



High-earning workers who don't have a bachelor's degree

by Matthew Mariani

How many people would object to a raise in pay? Not many. Everyone agrees that high earnings are better than low earnings. Statistics show that high-earning workers are likely to have a bachelor's degree or more education. But not everyone wants to spend 4 or more years in college. In fact, most workers do not have a bachelor's degree.

The good news is that many workers without bachelor's degrees have high earnings. High earnings are defined here in two ways. Both depend on medians, the point at which half the workers earned more and half earned less. The first measure of high earnings sets the cutoff at the median for earnings of all workers. The second measure raises the cutoff to the median for earnings of workers with a bachelor's degree.

Some people worry that high-paying jobs are no longer available for those without a bachelor's degree. Many high-

paying jobs in manufacturing, telecommunications, and some other industries

Many workers who don't have a bachelor's degree earn more than the average college graduate. But earnings are only one measure of what makes a job good.

have been eliminated. For men without a bachelor's degree, earnings adjusted for inflation have fallen over the past 15 years, due in part to these declines in high-paying jobs. Rising requirements for some professional, managerial, and other jobs have made entry without a degree even more difficult. An oversupply of college graduates has also displaced some less educated workers from high-paying jobs, which have not traditionally required a bachelor's degree.

Despite these trends, over 9 million, or 15 percent, of the full-time wage and salary workers age 25 and older who didn't have a bachelor's degree in 1998 earned

more than \$821 a week. That's more than the median for college graduates.

Earnings are one measure of what makes a job good. But choosing the right career involves many factors. Job characteristics, such as the nature of the work and working conditions, are also important. This article identifies occupations in which many highly paid workers do not have a bachelor's degree and points out other things that make for a good job.

Who has high earnings?

Median weekly earnings for full-time workers age 25 and older were \$572 in 1998. The median for those with at least a bachelor's degree was \$821. The low figure is over two and a half times the expected weekly earnings of a full-time employee paid the minimum wage (\$5.15 an hour), and the high figure is almost four times higher.

In 1998, 22.5 million workers without a bachelor's degree earned \$572 or more a week, and 9 million earned \$821 or more. (See chart 1.) Thirty-eight percent of workers without a bachelor's degree earned more than the median for all workers (\$572 per week). Fifteen percent of those without a bachelor's degree

Chart 1

Workers age 25 and older by usual weekly earnings and degree status, 1998
(thousands)

earned more than the median for workers with a bachelor's or higher degree (\$821 per week). (See chart 2.) In several occupations, more than 10 percent of the work-

Last year, 15 percent of workers without a bachelor's degree earned more than \$821 per week.

ers without bachelor's degrees earned over \$1,000. (See table 1.)

In part, earnings reflect the skills and innate talents of a worker. Other factors, such as location, urban or rural environment, industry, size of the facility, and unionization, also affect earnings. Three additional factors significantly affect the proportion of workers who have high earnings:

- ◆ Occupation
- ◆ Age
- ◆ Education and training.

Occupation. Tables 1, 2, and 3 list all occupations that have more than 50,000 full-time wage and salary workers age 25 or older who usually earn \$821 or more a week. These tables exclude small occupations—occupations with fewer than 50,000 employed—in which workers have high earnings. Two examples are elevator installer and air traffic controller.

In addition to total employment, table 2 shows the number of workers who do not have a bachelor's degree and their share of the total. Table 3 lists the same occupations but shows the number of high-earning workers who do not have a bachelor's degree—those earning \$821 or more per week. Table 3 also describes the employment of these high-earning workers as a share of all workers and as a share of those who do not have a bachelor's degree.

