# The aging of the U.S. population: human resource implications 

In the upcoming decades, 'older workers' will be competing against the largest cohort of middle-aged workers in our country's history; in the absence of other options, the elderly may feel increased pressure to retire or work part time

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If present demographic trends persist, the proportion of older persons in the United States is expected to increase significantly, particularly after the turn of the century. At present, there is lively debate concerning the labor force implications of such an "older" population. Some analysts have suggested that the projected decline in persons age 16 to 24 in the population will lead to increased demand for, and retention of, older workers. Others have cautioned that, despite demographic changes, factors such as persistent high unemployment among "prime age" workers, increased legal and illegal immigration, sustained growth in women's labor force participation, changing technology, and continuation of recent trends toward early retirement will mitigate against a major shift in the age structure of the work force until well into the next century.

Because so many considerations influence the choice which older persons make between work and retirement - such as availability of retirement benefits, health status, job opportunities, training, and education, and personal preferences-it is difficult to draw reasonable

[^0]conclusions about the future age composition of the labor force. This problem becomes more complicated because economic conditions, which directly affect aggregate demand for labor, cannot be predicted with certainty.

Nevertheless, it is essential to consider available demographic and labor force data and projections in the development of human resource policies for the future, because the "aging" of the pool of workers could have profound societal and economic implications. For example, an older labor force will pose a series of challenges to human resource managers, who may be required to tailor new and more flexible personnel policies and employee benefit plans to the needs of older workers. And, the probable effects of demographic changes have added significance for future retirement policies, for the overall costs of social security and private pensions depend critically upon the length of the retirement period or, conversely, on the mean duration of employment.

This article focuses on demographic and labor force trends and their implications for the future employment of older workers. It includes a review of data and projections for the population and labor force; a discussion of likely industrial and occupational shifts; and an inventory of the characteristics of older workers. It seems proper at this point to caution the reader again that the
accuracy of any forecast is questionable, and that long-er-term projections, such as those presented below, are more unreliable than those made for the short term. Thus, while the following discussion deals with a number of likely future scenarios, it by no means exhausts the list of possible outcomes.

## Population changes

The Bureau of the Census has estimated the 1982 U.S. population at 232 million, with a median age of nearly 31 years (compared with 29 in 1976). More than 1 of 5 persons ( 48 million) were age 55 or over, and of these individuals, 26 million were age 65 or older. (See tables 1 and 2.) Women accounted for 60 percent of the age 65 -or-older population.

Over the next 30 years, the population age 55 and over is expected to increase to nearly 70 million, representing about 1 in 4 persons; 35 million people- 60 percent of them women-will be at least 65 years old. The median population age will have increased to almost 37 from the present age 31. Finally, life expectancy at birth and at age 65 will continue to increase significantly over the next three decades. Whereas today, male life expectancy at birth is about 70 years and at age 65, 14 years, men born in the year 2010 can expect to live 73 years and 16 years more if they reach age 65 . Similar increases will occur for women, and in 2010 their life expectancy at birth will be nearly 82 years and they can expect to live almost 22 additional years beyond age 65.

However, this "gradual" aging of the population will be completely overshadowed by the year 2030 when nearly 30 percent of the population will be age 55 and over and 55 million people will be age 65 or over ( 18 percent of the total population), with 40 percent of these persons being age 75 or over. By this time, the median age will be 38 and people will have an even longer life expectancy at birth and at age 65.

Due to the decrease in the ratio of the working to the nonworking population (from 5.1 in 1980 to 3.0 in 2030) and the decline in the number of workers per Social Security beneficiary (from 3.7 in 1981 to 2.2 in 2030), major adjustments in retirement income support programs will be necessary. Because of current fiscal problems of Social Security, possible alternative approaches to this long-term problem are a-ready being discussed. The large increase of older persons in the population after the turn of the century will clearly require longer labor force participation at older ages if retirement benefits similar to those of today are to be maintained.

