———FOOTNOTES———

[1] The white-collar survey (National Survey of Professional, Administrative, Technical, and Clerical Pay—PATC) is conducted by the Bureau of Labor Statistics, but survey occupations and coverage such as establishment size and the private industries to be included are determined by the President's Pay Agent—the Secretary of Labor and the Directors of the Office of Management and Budget and the Office of Personnel Management. This reflects the use of PATC findings in the pay setting process for Federal employees. The role of the PATC survey is described in George L. Stelluto's "Federal pay comparability: facts to temper the debate," *Monthly Labor Review*, June 1979, pp. 18–28.

[2] See John D. Morton's "BLS prepares to broaden scope of its white-collar pay survey," *Monthly Labor Review*, March 1987, pp. 3–7.

[3] In the survey coding structure, the level designations among various occupations are not synonomous: for example, the first level of attorneys is comparable to the third level of engineers, accountants, and most other professional and administrative occupations. Classification of employees in the occupations and work levels surveyed is based on factors detailed in definitions which are available upon request.

How do demographic changes affect labor force participation of women?

DANIEL T. LICHTER AND JANICE A. COSTANZO

Since World War II, U.S. labor force participation rates among women have almost doubled, reaching about 55 percent in 1985.[1] Increases in labor force activity have been pervasive for all groups, especially married women and women with young children.

Changes in the demographic composition of the female population, particularly during the past decade or so, have had great potential for altering overall participation rates.[2] For example, William Johnson and Jonathan Skinner have reported that the rise in divorce rates between 1960 and 1980 may explain up to 17 percent of the rise in labor force participation rates of women during that period.[3] Similarly, Ralph Smith has concluded that between 1971 and 1975, the changing demographic composition (for example, marital and family status changes) of women in the labor force accounted for 28 percent of the increase in their rates.[4] Compositional changes are likely to be small over a short time period, however, and therefore should not be expected to greatly affect overall female labor force participation rates.

By examining data covering the 15-year period between 1970 and 1985, we provide evidence on the link between changes in demographic composition and labor force participation rates among women.

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Specifically, we ask: To what extent have changes in fertility rates, marital status, educational levels, and age structure accounted for growth in labor force participation rates of women since 1970?

Demographic composition

Fertility. The labor force participation rates among married women with children, particularly young children, have been steadily increasing since 1970. In 1985, nearly half of all women with children under age 18 were in the labor force, compared with less than 40 percent in 1970.[5] Moreover, the declines in fertility rates, as well as declines in family size, increasing childlessness, and delayed childbearing have freed many women to pursue employment opportunities outside the home. Completed family size, for example, decreased from 2.4 children in 1970 to 1.7 in 1984 among white women, and from 3.1 to 2.2 children among blacks.[6] Recent fertility declines are thus a potentially important demographic source of post-1970 increases in overall female labor force participation rates.

Marital status. Substantial variation exists by marital status, with married women exhibiting labor force participation rates much lower than those of the overall female population.[7] Changes since 1970 in the marital status composition of the female population have provided a potentially significant demographic source of growth in female labor force participation. The incidence of divorce, for example, increased from about 14 per 1,000 married women in 1970 to nearly 22 per 1,000 in 1984.[8] In addition, the proportion of never-married women has risen rapidly, especially among young adults, reflecting delayed marriage. For example, the median age at first marriage among women in the United States rose from 20.6 in 1970 to 22.8 in 1984.[9]

Education. The educational upgrading of the female population has been a major facet of social change in the United States. For women age 25 or over, median years of schooling increased from 12.1 to 12.6 years between 1970 and 1980, and the percent graduating from high school grew from 52.8 to 65.8.[10] Changes in the educational composition of the female population must be included in any demographic or structural explanation of rising participation rates among the female population. Indeed, increasing educational attainment alters the relative importance of home work versus the labor market for many women. This is clearly revealed in female labor force participation rates that tend to accelerate with increasing educational attainment.

Age. Age composition is a major structural aspect of the labor force.[11] Market-related activities are clearly associated with age. The age profile of women in the labor force is curvilinear, reaching its nadir during the child-bearing years and after age 40 or so, when labor force exits begin to rise. One significant facet of labor force age structure can be

linked directly to the post-World War II baby boom. That is, the baby-boom cohort of the 1950's entered the labor force in large numbers during the 1970's. As this cohort aged between 1970 and 1985, declining proportions of women were concentrated in the age categories that typically exhibit lower than average rates of participation (say, those in mid- to late 40's). The "maturing" of the baby-boom cohort thus represents another potentially significant demographic component of change for women in the labor force.

