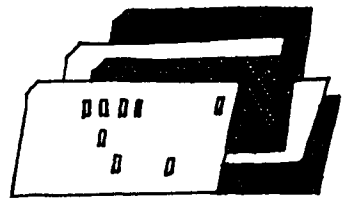
Research Summaries



One-fourth of the adult labor force are college graduates

ANNE MCDOUGALL YOUNG

Between 1983 and 1984, the number of 25- to 64-year-old college graduates in the labor force rose by a million—the third consecutive annual increase of this magnitude. Graduates continued to register higher rates of labor force participation, markedly lower unemployment rates, and larger shares of managerial and professional specialty jobs than other workers. Data from the March 1984 Current Population Survey[1] show that college graduates now account for one-fourth of all adult workers.[2] Moreover, persons who have completed at least 1 year of college outnumber those who left school directly after high school graduation. (See table 1.)

Labor force. Although population increases account for the bulk of the over-the-year rise in the college educated work force, a higher labor force participation rate for female graduates also contributed. Women thus comprised three-fifths of the increase and now represent 38 percent of all

Anne McDougall Young is an economist in the Office of Employment and Unemployment Statistics, Division of Employment and Unemployment Analysis, Bureau of Labor Statistics.

Table 1. Labor force status of persons 25 to 64 years old by years of school completed, sex, race, and Hispanic origin, March 1983–84

[Numbers in thousands]

Labor force status and years of school completed	Total		Men		Women		White		Black		Hispanic origin	
	1983	1984	1983	1984	1983	1984	1983	1984	1983	1984	1983	1984
Civilian noninstitutional population	111,658	113,893	53,862	54,991	57,794	58,901	96,864	98,826	11,739	12,100	6,258	6,585
Elementary: 8 years or less	11,122	10,618	5,725	5,560	5,396	5,059	8,881	8,457	1,879	1,830	2,291	2,299
High school: 1 to 3 years	13,513	13,197	6,220	6,131	7,292	7,068	10,796	10,502	2,444	2,420	928	1,009
4 years only	44,815	46,209	19,224	19,900	25,590	26,310	39,516	40,738	4,430	4,589	1,799	1,902
College: 1 to 3 years	18,996	19,636	9,229	9,538	9,768	10,100	16,755	17,303	1,756	1,865	721	815
4 years or more	23,213	24,232	13,463	13,865	9,749	10,368	20,914	21,825	1,230	1,395	519	559
Civilian labor force	83,615	86,001	47,903	48,767	35,712	37,234	72,750	74,911	8,592	8,954	4,378	4,690
Elementary: 8 years or less	6,095	5,818	4,110	3,902	1,986	1,917	4,942	4,732	982	960	1,374	1,395
High school: 1 to 3 years	8,762	8,545	5,193	5,073	3,570	3,472	7,035	6,810	1,543	1,560	613	686
4 years only	33,397	34,603	17,404	17,895	15,993	16,709	29,301	30,422	3,459	3,568	1,378	1,458
College: 1 to 3 years	15,159	15,812	8,459	8,761	6,702	7,050	13,304	13,840	1,483	1,601	578	678
4 years or more	20,201	21,223	12,738	13,136	7,462	8,086	18,171	19,105	1,127	1,266	434	474
Labor force participation rate	74.9	75.5	88.9	88.7	61.8	63.2	75.1	75.8	73.2	74.0	70.0	71.2
Elementary: 8 years or less	54.8	54.8	71.8	70.2	36.8	37.9	55.6	56.0	52.3	52.5	60.0	60.7
High school: 1 to 3 years	64.8	64.7	83.5	82.7	49.0	49.1	65.2	64.8	63.1	64.5	66.1	68.0
4 years only	74.5	74.9	90.5	89.9	62.5	63.5	74.1	74.7	78.1	77.8	76.6	76.7
College: 1 to 3 years	79.8	80.5	91.7	91.9	68.6	69.8	79.4	80.0	84.5	85.8	80.2	83.2
4 years or more	87.0	87.6	94.6	94.7	76.5	78.0	86.9	87.5	91.6	90.8	83.6	84.8
Employed	76,098	80,365	43,194	45,412	32,903	34,953	66,915	70,610	7,152	7,764	3,777	4,249
Elementary: 8 years or less	5,154	5,144	3,466	3,453	1,688	1,691	4,188	4,210	819	819	1,129	1,217
High school: 1 to 3 years	7,352	7,488	4,336	4,418	3,015	3,070	5,992	6,075	1,204	1,262	510	594
4 years only	30,051	32,097	15,334	16,451	14,715	15,646	26,595	28,480	2,806	3,050	1,208	1,341
College: 1 to 3 years	14,047	14,980	7,750	8,302	6,296	6,678	12,443	13,201	1,287	1,446	523	638
4 years or more	19,493	20,655	12,307	12,787	7,186	7,868	17,600	18,642	1,036	1,186	407	459
Unemployed	7,518	5,635	4,710	3,355	2,810	2,280	5,835	4,301	1,440	1,191	602	438
Elementary: 8 years or less	942	675	644	448	297	226	755	522	162	141	247	178
High school: 1 to 3 years	1,410	1,056	857	654	553	401	1,042	735	339	298	103	89
4 years only	3,347	2,505	2,069	1,444	1,277	1,061	2,606	1,941	653	517	170	117
College: 1 to 3 years	1,112	831	708	458	405	372	86	640	197	155	55	40
4 years or more	708	568	431	350	277	218	570	463	91	79	27	14
Unemployment rate	9.0	6.6	9.8	6.9	7.9	6.1	8.0	5.7	16.8	13.3	13.8	9.3
Elementary: 8 years or less	15.5	11.6	15.7	11.5	15.0	11.8	15.3	11.0	16.5	14.7	18.0	12.8
High school: 1 to 3 years	16.1	12.4	16.5	12.9	15.5	11.5	14.8	10.8	22.0	19.1	16.8	13.0
4 years only	10.0	7.2	11.9	8.1	8.0	6.3	8.9	6.4	18.9	14.5	12.3	8.0
College: 1 to 3 years	7.3	5.3	8.4	5.2	6.0	5.3	6.5	4.6	13.3	9.7	9.5	5.9
4 years or more	3.5	2.7	3.4	2.7	3.7	2.7	3.1	2.4	8.1	6.2	6.2	3.0