Clearly, between now and the year 2000, the most striking trend is the decline in the number and proportion of the population age 18 to 34 who represent a substantial portion of the current labor force. The gen-

| Demographic trends | 1982 | 2000 | 2010 | 2030 |
| :---: | :---: | :---: | :---: | :---: |
| Number of persons (in thousands and as percent of total) | $\begin{aligned} & 231,964 \\ & (100.0) \end{aligned}$ | $\begin{aligned} & 266,496 \\ & (100.0) \end{aligned}$ | $\begin{aligned} & 281,732 \\ & (100.0) \end{aligned}$ | $\begin{aligned} & 307,340 \\ & (100.0) \end{aligned}$ |
| Age: |  |  |  |  |
| 18 to 24 years | $\begin{aligned} & 29,804 \\ & (12.8) \end{aligned}$ | $\begin{aligned} & 24,882 \\ & (9.3) \end{aligned}$ | $\begin{gathered} 28,629 \\ (10.1) \end{gathered}$ | $\begin{aligned} & 28,771 \\ & (9.3) \end{aligned}$ |
| 25 to 34 years | $\begin{aligned} & 39,416 \\ & (16.9) \end{aligned}$ | $\begin{aligned} & 35,783 \\ & (13.4) \end{aligned}$ | $\begin{aligned} & 37,605 \\ & (13.3) \end{aligned}$ | $\begin{aligned} & 38,715 \\ & (12.5) \end{aligned}$ |
| 35 to 54 years | $51,570$ | $79,177$ | 77,160 | 77.651 |
| 55 years and over | $\begin{aligned} & (22.2) \\ & 48.334 \end{aligned}$ | $\begin{aligned} & (29.7) \\ & 5670 \end{aligned}$ | (27.3) 69,184 | $(25.2)$ 88,100 |
|  | (20.8) | (21.1) | (24.5) | (28.6) |
| 55 to 64 years | 22,141 | 23,824 | 33,760 | 32,236 |
|  | (9.5) | (8.9) | (11.9) | (10.4) |
| 65 to 74 years | $15,756$ | $17,283$ | $19,586$ | 31,561 |
| 75 years and over | $\begin{aligned} & (6.7) \\ & 10,435 \end{aligned}$ | (6.4) 15,162 | $\begin{aligned} & 6.9) \\ & 15837 \end{aligned}$ | $(10.2)$ 24.302 |
|  | (4.4) | (5.6) | (5.6) |  |
| Median age (in years) <br> Life expectancy (In years) | 30.7 | 35.5 | 36.6 | 38.0 |
| At birth: |  |  |  |  |
| Men | ${ }^{1} 69.8$ | 72.9 | 73.4 | 74.2 |
| Women | ${ }^{1} 77.7$ | 81.1 | 81.6 | 82.6 |
| At age 65: |  |  |  |  |
| Men . . | ${ }^{1} 14.3$ | 15.8 | 16.1 | 16.7 |
| Women | '18.7 | 21.1 | 21.6 | 22.4 |
| ${ }^{1}$ Data are for 1980. <br> Sources: Bureau of the Census, "True Level Population Projections" (1977) and Social Security Administration, Social Secunity Area Population Projections, 1981. |  |  |  |  |