Accounting for change

We restrict this analysis to women ages 25–49.[12] For most women, schooling has been completed by age 25, and labor force exit rates begin to accelerate significantly after 45 or so.

The extent to which changing demographic composition accounts for the increases in labor force participation rates among women can be evaluated using standard demographic methods of decomposition or components analysis.[13] It is well known that the difference between two crude rates is attributed to differences in both status-specific rates and population composition. Differences in rates between 1970 and 1985 can thus be decomposed into parts attributed to changing propensity to participate (that is, a so-called true or rate effect) and parts attributed to changes in the distribution of women by number of children, marital status, education, and age (composition effects). The categories of population composition we consider here are provided in table 1 for blacks and nonblacks.

The results of the decomposition analysis are presented in table 2. Total labor force participation rates of women increased from 47.90 percent to 71.01 percent between March 1970 and 1985. Of the 23.11-percentage-point increase in labor force participation rates, 12.48, or about 54 percent, is attributable to the changing propensity to participate. (See the "rate effect.") Simply put, a majority share of the in-

Table 2. Components of change in labor force participation rates for women, by race, 1970–85

Component	Total	Black	Nonblack[1]
1985	71.01	73.21	70.70
1970	47.90	60.21	46.47
Total effect, or change	23.11	13.00	24.23
Rate effect[2]	12.48	2.07	13.72
Composition effect[3]	10.63	10.93	10.51
Number of children under age 18	4.33	3.78	4.53
Marital status	3.00	-.18	3.05
Education	3.18	7.25	2.82
Age	.11	.08	.10

[1] Nonblack includes whites and all other racial groups, except blacks.

[2] The rate effect is the 1985–70 difference in labor force participation rates of women standardized by number of children, marital status, education, and age.

[3] The total composition effect is equal to the sum of the four composition effects considered here.

crease over this 15-year period is attributed to changes in behavior rather than changes in demographic composition. This further implies that labor force participation rates would have increased during 1970–85, even if the demographic composition of the female population had not changed during this period. The increase in labor force participation rates for women cannot be explained away with compositional arguments.

This conclusion, however, should not be interpreted to mean that changing demographic composition or changes in the supply of women are unimportant facets of change in labor force participation rates. Indeed, 46 percent of the increase since 1970 is directly attributable to changing demographic composition. (See "composition effect," table 2.) Although past studies reveal that compositional effects are not dramatic over a short time, the effects of changing demographic composition are considerably more apparent over a longer period, such as that examined here. Moreover, when we examine the relative importance of each compositional component, data reveal that, on the one hand, changing fertility rates, as measured by number of children, account for 4.33 percentage points (or nearly 20 percent) of the overall post-1970 increase in labor force participation.[14] Marital status and education changes, on the other hand, account for smaller but roughly similar shares (about 13 percent) of the increase. Changing age composition has virtually no effect on labor force participation rates of women. As these results suggest, while not solely responsible for recent increases in labor force activity among women, changing composition nevertheless is clearly an important and too frequently ignored source of growth in labor force participation rates.

As shown in table 2, limiting the analysis to the total (or nonblack) female population also tends to mask substantial racial variations in the mix of compositional and rate effects. In contrast to nonblack women, our analysis reveals that changing composition is primarily responsible for the increase in labor force participation rates for black women,

Table 1. Percent distributions of women ages 25–49, by race and selected characteristics, 1970 and 1985

Characteristics	Black 1970	Black 1985	Nonblack[1] 1970	Nonblack[1] 1985
Number of children under age 18:				
0	23.9	32.7	20.5	36.2
1–2	35.5	49.4	46.4	50.0
3 or more	40.6	17.9	33.1	13.8
Marital status:				
Never married	8.5	28.6	3.6	10.9
Married	67.0	41.4	89.4	72.8
Other ever-married	24.5	30.0	7.0	16.4
Years of schooling				
Less than 12	53.0	24.2	30.3	14.2
12	34.2	42.9	48.6	43.7
More than 12	12.8	32.9	21.1	42.1
Age:				
25–32	35.5	42.8	33.3	38.9
33–41	35.3	34.6	34.2	37.1
42–49	29.2	22.6	32.5	24.0