Earnings vary within occupations. Not every worker in a high-earning occupation makes a lot of money. Consider the example of freight, stock, and material movers. Although some of these workers

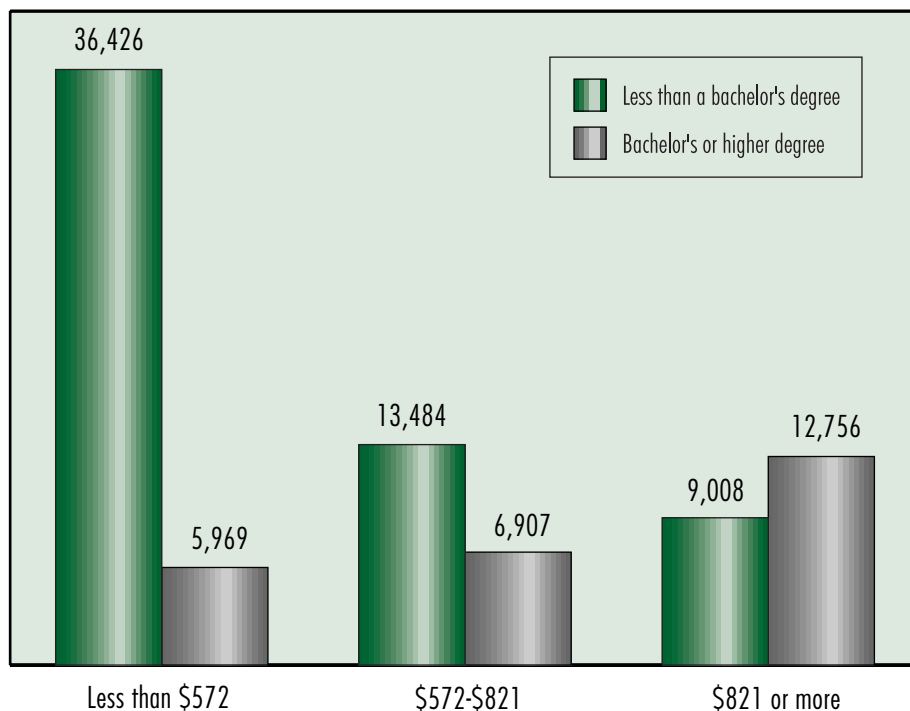


Chart 2

Workers age 25 and older by usual weekly earnings and degree status, 1998
(percent)

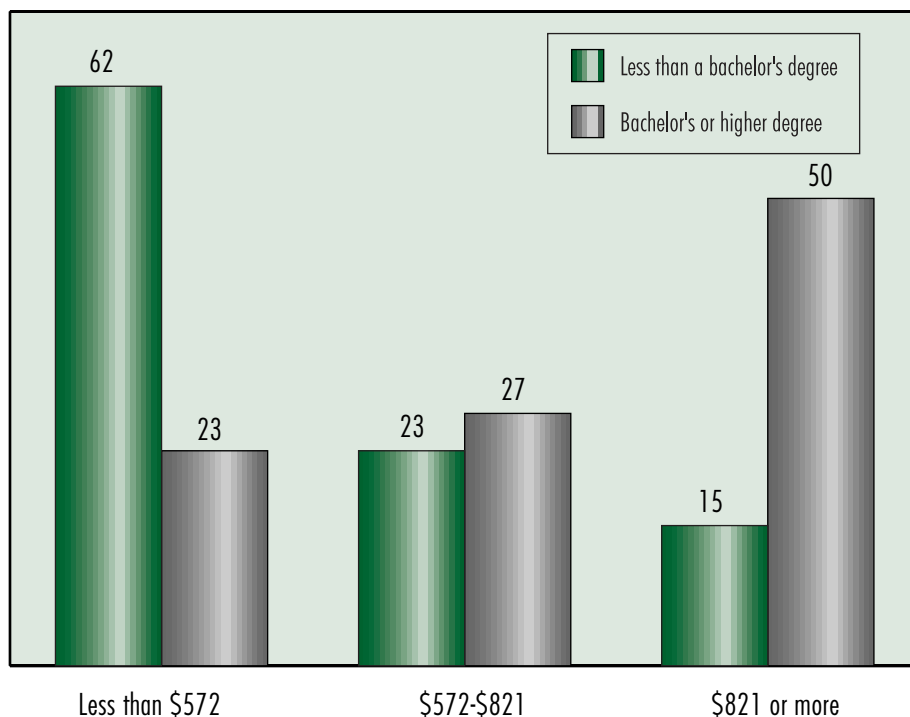


Table 1**Usual weekly earnings of wage and salary workers age 25 and older with less than a bachelor's degree, 1998**