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table 2. Labor force status of female college graduates 25 to 64 years old by marital status, presence of children, and race, March 1984

[Numbers in thousands]

Marital status, race, and Hispanic origin	Civilian noninstitutional population		Civilian labor force	
	Total	Percent distribution	Total	Percent of population
White				
Total, 25 to 64 years	9,120	100.0	7,052	77.3
Never married	1,590	17.4	1,507	94.8
Married, spouse present	6,306	69.1	4,465	70.8
With children under 18 years old	3,639	39.9	2,477	68.1
Other marital status	1,223	13.4	1,080	88.3
Widowed	180	2.0	120	66.7
Divorced or separated	1,045	11.5	959	91.8
Black				
Total, 25 to 64 years	779	100.0	684	87.8
Never married	173	22.2	158	91.3
Married, spouse present	396	50.8	346	87.4
With children under 18 years old	251	32.2	227	90.4
Other marital status	210	27.0	180	85.7
Widowed	21	2.7	12	(1)
Divorced or separated	188	24.1	168	89.4
Hispanic origin				
Total, 25 to 64 years	260	100.0	189	72.7
Married, spouse present	167	64.2	105	62.9
With children under 18 years old	120	46.1	72	60.0
Other marital status	93	35.8	84	90.3

[1]Data not shown where base is less than 75,000.

NOTE: Detail for race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

adult workers with 4 years or more of college, compared with 32 percent in 1970. Over this period, the labor force participation rate for female college graduates ages 25 to 64 rose from 61 to 78 percent, while that for male graduates edged down from 96 to 95 percent.[3]

The proportion of black college graduates in the labor force continued to exceed that for white graduates, reflecting primarily the high participation rate of black women. As shown in table 2, black female graduates who were married were much more likely than their white counterparts to be in the labor force, especially if they had children. Black female graduates were also more likely than white graduates to have never married and were twice as likely to be divorced or separated. The much larger proportion of black women in these marital status groups and the high labor force participation rates characteristic of persons responsible for their own support and that of others help account for the higher participation rate of black graduates. Among men, white and black college graduates had roughly comparable participation rates. Married Hispanic women who were college graduates were less likely to be in the labor force than either whites or blacks, but those who were not married matched the participation rates of their white and black counterparts.