[1] Nonblack includes whites and all other racial groups, except blacks.

accounting for 10.93, or nearly 85 percent, of the 13.00 percentage point increase since 1970. This sizable change is mainly attributable to educational upgrading among black women. Indeed, increased education accounts for about two thirds (or 7.25/10.93) of the overall compositional effect and about 55 percent of the overall increase in labor force participation rates for black women during the 1970–85 period. The only other compositional component of any significance is the changing number of children, a demographic component that accounts for about 30 percent of the increase since 1970.

Implications

The period since 1970 has revealed a continuing pattern of increase in rates of female labor force participation. Rising wage rates and changing attitudes regarding work have clearly contributed to this increase.[15] Our results nevertheless suggest that demographic explanations cannot be entirely dismissed. A substantial share—almost half—of the increase has roots in ongoing patterns of demographic change, especially recent fertility declines, shifts in patterns of marriage and divorce, and educational upgrading. The changing mix of women across various population subgroups thus provides an important demographic explanation of changing female labor force participation rates, particularly for black women.

The results also imply that prospects are good for continuing high labor force participation rates for women. Demographic changes are likely to counterbalance any dampening effects of slowing wage increases or changes in family or work attitudes. Indeed, the changing demographic supply of potential female workers may account for an increasing share of future growth in labor force participation among women.[16] □

————FOOTNOTES————

[1] See William G. Bowen and T. Aldrich Finegan, The Economics of Labor Force Participation (Princeton, Princeton University Press, 1969); Glen G. Cain, Married Women in the Labor Force (Chicago, University of Chicago Press, 1966); and Employment and Earnings (Bureau of Labor Statistics, August 1986).

[2] Elizabeth Waldman, "Labor force statistics from a family perspective," Monthly Labor Review, December 1983, pp. 16–20.

[3] William R. Johnson and Jonathan Skinner, "Labor Supply and Marital Separation," American Economic Review, June 1986, pp. 455–469.

[4] See Ralph E. Smith, "Sources of growth in the female labor force, 1971–75," Monthly Labor Review, August 1977, pp. 27–29.

[5] Howard Hayghe, "Rise in mothers' labor force participation includes those with young children," Monthly Labor Review, February 1986, pp. 43–45.

[6] National Center for Health Statistics, Monthly Vital Statistics Report, Advance Report of Final Natality Statistics, 1984 (Hyattsville, MD, Public Health Service, July 18, 1986).

[7] Howard Hayghe, "Working mothers reach record number in 1984," Monthly Labor Review, Dec. 1984, pp. 31–34.

[8] National Center for Health Statistics, Monthly Vital Statistics Report, Advance Report of Final Divorce Statistics, 1984 (Hyattsville MD, Public Health Service, Sept. 25, 1986).

[9] National Center for Health Statistics, Monthly Vital Statistics Report, Advance Report of Final Marriage Statistics, 1984 (Hyattsville, MD, Public Health Service, June 3, 1987).

[10] U.S. Bureau of Census, General Social and Economic Characteristics, United States Summary PC 80–1–C1 (U.S. Government Printing Office, 1983.)

[11] James P. Smith and Finis Welch, "No Time to be Young: The Economic Prospects for Large Cohorts in the United States," Population and Development Review, March 1981, pp. 71–83.

[12] Data for this analysis are from the March 1970 and 1985 machine-readable files of the Current Population Survey, Bureau of Census.

[13] See Prithwis Das Gupta, "A General Method of Decomposing a Difference Between Two Rates Into Several Components," Demography, February 1978, pp. 99–112. Methods of decomposition have a long history in demographic research. Any comparison between two crude rates is affected by differences in population composition (for example, age composition). To eliminate compositional differences, standardized rates are often calculated, which eliminate the confounding effects of differences by assigning a similar composition (that is, a "standard" age composition) to each population. Methods of decomposition represent a simple extension of this analytic technique by enabling us to gauge the relative effects of more than one compositional component on crude rate differences.