| Occupation | Median earnings | Minimum earnings of the top 10 percent |
|---|-----------------|--|
| All occupations | \$486 | \$ 939 |
| Accountants and auditors | 547 | 914 |
| Administrators and officials, public administration | 628 | 1,140 |
| Aircraft engine mechanics | 790 | 1,200 |
| Assemblers | 403 | 773 |
| Automotive mechanics | 520 | 938 |
| Carpenters | 518 | 988 |
| Computer programmers | 777 | 1,306 |
| Computer systems analysts and scientists | 860 | 1,389 |
| Construction laborers | 404 | 820 |
| Electrical and electronic engineers | 882 | 1,343 |
| Electrical and electronic equipment repairers, except phone | 630 | 1,060 |
| Electrical and electronic technicians | 665 | 1,088 |
| Electrical power installers and repairers | 847 | 1,227 |
| Electricians | 694 | 1,094 |
| Financial managers | 648 | 1,241 |
| Firefighting occupations | 751 | 1,194 |
| Freight, stock, and material movers, hand | 379 | 742 |
| Health technologists and technicians | 492 | 805 |
| Industrial machinery repairers | 612 | 1,023 |
| Investigators and adjusters, insurance and other | 475 | 759 |
| Machine operators and tenders, except precision | 413 | 782 |
| Machinists | 608 | 985 |
| Mail carriers and postal clerks | 665 | 870 |
| Managers and administrators not elsewhere classified | 721 | 1,373 |
| Managers, food serving and lodging establishments | 511 | 987 |
| Managers, marketing, advertising, and public relations | 762 | 1,517 |
| Managers, medicine and health | 587 | 955 |
| Material moving equipment operators | 515 | 949 |
| Mechanical engineers | 897 | 1,406 |
| Other financial officers | 607 | 1,112 |
| Plant and system operators | 686 | 1,168 |
| Plumbers, pipefitters, and steamfitters | 628 | 1,056 |
| Police and detectives | 635 | 1,026 |
| Real estate sales occupations | 618 | 1,582 |
| Registered nurses | 705 | 1,002 |
| Sales occupations, other business services | 586 | 1,220 |
| Sales representatives, finance and business services | 587 | 1,257 |
| Sales representatives, mining, manufacturing and wholesale | 639 | 1,174 |
| Sales workers, motor vehicles and boats | 595 | 1,133 |
| Secretaries | 439 | 686 |
| Supervisors and proprietors, sales occupations | 520 | 1,035 |
| Supervisors, administrative support occupations | 566 | 915 |
| Supervisors, construction occupations | 710 | 1,156 |
| Supervisors, mechanics and repairers | 738 | 1,148 |
| Supervisors, production occupations | 632 | 1,089 |
| Supervisors, protective service occupations | 729 | 1,229 |
| Telephone and telephone line installers and repairers | 767 | 1,143 |
| Tool and die makers | 802 | 1,149 |
| Truckdrivers | 540 | 963 |
| Welders and cutters | 542 | 930 |

enjoy high earnings, most do not. This occupational group appears in table 3 because 54,000 of these workers did not have bachelor's degrees but earned more than \$821 a week. However, these workers accounted for only 7 percent of all

Some occupations have higher earnings than others, but earnings vary within occupations.

freight, stock, and material movers who did not have bachelor's degrees. As noted in table 1, freight, stock, and material movers had median weekly earnings of \$379, much less than the median for all workers.