eral magnitude of this change is indicated in table 1 where it can be seen that between 1982 and 2000 there will be a decline of approximately 6 percent of persons age 18 to 34 resulting in approximately 8.4 million fewer persons in this age range in 2000 . However, while this is occurring, prime-aged persons ( 35 to 54 years) will increase their share of the population by 7 percent, and other group's proportions in the population will remain fairly stable. The major decrease in the younger population age groups has resulted in speculation that there will be shortages of entry-level and other types of skilled workers in the next 20 years. A closer examination of the data demonstrates the age groups where these "shortages" will arise. Table 2 indicates that about three-fifths of the decline will occur because of reduced numbers of 18 - to 25 -year-olds in the population and that most of the remaining decline will be in the 26 to 29 year age group.
(Persons age 30 to 39 will actually increase in the population by 2000 .) The bulk of the population decline is therefore concentrated in the 18 to 29 age range between now and the year 2000 . (There will also be a significant decline in 16- and 17 -year-olds and most younger age groups through 2000 due to a continuation of below replacement level fertility rates, which are assumed to approximate replacement fertility prior to 2000.) Thus, it can be assumed that the shortage of younger persons will be of somewhat more significance in terms of entry-level employment (persons 18 to 25
years old) than for journeyman type skilled jobs more often occupied by persons age 26 to 35 . Of course, the magnitude of such "shortages" depends upon the overall demand for labor, and more specifically, on labor force participation by various age groups.

It should be noted that there will be fewer persons age 18 to 34 in the population in the year 2000 than at present but that this pattern is reversed for persons age 35 to 54 , who will experience a 7 -percent increase in the population by that time. In addition, beyond the turn of the century, there will be fewer persons age 18 to 39 and substantially more age 55 and over. This indicates that in the short run, the decline in the portion of younger persons may be partially offset by the growth of the "middle-aged" but that continuous population aging will result in a major reduction in the proportion of younger persons, a commensurate increase of older persons, and a stabilization of middle-aged individuals after the turn of the century. Therefore, from a demographic perspective, over the next 18 years there will be a definite decline of younger persons age 18 to 29 of about 8 million and a major increase in the population age 35 to 54 of about 28 million. After the turn of the century, the important change will be the large increase in the number and proportion of older persons with a relative stabilization of younger and middle-aged groups.

## Labor force changes

In 1982, the total U.S. labor force is estimated at 110 million- 62 million men ( 56 percent) and 44 million women ( 44 percent). At present, persons age 18 to 24 represent 20 percent of the total labor force, those age 25 to 34 are 28 percent and individuals age 55 and over

| Table 2. Projected demographic trends for 1982, 2000, 2010, and 2030, selected age groups |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Demographic trends | 1982 | 2000 | 2010 | 2030 |
| Number of persons (in thousands and as percent of total) | $\begin{aligned} & 231,964 \\ & (100.0) \end{aligned}$ | $\begin{aligned} & 266,496 \\ & (100.0) \end{aligned}$ | $\begin{aligned} & 281,732 \\ & (100.0) \end{aligned}$ | $\begin{aligned} & 307.340 \\ & (100.0) \end{aligned}$ |
| Age: |  |  |  |  |
| 18 to 21 | $\begin{aligned} & 16,895 \\ & (7,2) \end{aligned}$ | $\begin{aligned} & 14,943 \\ & (5.6) \end{aligned}$ | $\begin{aligned} & 16,255 \\ & (5.7) \end{aligned}$ | $\begin{aligned} & 16,670 \\ & (5,4) \end{aligned}$ |
| 22 to 25 | $\begin{aligned} & 17,228 \\ & (7,4) \end{aligned}$ | $\begin{aligned} & 13.242 \\ & (4.9) \end{aligned}$ | $\begin{aligned} & 16,482 \\ & (5.8) \end{aligned}$ | $\begin{aligned} & (0.7) \\ & 16.044 \\ & (5.2) \end{aligned}$ |
| 26 to 29 | 16,373 | 13,892 | $16,014$ | $15,460$ |
| 30 to 34 | (7.0) 18,723 | (5.2) 18,586 | $\begin{aligned} & (5.6) \\ & 17,482 \end{aligned}$ | $\begin{aligned} & (5.0) \\ & 9,311 \end{aligned}$ |
| 301034 | (8.0) | (6.9) | (6.2) | (6.2) |
| 351039 | 15,957 | 21,174 | 17.351 | 20,222 |
|  | (6.8) | (7.9) | (6.1) | (6.2) |
| 01019 | 71,139 | 78,133 | 77,213 | 82,492 |
|  | (30.0) | (29.3) | (27.4) | (26.8) |
| 20 to 64 | $134,632$ | $156,015$ | $\begin{aligned} & 169,205 \\ & (60.0) \end{aligned}$ | $169,321$ |
| 65 and over | (58.0) 26,192 | ${ }_{32.445}^{(58.5)}$ | 160.424 35 | ${ }_{55,863}$ |
| 65 and over | (11.2) | (12.1) | (12.5) | (18.1) |
| Ratio of population aged 20 to 64 to: |  |  |  |  |
| Population 65 and over ....... | 5.1 | 4.8 | 4.7 | 3.0 |
| Population 0 to 19 and 65 and over | 1.3 | 1.4 | 1.5 | 1.2 |
| Source: Bureau of the Census, "True Level Population Projections" (1977). |  |  |  |  |