Unemployment. Unemployment rates of persons 25 to 64 declined over the year for all educational attainment groups as the economic recovery continued. College graduates were about one-fifth as likely as those who had completed 1 to 3 years of high school and one-third as likely as high school graduates to be unemployed. The inverse relationship of unemployment rates and educational attainment has been a historical pattern; moreover, college graduates are hit less hard by recessions than the other educational status groups.

Occupations. A majority of workers in managerial and professional speciality occupations were college graduates. Within this broad category, the proportion of workers who had completed 4 years or more of college was substantially higher in professional specialty occupations—81 percent for men and 72 percent for women—than in executive, administrative, and managerial occupations—52 percent for men and 35 percent for women. (See table 3.)

Although most workers in professional specialty occupations continue to end their formal education at the baccalaureate level, advanced degrees have increasingly become an expectation for professional status in many of the specific categories. In March 1984, about 45 percent of the adult men and 25 percent of the adult women in professional specialty jobs had completed 6 or more years of college. (See table 4.)

There is some indication that the proportion of professional women with postgraduate work may increase in the future. For example, the proportion of all master's, doctorates, and first professional degrees awarded to women rose from 33 percent in 1970–71 to 45 percent 10 years later.[4] Professional women are also slowly shifting from a concentration in education and nursing occupations to some of the more traditionally male strongholds, such as engineering, law, and the life and physical sciences.

In contrast to those in professional specialties, only about 5 percent of the managerial workers had completed 5 years

Table 4. Percentage of college graduates employed in selected occupations by sex, age, and years of college completed, March 1984

Occupation, sex, and age	Total employed (thousands)	Percent who were college graduates by years of college completed			
		4 years or more			
		Total	4 years	5 years	6 years or more
Professional specialty occupations					
Men, 25 to 64 years	6,225	80.7	25.2	10.8	44.7
25 to 44 years	4,238	82.1	27.6	11.3	43.2
45 to 64 years	1,987	77.8	20.1	9.8	47.9
Women, 25 to 64 years	5,992	72.4	34.7	13.2	24.5
25 to 44 years	4,435	74.7	36.8	13.8	24.1
45 to 64 years	1,557	66.0	28.7	11.5	25.8
Executive, administrative, and managerial occupations					
Men, 25 to 64 years	6,899	52.1	31.0	5.6	15.5
25 to 44 years	4,204	56.8	33.7	6.7	16.4
45 to 64 years	2,695	44.7	26.7	4.0	14.0
Women, 25 to 64 years	3,442	35.2	20.9	4.7	9.6
25 to 44 years	2,366	40.8	25.7	4.8	10.3
45 to 64 years	1,076	23.0	10.5	4.4	8.1

Table 3. Employed civilians 25 to 64 years old by sex, selected occupation, and years of school completed, March 1984