Remember that first impressions may mislead. Annual earnings for seasonal occupations may be lower than implied by weekly earnings: Spells of unemployment reduce annual earnings in these occupations. Excluding part-timers and workers under 25 results in higher earnings numbers because these workers typically earn less. In addition, putting in extra hours in some occupations more readily translates into higher earnings than in others, in part because some workers receive overtime pay.

Age. Earnings tend to increase with age as workers gain experience and seniority. (See chart 3.) This upward trend usually peaks between the ages of 45 and 54. The number of high wage earners is thus concentrated in the 35 to 44 and 45 to 54 age groups. Some of these highly paid workers without bachelor's degrees entered the job market years ago, when educational requirements for entry were lower and more high-wage manufacturing jobs were available. However, some younger workers without a bachelor's degree also enjoy high earnings. For example, 24 percent of workers age 25 to 29 who did not have a degree earned \$572 or more a week. About 7 percent earned \$821 or more.

Table 2**Employment of wage and salary workers age 25 and older by occupation, 1998**

(numbers in thousands)

| Occupation | Total | Number with less than a bachelor's degree | Percent |
|---|---------------|---|-----------|
| All occupations | 84,549 | 58,917 | 70 |
| Accountants and auditors | 1,211 | 427 | 35 |
| Administrators and officials, public administration | 579 | 246 | 42 |
| Aircraft engine mechanics | 134 | 117 | 87 |
| Assemblers | 1,005 | 955 | 95 |
| Automotive mechanics | 536 | 513 | 96 |
| Carpenters | 743 | 712 | 96 |
| Computer programmers | 491 | 194 | 40 |
| Computer systems analysts and scientists | 1,205 | 366 | 30 |
| Construction laborers | 536 | 517 | 96 |
| Electrical and electronic engineers | 580 | 146 | 25 |
| Electrical and electronic equipment repairers, except phone | 437 | 363 | 83 |
| Electrical and electronic technicians | 378 | 312 | 83 |
| Electrical power installers and repairers | 119 | 114 | 96 |
| Electricians | 608 | 575 | 95 |
| Financial managers | 628 | 244 | 39 |
| Firefighting occupations | 198 | 177 | 89 |
| Freight, stock, and material movers, hand | 871 | 823 | 94 |
| Health technologists and technicians | 1,161 | 908 | 78 |
| Industrial machinery repairers | 503 | 480 | 95 |
| Investigators and adjusters, insurance and other | 1,117 | 820 | 73 |
| Machine operators and tenders, except precision | 3,852 | 3,721 | 97 |
| Machinists | 458 | 437 | 95 |
| Mail carriers and postal clerks | 605 | 514 | 85 |
| Managers and administrators not elsewhere classified | 5,087 | 2,565 | 50 |
| Managers, food serving and lodging establishments | 797 | 618 | 78 |
| Managers, marketing, advertising, and public relations | 710 | 256 | 36 |
| Managers, medicine and health | 617 | 324 | 53 |
| Material moving equipment operators | 918 | 899 | 98 |
| Mechanical engineers | 301 | 88 | 29 |
| Other financial officers | 599 | 262 | 44 |
| Plant and system operators | 251 | 224 | 89 |
| Plumbers, pipefitters, and steamfitters | 375 | 360 | 96 |
| Police and detectives | 982 | 735 | 75 |
| Real estate sales occupations | 337 | 194 | 58 |
| Registered nurses | 1,439 | 694 | 48 |
| Sales occupations, other business services | 442 | 234 | 53 |
| Sales representatives, finance and business services | 1,609 | 778 | 48 |
| Sales representatives, mining, manufacturing and wholesale | 1,182 | 674 | 57 |
| Sales workers, motor vehicles and boats | 254 | 206 | 81 |
| Secretaries | 2,054 | 1,837 | 89 |
| Supervisors and proprietors, sales occupations | 2,895 | 2,081 | 72 |
| Supervisors, administrative support occupations | 654 | 469 | 72 |
| Supervisors, construction occupations | 460 | 409 | 89 |
| Supervisors, mechanics and repairers | 241 | 210 | 87 |
| Supervisors, production occupations | 1,096 | 958 | 87 |
| Supervisors, protective service occupations | 210 | 147 | 70 |
| Telephone and telephone line installers and repairers | 242 | 219 | 90 |
| Tool and die makers | 123 | 117 | 95 |
| Truckdrivers | 2,216 | 2,132 | 96 |
| Welders and cutters | 479 | 473 | 99 |
| All other occupations | 40,024 | 27,073 | 68 |