- 14 percent. Only 2.7 percent of the labor force or about 3 million persons are age 65 and over; three-quarters of these workers are between the age of 65 and 74 and nearly 60 percent are aged 65 to 69 .

Between now and the year 2000, the composition of the labor force will be changing significantly. At that time, the labor force will be composed of about 134 million people (a 22 -percent increase over 1982). Men will represent 52 percent (versus 56 percent in 1982) and women 48 percent (versus 44 percent in 1982). There will be a significant decrease in the proportion of the labor force composed of younger persons. Those age 18 to 24 will represent only 15 percent of the labor force, (a 5 -percent decrease), persons age 25 to 34 will account for 22 percent (a 6 -percent decrease).

However, while the proportion of younger persons in the labor force is declining, middle-aged workers between 35 and 54 years will increase significantly, both in number and proportion. ${ }^{1}$ Specifically, persons in this age group, who now represent 35 percent of the work force ( 39 million persons), will be 49 percent of the labor force by the year 2000 ( 64 million persons). This 14-percent increase in potential middle-aged workers can be contrasted with the 11-percent decline in workers age 18 to 34 .

While these changes are occurring for the young and the middle-aged, there will be a 2 -percent decline in labor force participation for persons age 55 and over including reductions in persons age 55 to 65,65 to 74 , and 75 and over. Projections indicate that only 11 percent of the labor force will be age 55 and over and only 2 percent will be age 65 and over in 2000.

Although the proportional population decrease for younger men and women age 18 to 34 between 1982 and 2000 will be similar (about 12.5 percent), this will not hold for labor force composition where women will gain 7 percent, while men will decline 13 percent. ${ }^{2}$ To some extent, this change reflects a continuing growth in women's entry into the labor force and, interestingly, significant proportional increases of black women in the labor force. It is especially important to note that in terms of both the population and labor force, blacks will experience proportional increases over the next 20 years while whites will generally decline.

Thus, while the decrease of younger persons in the labor force will parallel population changes, the same principle will hold for the middle-aged population and labor force which will increase. The statistics also demonstrate that while there will be a modest proportional increase in the number of older persons by the year 2000, there will be a simultaneous decline in their labor force attachment. (These projections are based on an assumption of a continuation of the early retirement trend through 2000 with little or no change in national retirement policies.)

However, it is important to recognize that these demographic projections alone do not necessarily demonstrate either that there will be a direct substitution between middle-aged and younger workers or that there will be little or no demand for older workers to meet future labor requirements. Typically, middle-aged workers have not been recruited for entry-level jobs nor have they tended to work on a part-time basis. Therefore, the decline in the younger labor force may produce demand for entry-level workers which might be met by older persons. In addition, skill shortages might result in the development of retraining programs for both middleaged and older workers in order to meet employment demand. Finally, an increase in flexible work schedules may lead to a greater demand for older workers.

## Future labor force participation

There are two basic ways in which the age composition of the labor force can change significantly through demographic shifts such as changes in birth or mortality rates, or through changes in labor force participation rates of different age groups. The first has been described and the results indicate that the overall population and labor force will decrease for persons age 18 to 34 but increase for the middle-aged group between the ages of 35 and 54 . However, unless the present labor force participation of various age groups is examined, it is difficult to be more precise about such future changes.