Sex and occupation	Total employed (thousands)	Percent distribution				
		Total	Years of school completed			
			Less than 4 years of high school	4 years of high school only	1 to 3 years of college	4 years of college or more
Men						
Total, 25 to 64 years	45,412	100.0	17.3	36.2	18.3	28.2
Managerial and professional specialty	13,123	100.0	3.5	15.1	15.7	65.7
Executive, administrative, and managerial	6,899	100.0	5.8	22.6	19.5	52.1
Professional specialty	6,225	100.0	.9	6.8	11.5	80.7
Technical, sales, and administrative support	9,015	100.0	7.6	34.6	27.5	30.3
Technicians and related support	1,358	100.0	3.3	28.8	33.9	33.9
Sales occupations	5,199	100.0	7.7	32.5	26.2	33.6
Administrative support, including clerical	2,459	100.0	9.6	42.2	26.6	21.6
Service occupations	3,410	100.0	25.6	41.8	21.6	11.1
Private household	28	100.0	[1]	[1]	[1]	[1]
Protective service	1,131	100.0	10.3	43.6	31.8	14.3
Food service	645	100.0	30.2	38.1	20.6	10.9
Health service	132	100.0	25.8	38.6	18.2	16.7
Cleaning and building service	1,201	100.0	39.0	43.0	12.2	5.9
Personal service	273	100.0	17.6	38.5	24.5	19.0
Precision production, craft, and repair	9,386	100.0	23.2	52.5	18.4	5.9
Operators, fabricators, and laborers	8,629	100.0	34.7	49.7	12.1	3.6
Farming, forestry, and fishing	1,849	100.0	37.2	38.6	14.1	10.2
Women						
Total, 25 to 64 years	34,953	100.0	13.6	44.8	19.1	22.5
Managerial and professional specialty	9,435	100.0	2.3	19.2	19.2	58.7
Executive, administrative, and managerial	3,442	100.0	3.7	36.2	24.8	35.2
Professional specialty	5,992	100.0	1.4	9.5	16.6	72.4
Technical, sales, and administrative support	15,085	100.0	6.6	56.1	24.7	12.5
Technicians and related support	1,269	100.0	3.1	36.6	33.8	26.5
Sales occupations	3,684	100.0	12.2	54.3	19.0	14.4
Administrative support, including clerical	10,132	100.0	5.0	59.2	25.7	10.1
Service occupations	5,632	100.0	31.3	52.0	12.1	4.6
Private household	549	100.0	51.4	38.3	9.8	.5
Protective service	128	100.0	14.8	53.9	20.3	10.9
Food service	1,823	100.0	32.4	54.6	10.1	3.0
Health service	1,135	100.0	23.6	55.4	15.9	5.0
Cleaning and building service	817	100.0	48.6	42.8	6.2	2.2
Personal service	1,178	100.0	17.5	57.4	15.8	9.3
Precision production, craft, and repair	835	100.0	26.9	53.8	12.3	6.9
Operators, fabricators, and laborers	3,632	100.0	40.0	50.6	7.3	2.2
Farming, forestry, and fishing	335	100.0	31.9	44.2	14.3	9.6

[1]Percent not shown where base is less than 75,000.

or more of college and only 13 percent, 6 years or more. Younger workers were somewhat more likely than older workers to have completed at least a bachelor's degree. It is expected that requirements for managers to complete advanced studies will increase as more technical expertise and specialized knowledge are needed for such positions.[5]

Two other occupational groups have comparatively high proportions of workers with a college education—technical workers, both men and women, and male salesworkers. Technical workers usually assist professional specialty workers, and must have the educational background to keep up with developments in their respective fields. Among salesworkers, men traditionally have dominated jobs in such areas as manufacturing, financial management, and insurance, which depend on knowledge of engineering, money and banking, and underwriting, whereas women have remained concentrated in retail trade.

Although relatively few college graduates were employed in the other broad occupational categories, gains in the formal education of younger workers have raised the educational attainment levels in some more specific service occupations. For instance, 17 percent of the male protective service workers under 45 years of age had completed 4 years of college, compared with only 8 percent of those over 45. This difference underscores the increasing emphasis in many police departments on the professional training of their officers. In addition, recent growth in such service industries as hotels, gyms and spas, and recreational services has contributed to the rising proportion of younger college graduates in personal service jobs. □

FOOTNOTES

[1]Data in this report are based on information from the March 1984 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

could have been conducted. Sampling variability may be relatively large in cases where the estimates are small. Small estimates, or small differences between estimates, should be interpreted with caution. This report is the latest in a series on this subject. The earlier summary was Anne McDougall Young, "More U.S. workers are college graduates," *Monthly Labor Review*, March 1984, pp. 46–49, reprinted with additional detailed tables for March 1982 and March 1983 in *Educational Attainment of Workers, March 1982–83*, Bulletin 2191 (Bureau of Labor Statistics, April 1984).