Education. Many workers who lack bachelor's degrees have other postsecondary education or training. Training other

High wage earners develop skills they need in many ways.

than a bachelor's degree provides the best preparation for some high-paying jobs. Workers with more training usually earn more. Some high wage occupations are difficult to enter without training, and within occupations, the most highly trained workers tend to collect the largest paychecks and have a better chance of advancing into supervisory jobs.

High wage earners develop skills they need in many ways—through associate degree programs, college courses, postsecondary vocational schools and technical institutes, apprenticeships or other formal employer training, informal on-the-job training, and Armed Forces experience. Earnings data are not available for workers with these types of training, but chart 4 shows that earnings increase with education.

What's good besides earnings?

Everyone needs money. Still, hardly anyone chooses an occupation—or a particular job within an occupation—based solely on salary. The perfect career recipe for any individual contains many ingredients besides money. These include the following:

- ◆ Benefits
- ◆ Projected growth and openings
- ◆ Job security
- ◆ Advancement potential
- ◆ Nature of the work.

Depending on the mix you prefer, a job with lower earnings might please you more than any other.

Benefits. Many employers provide some benefits that add to the quality of a job. These may include health insurance,

Table 3

Employment of wage and salary workers age 25 and older with less than a bachelor's degree and usual weekly earnings of \$821 or more by occupation, 1998

| Occupation | Number (thousands) | Percent of... | |
|---|-----------------------|-------------------|--|
| | | ...all workers | ...workers with less than a bachelor's degree |
| All occupations | 9,008 | 11 | 15 |
| Accountants and auditors | 65 | 5 | 15 |
| Administrators and officials, public administration | 75 | 13 | 30 |
| Aircraft engine mechanics | 51 | 38 | 44 |
| Assemblers | 63 | 6 | 7 |
| Automotive mechanics | 87 | 16 | 17 |
| Carpenters | 135 | 18 | 19 |
| Computer programmers | 91 | 19 | 47 |
| Computer systems analysts and scientists | 196 | 16 | 54 |
| Construction laborers | 50 | 9 | 10 |
| Electrical and electronic engineers | 84 | 14 | 58 |
| Electrical and electronic equipment repairers, except phone | 95 | 22 | 26 |
| Electrical and electronic technicians | 79 | 21 | 25 |
| Electrical power installers and repairers | 62 | 52 | 54 |
| Electricians | 203 | 33 | 35 |
| Financial managers | 76 | 12 | 31 |
| Firefighting occupations | 74 | 37 | 42 |
| Freight, stock, and material movers, hand | 54 | 6 | 7 |
| Health technologists and technicians | 83 | 7 | 9 |
| Industrial machinery repairers | 104 | 21 | 22 |
| Investigators and adjusters, insurance and other | 60 | 5 | 7 |
| Machine operators and tenders, except precision | 304 | 8 | 8 |
| Machinists | 96 | 21 | 22 |
| Mail carriers and postal clerks | 74 | 12 | 14 |
| Managers and administrators not elsewhere classified | 1,022 | 20 | 40 |
| Managers, food serving and lodging establishments | 95 | 12 | 15 |
| Managers, marketing, advertising, and public relations | 112 | 16 | 44 |
| Managers, medicine and health | 63 | 10 | 19 |
| Material moving equipment operators | 138 | 15 | 15 |
| Mechanical engineers | 51 | 17 | 58 |
| Other financial officers | 64 | 11 | 24 |
| Plant and system operators | 78 | 31 | 35 |
| Plumbers, pipefitters, and steamfitters | 89 | 24 | 25 |
| Police and detectives | 200 | 20 | 27 |
| Real estate sales occupations | 56 | 17 | 29 |
| Registered nurses | 187 | 13 | 27 |
| Sales occupations, other business services | 61 | 14 | 26 |
| Sales representatives, finance and business services | 196 | 12 | 25 |
| Sales representatives, mining, manufacturing and wholesale | 199 | 17 | 30 |
| Sales workers, motor vehicles and boats | 56 | 22 | 27 |
| Secretaries | 65 | 3 | 4 |
| Supervisors and proprietors, sales occupations | 365 | 13 | 18 |
| Supervisors, administrative support occupations | 80 | 12 | 17 |
| Supervisors, construction occupations | 135 | 29 | 33 |
| Supervisors, mechanics and repairers | 79 | 33 | 38 |
| Supervisors, production occupations | 269 | 25 | 28 |
| Supervisors, protective service occupations | 57 | 27 | 39 |
| Telephone and telephone line installers and repairers | 93 | 38 | 42 |
| Tool and die makers | 53 | 43 | 45 |
| Truckdrivers | 383 | 17 | 18 |
| Welders and cutters | 75 | 16 | 16 |
| All other occupations | 2,426 | 6 | 9 |