A review of current and projected labor force participation rates indicates the following: ${ }^{3}$ (a) overall participation in the labor force will increase by about 5 percent by the year 2000; (b) there will be significant increases in participation for all groups between age 18 and 44; and (c) participation rates for "older workers" ( 65 and over) will drop significantly while those for middle-aged workers age 45 to 64 will remain relatively stable. An examination of sex specific participation rates indicates that almost the entire gain in labor force participation rate is attributable to greater participation by women, more than three-fifths of whom will be in the work force by 2000 . The increasing rate of female participation is the major factor influencing increased participation rates for persons age 18 to 44 and this pattern will also persist for women age 45 to 64 . However, older women's labor force participation rates will decline only slightly, which means that lessened participation by older men will be the major reason for the continuing significant decrease of older workers in the labor force through the year 2000.

These findings indicate that caution should be exercised in evaluating the significance of population and labor force declines for younger persons in terms of the development of "labor shortages" over the next 20 years. For the significant projected increases in labor
force participation rates imply that a greater proportion of a reduced younger work force will participate in the future labor force. It is not possible presently to evaluate whether such increased participation will significantly reduce potential shortages of entry-level and skilled workers and lead to reduced demand for middle-aged and particularly older workers. At the same time, these projections strongly suggest that the proportional decline of older persons in the labor force will be accentuated by reduced rates of participation particularly by older men who will make up nearly 60 percent of older workers in the year 2000. Reduced labor force participation may well characterize the older population seemingly irrespective of various labor shortages and increases in demand for workers that might develop over the next two decades. Growth of the middle-aged labor force and particularly the increased participation by middle-aged women appears to be the most important factor which will mitigate the consequences of the decrease in younger workers. While higher younger worker participation in the labor force (especially younger women) might ease the shortage of entry-level workers, it may be necessary for more of the middle-aged to accept such positions in the future. Of course, older workers can qualify for both entry-level and (with training) skilled jobs in the work force. But, under present and projected future circumstances, it is unlikely that major increases in older worker employment will occur unless national employment and retirement policies change significantly.

Policies to encourage longer employment for older persons are under discussion and thus the projections considered here should be viewed as "steady-state" assumptions which might have to be changed under different retirement policies. An understanding of the labor force characteristics of older workers is essential for developing effective policies designed to encourage older worker labor force participation.

## Characteristics of older workers

As the statistics demonstrate, most older workers ${ }^{4}$ expect and desire to retire and actually do so. Because of the limited number of older persons who have continued to work, much more research and policy attention has been focused on the antecedents of the retirement decision and life circumstances after retirement. The number of older participants in the labor force has remained quite stable since 1950 when they accounted for nearly 5 percent of the work force and nearly 27 percent were labor force participants. However, in 1982, such workers made up slightly less than 3 percent of the labor force and only about 12 percent participated. If the 1950 participation rate still existed, there would be more than 6 million older workers today (about 5 percent of the labor force) instead of the actual 3 million.

There are a number of important characteristics of these older labor force participants which provide some guidance as to what might be expected if more older persons were encouraged to remain in the labor force:

- Of today's older workers, about 62 percent are men, half of whom work at full-time jobs. Among older women ( 38 percent of older workers), most work part time. For both men and women, the percentage with any work experience during the year has been declining steadily since 1950 as indicated by both work experience and labor force participation data. Older blacks are slightly more likely than whites to report work experience but tend to work more often on a part-time basis.
- Unemployment rates for older workers continue to be quite low, but for older persons who have been working and become unemployed, work experience data indicate that they face the longest median duration of unemployment of any age group-18 weeks. The extent to which unemployment among older workers is obscured by early retirement as a resuit of either prior unemployment or an erratic employment history, has proven difficult to measure. However, it is assumed that most persons who are very early retirees leave the labor force because of failing health. While older white men had an unemployment rate of 2.4 percent in 1981, the rate for comparable black men was nearly four times as great-8 percent-and a similar though less pronounced pattern existed for nonwhite women. The major reason for low unemployment among older workers remains that only 16 percent of all older persons had any work experience in 1981 and that this limited labor force attachment is likely to persist in the near-term future.
- The very rapid growth of the labor force over the past 10 years ( 2.45 percent a year) will slow to about 1.4 percent a year for the 1980 decade and less than 1 percent a year from 1990 to 2000 . It is therefore likely that the 1980 labor force of 106 million will grow to somewhat over 130 million by the year 2000 . Although lower birth rates will result in a smaller pool of younger workers, expansion of the labor force is likely because of multiple family earners, growth in single-person households headed by divorced, widowed, or never-married persons, and women's increasing role in the work force. Recently, several commentators have suggested that the reduction of the youth labor force will lead to labor shortages and demand for older workers. ${ }^{5}$ However, as we have pointed out, the expansion of the prime-age work force and greater labor force participation by this group (as well as younger persons) could easily overwhelm the youth labor force decline, leaving relatively little opportunity for older workers whose share of
the labor force has been declining consistently for more than 25 years. Thus, reduced labor force growth in the future does not necessarily mean that an increased demand for older workers will develop. Such a consequence could be influenced by an improved economy which requires significantly more labor despite improvements in technology.
- While it is clear that there are significant economic advantages of employment to older workers (full-time workers age 65 to 69 had a median income 43 percent higher than nonworkers in 1978), persons age 65 and over are concentrated in a small number of industries and occupations. ${ }^{6}$ Almost two-thirds of the older men are employed in two industries - trade (primarily retail) and miscellaneous services (primarily business and repair, personal, and other professional)—while slightly less than 40 percent of all other age group employees are found in these industries. In terms of occupations, older workers are heavily employed as managers and administrators, professional and technical workers, service workers, and farmers, and have low representation as craft and kindred workers, sales, clerical, and operatives (including transport). Older workers tend to occupy jobs such as small farmers, private household workers, service workers, and so forth, which are often not full-time, full-year occupations. ${ }^{7}$ Also, older workers are more highly represented among the self-employed which permits part-time work and considerable flexibility in scheduling.
- The older work force consisted of 1.9 million men and 1.1 million women with an additional 1 million persons reporting work experience in 1981. This fi-gure- 4 million older workers-represents about 16 percent of the total population age 65 and over. Older persons who work, typically do so on a parttime basis; in 1981, there were about 2.2 million such workers, of which 57 percent were men and 43 percent, women. About 1.9 million older persons worked full-time with nearly two-thirds working 50 to 52 weeks; most frequently, these were men.

Despite the limited labor force attachment of older workers, and the seeming reluctance of most older persons to secure employment, national surveys continue to indicate strong preferences for some type of continued employment (usually part-time) after retirement from the longest-held job. Older persons say they are primarily interested in part-time work, usually the same as or similar to their preretirement jobs. The survey findings strongly suggest that if more flexible work policies were adopted, many older persons would take advantage of them. From a practical standpoint, when business firms have offered part-time schedules to older workers, there has usually been considerable response
which exceeded the company's needs. However, in the great majority of firms, flexible employment policies of this type do not exist; therefore, older workers have no choice but to permanently retire from the firm. Once this occurs, the evidence indicates that few older persons secure other employment.
It appears that for older retirees, actualization of a preference for part-time work is a difficult process which occurs infrequently. Lack of suitable work opportunities, age discrimination, discouragement in job seeking, and perceived health limitations all contribute to this circumstance. Simultaneously, national retirement policies (public and private pensions) clearly provide significant incentives to leave the labor force but virtually no corresponding inducements to re-enter employment. And, it is clear that the growth in preference for part-time employment at older ages will not alone produce the kinds of work opportunities most suitable for older workers.