The general method described by Das Gupta has three primary advantages over other methods of decomposition: (1) the method can be applied to data cross-classified by any number of compositional factors (for example, in the analysis presented here, we use a four-factor model); (2) results are independent of the order in which compositional factors are considered; and (3) the procedure avoids problems with the allocation and interpretation of "interaction" effects among the compositional factors. With regard to the latter point, this is accomplished by calculating the effect of one compositional factor, holding other factors constant at an average level. As a result, a "total" effect (that is, the difference in crude rates) can be uniquely partitioned into a "rate" effect (the difference between two standardized labor force participation rates, using as the "standard population" the weighted average of the 1970 and 1985 female labor force populations, aged 25–49), and "compositional" effects (in this case, one each for changing fertility, marital status, education, and age).

[14] In addition to our examination of the effects of changing numbers of children, we also evaluated the effects of changes in the age composition of children. Because labor force participation rates are lowest among mothers with young children, we replicated our decomposition analysis with women separated into three categories: 0 children less than age 18; some or all less than age 6; and all children age 6–18. This analysis produced results that were similar to those reported in table 2. Changes in the age composition of children accounted for about 14 percent of the overall increase in rates for women.

[15] Given the results reported here, we are unable to partition sources of the "rate" effect, but surely rising real wages and changing attitudes account for a sizeable share of this effect. See David Shapiro and Lois B. Shaw, "Growth in the Labor Force Attachment of Married Women: Accounting for Change in the 1970s," Southern Economic Journal, October 1983, pp. 461–473.

[16] See George Masnick and Mary Jo Bane, The Nation's Families: 1960–1990 (Cambridge, The Joint Center for Urban Studies of MIT and Harvard University, 1980). They project labor force participation rates of women to the year 1990.

Furniture workers' wages higher under incentive systems

According to a Bureau of Labor Statistics survey of wood household furniture plants in June 1986, incentive pay systems bolstered workers' earnings. Moreover, a disparity in the incidence of incentive pay contributed to the differences in average pay levels in upholstered and nonupholstered furniture plants.[1] The survey included establishments employing 20 workers or more, and examined occupational pay, employee benefits, and selected establishment characteristics, such as method of wage payment and labor-management contract coverage.[2]

Table 1 shows that incentive-paid workers in upholstered furniture plants usually averaged 25 to 50 percent more per hour than timeworkers in the same job; in nonupholstered furniture plants, the advantage was 15 to 25 percent. Incentive pay systems, typically individual piece rates, applied to about two-fifths of the workers in upholstered furniture plants and to one-tenth of the workers in other wood household furniture plants. The use of incentive workers is more extensive in upholstering, which traditionally requires more hand-crafted operations in fabric application and cushion construction. In this regard, upholsterers and sewing-machine operators—largely incentive-paid jobs—together accounted for slightly more than one-third of the production workers in the upholstered furniture industry, but were less than 1 percent of the nonupholstered work force.

Overall, production workers in upholstered furniture plants held an 89-cent-an-hour pay advantage over those workers in nonupholstered plants. (See table 1.) Virtually all of this difference is attributable to relatively large pay premiums for incentive workers in upholstered furniture coupled with the higher incidence of incentive workers in that industry. For example, if the difference in the proportion of workers under incentive systems is taken into account, the average pay advantage for upholstered furniture workers shrinks to 16 cents an hour.[3]

Another key pay characteristic of the two furniture industries is that individual earnings vary substantially from their respective averages. The index of wage dispersion, a technique for measuring such variation, was 32 in nonupholstered furniture plants; in the upholstered sector, the index was 48, one of the highest recorded in any Bureau industry wage survey.[4] Contributing to the wide range of earnings were the relatively broad range of skill requirements (especially in the upholstered sector); the low incidence (about 10 percent) of pay systems providing for a uniform, single rate for a given occupation; and disparate pay levels among the industries' establishments, which were overwhelmingly nonunion (85 percent of the production work force).