life insurance, child-care subsidies, paid holidays and vacation time, sick leave, and employee discounts. Benefits have become a major part of the compensation

Benefits make up a significant portion of total compensation for many workers.

workers receive. In March 1998, benefits averaged about 28 percent of total compensation costs.

Some benefits, such as health and life insurance or subsidized child care, are as good as cash. Without them, workers would have to pay expenses out of pocket. Some employers, like airlines, provide free or subsidized travel, while retailers may provide discounts on merchandise. Paid holidays and vacation and sick leave improve quality of life.

Depending on the benefits package, a job with lower earnings might provide better total compensation than a job offering just a large paycheck.

Projected growth and openings. The projected growth rate and number of job openings affect the ease or difficulty of finding a job in an occupation and, perhaps, the opportunities for promotion, as well. The *Occupational Outlook Handbook* and "The 1996-2006 Job Outlook in Brief" in the spring 1998 *OOQ* provide vital information on projected occupational employment. In some cases, additional information on competition for jobs is given.

Some high wage occupations that do not require a bachelor's degree, such as machinists, are not expected to grow. Others are expected to grow about as fast as the average for all workers, including truckdrivers, police and detectives, automotive mechanics, material moving equipment operators, and mechanical engineers. Computer programmer, registered nurse, and most health technologist

and technician occupations are projected to grow faster than average.

For many occupations, projected growth significantly enhances job prospects. Even so, employment growth usually produces fewer openings than those

The projected growth rate and number of job openings affect the ease or difficulty of finding a job in an occupation.

resulting from the need to replace workers who transfer to different occupations, retire, or stop working for other reasons. For example, the employment of secretaries is projected to increase by 25,000 jobs by 2006, but net replacement needs are expected to provide more than 23 times as many openings.

Lack of growth in an occupation does not always mean a lack of job openings. For example, machinists have favorable prospects despite their lack of employment growth, because of the shortage of skilled machinists in the labor market.