[2]Furthermore, even though the college age population is expected to decline through 1990, the number of persons earning bachelor's and postgraduate degrees is projected to continue to increase by at least a million a year. See Debra E. Gerald, *Projections of Education Statistics to 1992–93; Methodological Report with Detailed Projection Tables*, National Center for Educational Statistics, forthcoming.

[3]See table 1, Bulletin 2191.

[4]National Center for Education Statistics, *The Condition of Education*, 1984 Edition, tables 2.14, 2.15, and 2.16.

[5]*Occupational Outlook Handbook, 1984–85 Edition*, Bulletin 2205 (Bureau of Labor Statistics, April 1984), p. 18.

Using the CPS to track retirement trends among older men

PHILIP L. RONES

Changes in the age structure of the population and dramatic declines in work activity among older men have made retirement trends a critical social issue. The economic and political ramifications of these trends are considerable: Already, declines in retirement age have combined with a rising life expectancy and changing age distribution, among other factors, to put pressure on public and private pension systems. Intergenerational conflicts may also arise, particularly during periods of high unemployment; for example, early retirement inducements are often used by employers seeking to avoid laying off younger workers. And, labor shortages could occur as the number of retirees increases in relation to the number of new labor force entrants.

It has always been difficult to identify the age at which people retire because separation from the labor force is often neither abrupt—part-time work is very common among older workers—nor final—many older persons reenter the labor force after a period of absence. In addition, retirement status is best defined by current work activity for some purposes, while for others, pension receipt is the more appropriate criterion. Given the types of data that are most readily available, a simple definition of retirees is often used, such as those who receive Social Security retirement benefits, or those above a certain age, such as 55, who are not in the labor force.

Transitions from work to retirement are probably best tracked by longitudinal surveys, which follow the same individuals for a period of time. Among the most notable of these are the Retirement History Survey and the Continuous Work History Sample of the Social Security Administration, and the National Longitudinal Survey, conducted by the Center for Human Resource Research, Ohio State University. Longitudinal surveys are particularly useful because of the considerable amount of demographic and other personal information available on individuals in the survey. A drawback of many longitudinal surveys is that they focus on persons in a limited age range at the time of the initial survey, which means that they cannot provide comparisons between these and other cohorts of workers.

One does not need to follow the same people to track a group's labor force trends. Unlike the longitudinal surveys, the Current Population Survey (CPS)[1] relies on a rotating sample—that is, a household (technically, an address) is in the sample for a limited time and is then replaced. In the CPS, 25 percent of the sample changes each month. But, while the survey does not follow the same people for long periods, the sample can "represent" the same group over time. In other words, within the limits of sampling reliability, any random sample of persons 55 years of age at one point in time would represent the same group as a different sample of 54-year-olds surveyed a year earlier.[2]

Because of the long history of the CPS and the frequency of observation, the survey can provide an excellent overview of changes in retirement trends. The data can be used in three ways. The cross-sectional view examines the labor force characteristics of persons of different ages at a fixed point in time. The time-series view examines the behavior of one or more demographic groups at different times. A third, the cohort view, follows the same people, or a sample representing the same people, as they age. This view has the advantage of permitting one to consider the unique history of each population group when assessing its present labor force status.

"Retirement" data from the CPS have generally been used with the time-series approach to track changes in labor force participation rates for broad age groups, usually persons 55 to 64 years and 65 years and over. However, since 1963 CPS data have been available on labor force characteristics by single year of age and by sex, for persons age 55 to 74. Thus, the CPS provides a better vantage point than most longitudinal surveys in that it follows work histories of many cohorts through their older years.

This summary presents these previously unpublished data for older men and estimates of rough retirement histories for different generations of these men. A simple definition of retirement is used for this purpose; all men over age 55 who are not in the labor force are deemed to be retired. Conversely, all who are working, whether full or part time, and all those actively looking for work are *not* retired.

Labor force participation rates—the proportion of the population in the labor force at each age—for men between ages 55 and 74 are shown in table 1 for the years 1963–

Philip L. Rones is an economist in the Division of Employment and Unemployment Analysis, Bureau of Labor Statistics.