Regional pay differences also added variability to the industries' pay structures, with average hourly earnings in nonupholstered furniture ranging from $4.97 in the Moun-

Table 1. Average hourly earnings in U.S. wood household furniture plants, selected occupations by method of wage payment, June 1986[1]

Occupation[2]	Nonupholstered furniture plants			Upholstered furniture plants		
	Time and incentive workers	Time-workers	Incentive workers	Time and incentive workers	Time-workers	Incentive workers
All production workers	$5.85	$5.75	$6.84	$6.74	$5.79	$7.98
Assembling						
Assemblers (except chairs)	5.69	5.55	6.64	5.06	4.82	5.97
Sewing-machine operators	5.71	5.54	6.78	6.68	5.85	7.20
Upholsterers	7.03	6.79	7.69	8.35	7.07	8.75
Rough mill						
Double-end-trimmer-and-boring-machine operators	6.22	6.04	6.96	6.58	5.92	7.45
Rip-saw operators	6.03	5.85	7.41	6.00	5.11	7.47
Variety-saw operators	5.84	5.75	6.57	6.24	5.84	7.72
Finishing						
Furniture sanders, hand	5.15	5.02	6.26	5.18	4.78	6.83
Furniture sanders, machine	5.80	5.66	6.91	5.44	5.17	7.85
Sprayers	5.81	5.72	6.60	5.78	5.53	7.65
Miscellaneous						
Furniture packers	5.53	5.43	6.52	5.63	5.09	7.73

[1] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts. Incentive payments, such as those resulting from piecework or production bonus systems, and cost-of-living increases (but not bonuses) were included as part of the workers' regular pay. Excluded were performance bonuses and lump-sum payments of the type negotiated in the auto and aerospace industries, as well as profit-sharing payments, attendance bonuses, Christmas or yearend bonuses, and other nonproduction bonuses.

[2] Occupations in this table are those for which comparisons for time and incentive workers in both upholstered and nonupholstered furniture plants are available. For a more extensive look at all occupations studied, see *Industry Wage Survey: Wood Household Furniture, June 1986*, Bulletin 2283 (Bureau of Labor Statistics, August 1987).

tain States to $6.94 in the Great Lakes States; in upholstered furniture, the range was $6.53 in the Border States to $7.74 in the Middle Atlantic States.[5] Even within the same locality, individual earnings were widely scattered. Following are selected indexes of wage dispersion for upholstered furniture plants in Hickory-Statesville, NC, a major industry center, that illustrate this point:

Occupation	Index of dispersion
All production workers	55
Sewing-machine operators	37
Final inspectors	36
Upholsterers	40

The survey studied other characteristics of upholstered and nonupholstered furniture plants, finding some similarities and some differences. Both industries, for example, had heavy concentrations of workers in the Southeast, spread about evenly over metropolitan and nonmetropolitan areas. Nationwide, average earnings for production workers in both industries were about 10 percent higher in metropolitan

areas than in nonmetropolitan areas, and about 15 percent higher in union than in nonunion establishments. Moreover, larger plants paid higher wages than smaller plants; the pay premiums for larger establishments averaged 5 percent in nonupholstered plants and 10 percent in upholstered plants.

As for employee benefits, more than nine-tenths of the production workers in both industries were eligible for paid holidays, paid vacations, and various health insurance plans. Establishments typically provided 6 to 10 holidays per year and 1 to 3 weeks of annual vacation pay, depending on the worker's length of service. Health plans covering more than nine-tenths of the workers included hospitalization, surgical, medical, and major medical insurance, typically provided at no cost to the employee. Life, accidental death and dismemberment, and sickness and accident insurance also were common in the industries.

Retirement plans covered two-thirds of the workers in nonupholstered furniture plants and about one-half of those in upholstered furniture plants. These plans typically were financed entirely by the employer.

For each of the two industries, separate reports for States and areas of industry concentration are available from the Bureau of Labor Statistics or any of its regional offices. A comprehensive bulletin on the study, *Industry Wage Survey: Wood Household Furniture, June 1986*, Bulletin 2283, may be purchased from the Bureau of Labor Statistics, Publications Sales Center, P.O. Box 2145, Chicago, IL 60690, or the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The bulletin provides additional information on occupational pay by region and by size of establishment, and on the incidence of employee benefits. ☐

---------FOOTNOTES---------

[1] Earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts. Incentive payments, such as those resulting from piecework or production bonus systems, and cost-of-living pay increases (but not bonuses) were included as part of the workers' regular pay. Excluded were performance bonuses and lump-sum payments of the type negotiated in the auto and aerospace industries, as well as profit-sharing payments, attendance bonuses, Christmas or yearend bonuses, and other nonproduction bonuses.