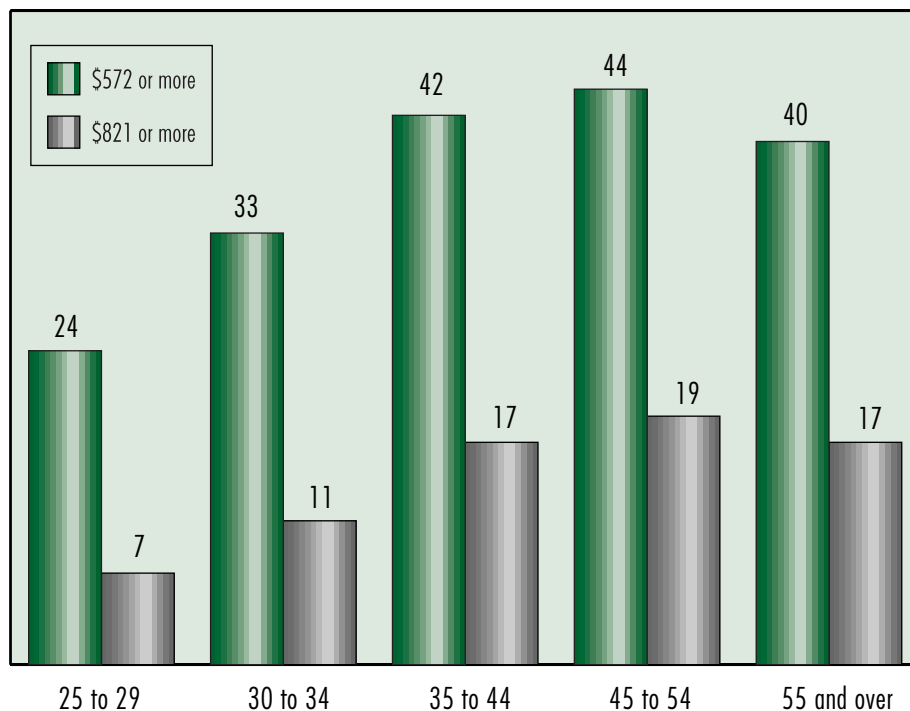
Job security. Workers in some occupations and industries are less vulnerable to losing their jobs as a result of economic downturns, seasonal variations in production, or changes in the technologies used to accomplish work. Occupational unemployment rates provide one measure of job security. Workers in occupations with low unemployment rates are less likely to become unemployed. Some occupations having high unemployment rates still qualify as high paying, but workers who desire security may prefer a smaller but more reliable paycheck.

Unemployment rates reflect two kinds of unemployment: cyclical and long term.

Chart 3

Workers without a bachelor's degree earning \$572 or more per week by age, 1998

(percent)



Recessions and seasonal changes in production create cyclical unemployment in many occupations. During slack periods, workers may face temporary layoffs but can expect to resume work when conditions improve. On the other hand, long-term unemployment or even permanent job loss may result from restructuring or plant closings. Jobs in organizations or industries with good long-term prospects are obviously more desirable. If you lose your job, you will likely find another one in such an industry.