## Industrial and occupational changes

To some extent, changes in the Nation's industrial and occupational profile will influence the degree to which employment opportunities will be available to older workers in the years ahead. The Bureau of Labor Statistics, using a model of the U.S. economy, has developed projections of industrial and occupational changes through the year $1990{ }^{8}$
Over the next decade, the continued growth of service industries will be a major characteristic of the economy. Overall, these industries are expected to experience employment growth of 30 percent by 1990, led by growth in direct service industries ( 53 percent employment growth), retail and wholesale trade ( 28 percent growth), and finance, insurance, and real estate ( 34 percent).

| Table 3. Employment by industry, 1981 and projected1990 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Industry | 1981 |  | 19901 | Projected change in employment 1981-90 | Average annual percent change in employment |
|  | $\begin{array}{\|c\|} \hline 65 \\ \text { and over } \\ \hline \end{array}$ | All ages | All ages |  |  |
| Total employment (in thousands) | 3,119 | 107,347 | 124,184 | 16,837 | 1.6 |
| Distribution (in percent) | 100.0 | 100.0 | 100.0 |  |  |
| Agriculture | 9.2 | 3.0 | 2.0 | -737 | -2.9 |
| Mining | 0.4 | 1.0 | 0.8 | -80 | -0.9 |
| Construction. | 3.7 | 6.3 | 6.3 | 1,061 | 1.6 |
| Manufacturing: Durables | 6.1 | 13.4 | 12.4 | 1,014 | 0.8 |
| Nondurables | 5.6 | 8.8 | 7.4 | -257 | -0.3 |
| Transportation ......... | 3.2 | 6.3 | 6.0 | 688 684 | 1.1 |
| Wholesale and retail trade Finance, insurance, and real | 23.6 | 20.5 | 22.7 | 6,184 | 2.8 |
| estate | 6.1 | 5.9 | 5.9 | 993 | 1.6 |
| Services ........ | 37.8 | 29.5 | 31.3 | 7,202 | 2.3 |
| Public administration | 4.2 | 5.2 | 5.2 | 876 | 1.6 |
| 'Valerie A. Personick, "The outlook for industry output and employment through 1990," Monthly Labor Review, August 1981. pp. 28-41. |  |  |  |  |  |


| Industry | 1981 |  | 1990 ${ }^{1}$ | Projectedchange inemployment$1981-90$ | Average annusi percent change |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 65 | All ages | All ages |  |  |
| All occupations (in thousands) | 3,119 | 107,347 | 123,749 | 16,402 | 1.6 |
| Distribution (in percent) | 100.0 | 100.0 | 100.0 |  |  |
| Professionaltectrical | 13.3 | 15.7 | 16.6 | 3,689 | 2.3 |
| Managers-administrators | 13.2 | 11.2 | 8.8 | -1,133 | -1.1 |
| Sales .............. | 10.3 | 6.2 | 6.7 | 1,636 | 2.5 |
| Clerical | 14.1 | 18.3 | 18.6 | 3,373 | 1.8 |
| Craftsworkers | 7.3 | 12.8 | 12.1 | 1,233 | 1.0 |
| Operatives .. | 8.9 | 14.4 | 13.8 | 1,619 | 1.1 |
| Noniarm laborers | 3.9 | 4.7 | 5.8 | 2,132 | 4.0 |
| Private household | 4.1 | 1.2 | 0.8 | -298 | -2.9 |
| Service ....... | 16.3 | 13.0 | 15.0 | 4,607 | 3.2 |
| Farmworkers | 8.6 | 2.4 | 1.9 | -225 | -1.0 |
| 'Max L. Carey, "Occupational employment growth through 1990," Monthly Labor Review, August 1981, pp. 42-55. |  |  |  |  |  |

Goods-producing industries will grow far more slowly through 1990 ( 13 percent) with some major growth in manufacturing and declining employment in agriculture. Basically, over the next two decades, employment in service-producing industries will grow significantly while growth in goods-producing industries will be modest.

