More U.S. workers are college graduates

ANNE MCDougall Young and Howard Hayghe

From now until about the end of the decade, the last of the enormous postwar birth cohort will pass through school and into the adult labor force. Millions more workers will have college degrees, as the anticipated number of bachelors' and higher degrees awarded will continue to exceed a million a year for the rest of the 1980's. Thus, college graduates will continue to represent a growing proportion of the labor force.

Today, nearly 1 in 4 adult workers has completed college. A little more than a decade ago, in 1970, just 1 in 7 had as much formal schooling. During the 13-year interval, the baby-boom generation—now concentrated in the 25- to 34-years age group—went to college in record numbers, and, in most of these years, over a million bachelors’ and advanced degrees were awarded annually. This growth, together with the fact that labor force participation rates of college graduates are typically higher than the rates for persons with fewer years of school, generated significant increases in the college-educated work force.

More college graduates

Between 1970 and 1983, the number of 25- to 64-year-old workers with 4 years or more of college increased by 11.5 million. Almost half of this rise was among 25- to 34-year-olds, with 35- to 44-year-olds accounting for most of the rest. While the proportion of working men ages 25 to 64 with a college degree rose by more than two-thirds over the 1970–83 period, that of women almost doubled. (See table 1.) Along with the increase in the number of graduates, the sharp upward trend in women’s labor force participation was a major factor contributing to this rise. From 1970 to 1983, the labor force participation rate increased for all but the oldest group of female college graduates, with that of 25- to 34-year-olds rising the most:

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In the past, household and child-care responsibilities were among the major reasons for women ages 25 to 34 to stay at home. During the 1970's, inflation and economic need, among other factors, apparently became more compelling reasons for women in this age cohort to work outside the home. By 1983, not only did fewer married college graduates ages 25 to 34 have preschool children (53 percent versus 68 percent in 1970), but those who did have children under age 6 were far more likely to be in the labor force (61 percent compared with 34 percent in 1970). The labor force participation rate of 55- to 64-year-old college graduates generally paralleled the downward trend for all women in this age group during most of the 1970–83 period.

In contrast to the situation among most women, there has been a decrease in the labor force participation rates of adult men in all educational attainment groups. For male college graduates, however, the rate has slipped by only a percentage point since 1970. This decline was considerably less than for men in other educational attainment categories, and, like that of the other men, it occurred primarily among those in the older age brackets. One result of these contrasting male-female labor force trends has been that women’s share of the college-graduate work force increased, from 27 percent in 1970 to 38 percent in 1983.

The ongoing decline in the number of school leavers—workers who have not completed 12 years of formal schooling—is an additional factor behind the growth in college graduates’ share of the adult work force. Between March 1970 and 1983, the total number of school leavers in the labor force declined by more than 7 million, mostly because of retirement or death among older workers who have typically completed fewer years of school than younger workers.

Black and Hispanic workers

Blacks and Hispanics have joined in the general upgrading of the educational attainment of the population in recent years. However, their proportions with college degrees continue to be much lower than that of whites. In 1983, 13 percent of adult black workers and 10 percent of Hispanics were college graduates, compared with 25 percent of whites. Moreover, since 1970, the percentage-point increase for blacks (5 points) and Hispanics (3 points) has been much smaller than for whites (10 points). For both whites and blacks, the proportions of adult workers who were school leavers dropped by about half, while the share for Hispanics declined by one-third. This difference in the size of the decline between Hispanics on the one hand, and whites and blacks on the other, may reflect recent immigration from countries where the propensity to stay in school is not as great as in the United States, and public educational opportunities are not as widely available.

Greater educational attainment was linked with higher labor force participation rates for all race and ethnic groups. However, labor force rates differed significantly for some race and sex groups with the same general level of schooling. Age was sometimes an important factor. For instance, among dropouts in the adult labor force, almost 40 percent of the male Hispanics were 25 to 34 years old, compared
with 25 percent of both whites and blacks. The preponderance of younger workers pushed the labor force participation for Hispanic male dropouts to 87 percent, compared with 79 percent for whites and 72 percent for blacks. (See table 2.)

Black women were much more likely to be in the labor force than white or Hispanic women at every level of schooling, with the difference rising from about 4 percentage points among dropouts to almost 15 percentage points among college graduates. The persistence of higher labor force rates among black women reflects, in part, financial need in families where the men, on average, have lower earnings than white men at all levels of education. Also, a larger proportion of black families were maintained by women, 42 percent in March 1983, compared with about 13 percent of white families and 23 percent of Hispanic families.

As can be seen, the overall participation rate for Hispanic women was lower than that for either blacks or whites. This is partly because more than half of the Hispanic women in the population had not completed high school, compared with only a fourth of the whites and a third of the blacks. Because labor force participation rates of high school dropouts are typically lower than for other education groups, the concentration of Hispanic women in that category had the effect of decreasing their overall labor force rate. Also, relatively more Hispanic than white or black women had children under age 6, whose presence tends to inhibit mothers' labor force participation.