Advancement potential. Some occupations offer a natural path for career ad-

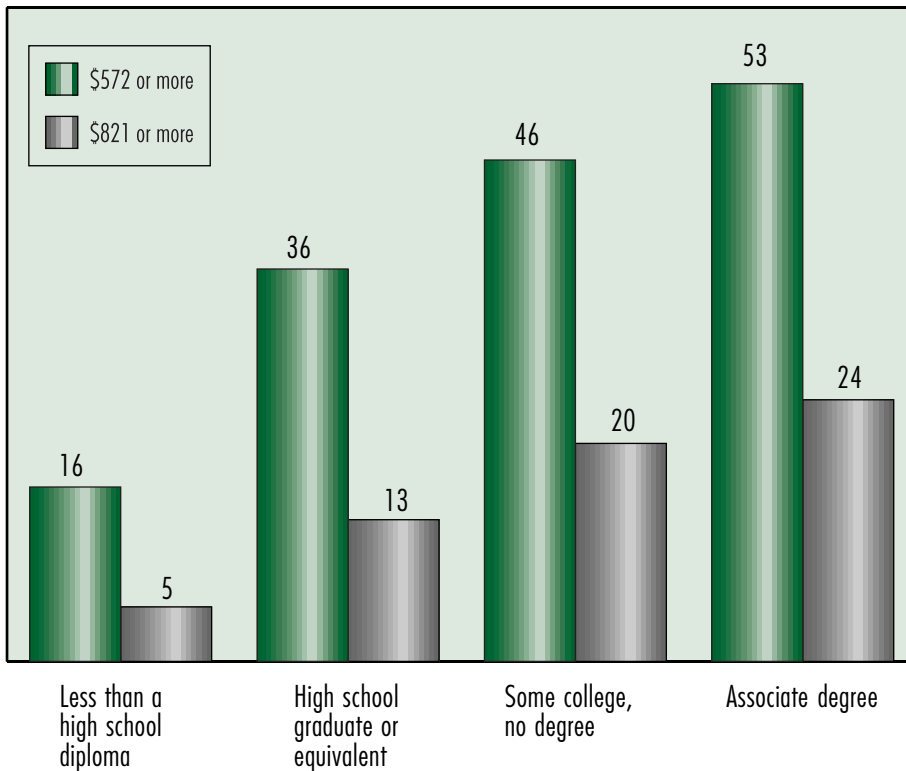
vancement. For instance, an electrician apprentice becomes a journey level electrician and then, perhaps, an electrician supervisor or contractor. Workers in other occupations may need to blaze their own trail to success. Still other occupations or jobs offer few, if any, chances for advancement.

Promotion potential varies from employer to employer. In general, fast growing occupations and organizations offer better promotion prospects. Large employers often provide better prospects, but small organizations may offer broader responsibilities and opportunities to learn

Chart 4

Workers without a bachelor's degree earning \$572 or more per week by education level, 1998

(percent)



a wider range of skills. The most successful workers look for opportunities and seize them when they arise.

Nature of the work. What type of work holds the greatest appeal? It all depends on the person. Different occupations correspond with varying individual, social, and physical characteristics. Everyone weighs these factors in their own way when deciding what makes a job good.

Individuals like doing tasks that interest them, use their skills, and satisfy their needs in other ways. What interests you? Is it cars, music, children, or any one of thousands of other subjects? Do you like

taking risks, or do you desire security? Does stress motivate you or make you sick? Different personalities crave different types of activities, such as the following:

- ◆ Helping others
- ◆ Analyzing data or information
- ◆ Coordinating events and activities
- ◆ Teaching or mentoring
- ◆ Selling or persuading
- ◆ Operating or fixing machinery
- ◆ Creating new concepts, designs, or works of art
- ◆ Running an enterprise
- ◆ Managing the efforts of others
- ◆ Organizing ideas or programs.

Individuals have their own ideas about the work environment they prefer. Some people like dealing with customers or co-workers all day long, whereas others would rather work alone more often than not. But in either case, having a good supervisor and friendly coworkers may count for a lot.

Important physical characteristics of work include the level of physical exertion necessary, cleanliness and safety of the workplace, and ability to control the pace of work and the methods used. Geographic location also matters. For some people, a good job is one that is near their home.

Different workers value the idea of paid work differently. The hours that high pay demands may clash with what a worker wants. Some only want part-time work so they can devote their energies to family responsibilities, school, or other pursuits.

To learn more about the many distinguishing characteristics of occupations, see "Matching Yourself With the World of Work, 1998," in the fall 1998 *OOQ*. To obtain a reprint of this article, call the Consumer Information Center at 1 (888) 878-3256.

Are you ready?

The data reveal many good jobs for those who do not have a bachelor's degree—not only jobs with high wages, but also jobs that are good for other reasons. Every job has its positives and negatives. One factor seldom makes a job good or bad.

Find out all you can about occupations that interest you. Research the entry requirements and other characteristics so you will know what to expect. Above all, choose a career that meets your definition of good. The demand for skilled workers will remain strong. Are you ready? 