For purposes of analysis, occupations are usually categorized as white collar (professional and technical, clerical, sales, and managerial); blue collar (craft, operative, and laborer); service; and farm. Over the next 10 to 20 years, there will be a continuing growth of professional and technical occupations, particularly for scientists, engineers, and technicians, as well as medical and health services occupations. The demand for salaried managers will also continue to grow significantly as will that for technologically trained clerical workers. The expansion of the retail trade industry will increase the growth of salesworkers and, similarly, the increases in services and contract construction will result in growth of craftworkers and operative employees. The greatest employment growth will occur for service workers with professional and technical service employment.

There are certain difficulties in estimating expected job openings based on industrial and occupational changes in the economy. Replacement needs caused by deaths and retirements will greatly exceed openings arising from employment growth in the years immediately ahead; however, occupational transfers and temporary labor force separations will be the largest source of job openings. Of course, employees in clerical, service, sales, and operative occupations have a higher replacement rate (primarily because of less need for training) than professional and technical occupations in which job transfers are more difficult. Data on total replacement needs by occupation are not presently available. Howev-
er, because of job transfers, deaths, retirements, and other labor force separations, job opportunities may exist even in occupations where employment is expected to increase slowly or decline.

Tables 3 and 4 indicate that industries (wholesale and retail trade and services) and occupations (professional, technical, sales, clerical, and service) in which older persons are disproportionately employed today are expected to grow considerably in the years ahead. Today the wholesale and retail trade and service industries employ 60 percent of all older workers, and 70 percent of the overall projected increase in employment through 1990 is expected to occur in professional and technical, clerical, and service occupations. These industries and occupations frequently hire part-time employees-in 1980, about one-fifth of all employees in professional, technical, and clerical occupations worked part time.

While selected areas of industry and occupational growth may well result in more part-time job opportunities suitable for older workers, there is considerable uncertainty regarding whether older persons will fill these types of jobs in the future. There will be a substantial number of middle-aged workers, particularly women, who might also compete for this employment
and a remaining group of younger persons interested in part-time work. With present retirement policies, it is very likely that, despite the potential for a modest increase in elderly employment over the next 20 years, the number of nonworking elderly will increase from about 23 million in 1982 to approximately 30 million in 2000 and could reach 49 million by 2030 if present declining labor force participation trends continue.

In CONCLUSION, the findings suggest that predictions of major labor shortages in the next two decades, leading to demand for more older workers, may be exaggerated and that the growth of the middle-aged to older work force will be the most important characteristic of the future labor market. While there will be a decline in numbers of younger labor force entrants, this may not be significant enough to increase the demand for workers over age 65, whose labor force participation is already substantially diminished by the availability of public and private pensions, desire for leisure, and limited part-time employment opportunities. Therefore, it is unlikely that older -orkers will be able to compete successfully against the largest cohort of middle-aged workers in U.S. history.
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[^1]$o m y$ (Lexington, Mass., Lexington Books, 1981.)

* Phillip L. Rones, "Older men -- the choice between work and retirement," Monthly Labor Review, November 1978, p. 7.
'See Thomas C. Nelson, "The Age Structure of Occupations," in Pauline K. Ragan, ed., Work and Retirement: Policy Issues (Los Angeles, Calif., The University of Southern California Press, 1980).
*Occupational Outlook Handbook, 1980-81 Edition (Washington, Bureau of Labor Statistics, March 1980).


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[^1]:    'Howard N Fullerton, Jr., "The 1995 labor force: a first look," Monthly Labor Review, December 1980, pp. 11-21; and unpublished statistics.
    ${ }^{2}$ Howard N Fullerton, Jr., "The 1995 labor force."
    "Howard N Fullerton, Jr., "The 1995 labor force."
    ${ }^{4}$ This section refers to workers over age 65 unless otherwise noted.
    'See Lawrence Olson and others, The Elderly and the Future Econ-

