening of the growth of the labor force in the future. Several factors may interfere with the projected further slowdown of labor force growth:

An increase in the participation rate of the young. A more efficient use of the youth labor force is one way that both the overall labor force participation rate and the growth of the labor force might increase. However, the increase in school enrollment of youths during the past several decades has decreased the labor force participation rates of the young age cohorts dramatically. The increase in school attendance and the growth in the number of students enrolled in high school, college, and summer school together represent a structural change with a permanent impact on the labor market. On the basis of the current long-term projections, it appears that the labor force participation rate of the young age groups will not

## Chart 4. Economic dependency ratio, 1950 to 2000 and projected 2010 to 2050



[^2]be increasing any time soon enough to be effective in increasing either the overall labor force participation rate or the growth of the labor force.

An increase in the participation rate of women. A second possibility for increasing the overall labor force participation rate and the growth of the labor force is through an increase in the labor force participation rate of women. Women's participation rates have increased significantly since the 1970s, and the gender gap has been greatly reduced. However, on the basis of previous BLS projections, as well as the current set of long-term labor force projections, it appears that the labor force participation rate of women already may have reached its peak. The recent decline in women's participation is another factor contributing to the downward trend in the overall participation rate since 2000. It is unlikely that the labor force participation rate of women will achieve the significant increases registered during the 1970-90 timeframe; more likely, the rate will remain flat or edge down.

An increase in the participation rate of the older workforce. Yet another manner in which the labor force can be more efficiently used is through an increase in the participation rate of the older workforce. Such a state of affairs can come about through changes in laws, regulations, and employment policies. The baby boomers currently (in 2006) are between the ages of 42 years and 60 years. An increase in the labor force participation rate of the older workforce, multiplied by the large number of workers in this age group, has the potential to increase the size of the labor force significantly. The 55-years-and-older age group accounted for 16.2 percent of the labor force in 2005 and is projected to constitute 19.0 percent of the labor force in 2010 and nearly 24 percent in 2020. The group's share is expected to decrease slightly to 22.9 percent in 2050.

## Notes

[^3]${ }^{3}$ See Mitra Toossi, "A century of change: the U.S. labor force, 1950-

The labor force participation rate of older workers has been increasing since the end of the 1980s. The decision to continue work into the later years of life has been the result of several intertwined factors, such as the continually increasing life expectancy of the population, wherein a growing number of people are healthier for a longer portion of their life span. Because the average number of years spent in retirement has been rising steadily over the past several decades, and even before that, since the 1980s older workers have increasingly chosen to remain in the labor force in pursuit of additional earnings. In addition, the elimination of mandatory retirement and the enactment of age discrimination laws have contributed to the increase in participation rates of older persons.

Other factors, such as significant increases in healthcare costs and a decrease in the availability of health benefits, also have increased the participation of the older age groups in the workforce. Finally, recent changes in the Social Security laws, along with an increase in the normal retirement age for certain birth cohorts and a decrease in benefits with early retirement, have encouraged the 55-years-and-older group to increase its labor force participation.

Immigration. As far as population projections are concerned, different immigration scenarios result in different growth rates for the population and the labor force. Because immigration accounts for more than 40 percent of the growth of the U.S population, assumptions about immigration have a direct effect on the Census Bureau's population projections and hence on the BLS labor force projections.

According to the Census Bureau's Web site, the United States posts one birth every 8 seconds, one death every 11 seconds, one (net) international migrant every 31 seconds, and a net gain of one person every 14 seconds. Changes in future immigration policies could affect the growth rate of the population, which is the major factor in labor force projections.

2050," Monthly Labor Review, May 2002, pp. 15-28.
${ }^{4}$ Information about the U.S. Census Bureau is on the Internet at www.census.gov/ipc/www/usinterimproj.
${ }^{5}$ See Mitra Toossi, "Labor force projections to 2014: retiring boomers," Monthly Labor Review, November 2005, pp. 25-44.
${ }^{6}$ Steven Hipple, "Labor force during recent labor market downturns," Issues in Labor Statistics, Summary 03-03 (Bureau of Labor Statistics, September 2003).
${ }^{7}$ Toossi, "A century of change."
${ }^{8}$ Ronald D. Lee, Intergenerational Transfers (Berkeley, CA, Center for Research and Education in Aging), on the Internet at crea.berkeley.edu/ lee-profile.shtml.


[^0]:    Source: National Center for Health Statistics, Centers for Disease Control and Prevention.

[^1]:    See footnotes at end of table.

[^2]:    Nоте: The economic dependency ration is the number of persons not in the labor force per hundred person in the labor force.

[^3]:    ${ }^{1}$ Projections of the labor force participation rate for each group are developed by first estimating a trend rate of change based on past participation behavior. The latter rate is then modified when the timeseries projections for the specific group appear to be inconsistent with the results of cross-sectional and cohort analysis. This second step ensures consistency in the projections across the various demographic groups. For further information, see "Employment Projections," Chapter 13 of Handbook of Methods (Bureau of Labor Statistics, 1999); on the Internet at stats.bls.gov/opub/hom/homch13_a.htm.
    ${ }^{2}$ Frederick W. Hollman, Tammany J. Mulder, and Jeffrey E. Kallan, Population Projections of the United States, 1999 to 2100: Methodology and Assumptions, Working Paper No. 38 (Bureau of the Census, 1999).