New occupational classification

The occupational classification system used since the 1970 decennial census has now been replaced by one that links occupational titles more closely to job function. Beginning in January 1983, the four traditional summary groups (white-
growing mismatch between actual educational levels and future expected job demands. Thus, the potential exists for a large increase in the number of jobs over the decade to come if those required for occupations with the greatest anticipated growth. In other words, many college graduates—perhaps 20 percent—will not be able to get jobs requiring a college degree, continuing the situation that has prevailed in recent years. Such mismatches could seriously affect the lives of many young workers and their families for years to come.

**FOOTNOTES**


2. Ibid.

3. Data in this report are based on tabulations from the March 1983 Current Population Survey (CPS), conducted for the Bureau of Labor Statistics by the Bureau of the Census. The data relate to persons 25 to 64 years old, unless otherwise specified. Because these estimates are based on a sample, they may differ from those obtained if a complete census were conducted. Sampling variability may be relatively large in cases where the estimates are small. Estimates, or small differences between estimates, should be interpreted with caution. This report is the latest in a series on this subject. The most recent was Anne McDougall Young, “Recent trends in higher education and labor force activity,” *Monthly Labor Review*, February 1983, pp. 39–41. A research summary, “Educational attainment of workers, March 1981,” detailed tables for March 1981, and summary educational attainment tables for 1980 revised to the 1980 Census base are included in *Educational Attainment of Workers, March 1981*, Bulletin 2159 (Bureau of Labor Statistics, January 1983).


Pay in Mountain region coal mines outstrips national average

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Coal miners in the Mountain States\(^1\) averaged $13.28 an hour in July 1982, according to an occupational wage survey by the Bureau of Labor Statistics. (See table 1.) This was 12 percent above the national average for bituminous coal mining and translated into a regional pay advantage of 2 percent in underground mines and 24 percent in surface mines.

At the time of the survey, mining in the Mountain States employed some 15,000 production workers, double the number recorded in an earlier survey conducted in January 1976. A preponderance of these workers were in mines with at least 250 employees, and most were unionized. The region's nonunion workers, however, averaged as much or more than their unionized counterparts, particularly among the 7,725 workers employed in underground mines.

Historically, six States—Illinois, Kentucky, Ohio, Pennsylvania, Virginia, and West Virginia—have accounted for the bulk of the work force in bituminous coal mining. Despite rapid growth in the Mountain States in recent years, these six States still accounted for nearly 80 percent of the Nation's soft coal employment in July 1982; in the 1976 survey, the proportion was 85 percent.

National pay levels. Nationwide, straight-time earnings of bituminous coal miners averaged $11.83 an hour in July 1982, up from $6.94 in January 1976. This represented a 70-percent increase over the 6\(\frac{1}{2}\) years since the previous survey\(^2\), or an average annual rise of 8.5 percent. By comparison, the Bureau's Employment Cost Index for all private nonagricultural workers rose 61 percent, or approximately 7.7 percent a year, between the first quarter of 1976 and the second quarter of 1982.

Workers in underground mines, nearly seven-tenths of the 158,803 workers covered by the 1982 survey, averaged $11.92 an hour—2 percent more than the $11.65 recorded in surface mines. (See table 1.) This pay relationship, however, was mixed among sections of the country. For example, average earnings of underground-mine workers in Pennsylvania and Kentucky exceeded those of surface-mine workers by 20 percent and 11 percent, respectively. But surface miners held a pay advantage averaging 19 percent in the Mountain States and 4 percent in Illinois.

Earnings distributions narrow. Earnings of individual workers in bituminous coal mines continued to be concentrated within relatively narrow ranges. The middle 50 percent of the production work force earned between $11.36 and $12.43 an hour in underground mines, and between $10.37 and $13.15 an hour in surface mines. The industry's pay systems contribute to this heavy concentration of earnings, as virtually all workers are under formal plans providing single rates for specific groups of occupations. Moreover, the custom of granting wage changes on a uniform cents-per-hour basis has shrunk the industry's wage structure in relative terms.

Pay schedules from the pattern-setting contract between the United Mine Workers of America (UMWA) and the Bituminous Coal Operators' Association (BCOA) illustrate the single-rate arrangements for job groups as well as the effect of uniform cents-per-hour increases (table 2). As of June 7, 1982, mining jobs in both branches of the industry were grouped into five pay grades, with rates ranging from $11.348 to $12.415 in underground mines, and from $11.796 to $13.178 in surface mines.

A comparison of the June 7, 1982, rates with those in effect June 12, 1976, illustrates the pay compression effects of uniform cents-per-hour increases. Pay differences between grades 1 and 5 over this period declined from 15.7 percent to 9.4 percent in underground mines and from 19.0 percent to 11.7 percent in surface mines, while dollar differences among grades remained unchanged. A look at the wage terms of the two most recent UMWA-BCOA agreements shows why this is so.


Union-nonunion pay. Union members accounted for nearly four-fifths of the industry's production work force. They