[2] For a report on the June 1979 survey, see Carl Barsky, "Occupational wage variation in wood household furniture plants," *Monthly Labor Review*, July 1981, pp. 37–38. Wood television, radio, phonograph, and sewing machine cabinets, and wood kitchen cabinets, included in the 1979 survey of nonupholstered furniture, were excluded in 1986.

[3] To calculate this figure, the proportion of the upholstered furniture work force was adjusted to reflect the proportion in nonupholstered furniture—nine-tenths on time rates and one-tenth on incentive rates. Average hourly earnings by method of wage payment for both industries remained as reported in table 1. When the overall earnings data are recomputed, the average for upholstered furniture is $6.01—73 cents less than its actual figure, and 16 cents, rather than 89 cents, more than paid nonupholstered furniture workers.

[4] The index of dispersion is computed by dividing the interquartile range (the difference between the third and first quartiles) by the median (the second quartile) and multiplying by 100. In the case of upholstered furniture, it was $3.00 / $6.20 × 100 = 48. For a detailed analysis of wage dispersion by industry, see Carl B. Barsky and Martin E. Personick, "Measuring wage dispersion: pay ranges reflect industry traits," *Monthly Labor Review*, April 1981, pp. 35–41. In analyzing the data for their article, the authors considered a dispersion index of 24 or more to be high.

[5] For purposes of the industry wage surveys, geographical classifications are *New England*: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; *Middle Atlantic*: New Jersey, New York, Pennsylvania; *Border States*: Delaware, District of Columbia, Kentucky, Maryland, Virginia, West Virginia; *Southeast*: Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee; *Southwest*: Arkansas, Louisiana, Oklahoma, Texas; *Great Lakes*: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin; *Middle West*: Iowa, Kansas, Missouri, Nebraska, North Dakota, South Dakota; *Mountain*: Arizona, Colorado, Idaho, Montana, New Mexico, Utah, Wyoming; *Pacific*: California, Nevada, Oregon, Washington. Alaska and Hawaii were not included in the study.

Linking employee fitness programs to lower medical costs and absenteeism

A survey of research on 17 worksite exercise programs supports the view that these activities improve employee fitness and help reduce health risks. Employers also benefit from reduced absenteeism and lower medical costs.

"The findings consistently show improvements in aerobic capacity and exercise habits, as well as other fitness-related measures," according to the study by the Institute of Aerobics Research in Dallas, TX. "In most cases, health risk factors, such as smoking and elevated blood lipids, also respond to the worksite programs."

Participating in such fitness programs is important because sedentary living can have an adverse impact on an individual's health. First, sedentary living habits lead to a low level of physical fitness. For example, a sedentary 35-year-old man has the same physical fitness level as an active 55-year-old man. Second, sedentary living habits and low physical fitness have been linked to diseases such as hypertension, obesity, cancer, and coronary heart disease.

Benefits

The results from programs that measured the impact of exercise on absenteeism show mostly favorable effects. For example, one company experienced an almost 50-percent drop in average absenteeism among program participants relative to the year prior to the fitness program, while another company reported a net reduction of 4.7 hours of sick leave per employee per year for program participants. Also, one company had a 20.1-percent decrease in average disability days among program participants and two school districts reported a reduction in the number of teacher absences.

In addition, direct medical and health care cost savings also have been documented in several studies of worksite exercise programs. Most studies report the short-term (1- to 2-year) effects of the worksite program on medical care

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costs. One company showed a 5-percent decrease in medical costs for program participants and another company realized a 45.7-percent drop in average major medical costs from the pre-entry to post-entry year for program participants. Similarly, one company reported a 48.2-percent difference in medical costs between exercisers and nonexercisers and a school district reported an average $253.42 reduction in medical care costs for program participants. Two long-term medical care studies extend the findings of the short-term programs, showing decreases in worker compensation costs and significant differences in average medical care costs for program participants versus nonparticipants.

The employee populations at the 17 worksites range in size from about 1,500 at a school district in Texas to "tens of thousands of employees and spouses" at several locations of a computer manufacturer. Sample sizes for the research studies of the exercise programs "were generally a fraction of the total employed population," the authors note.

The report, *Physical Fitness Programs in the Workplace*, by Gary F. Knadler, Todd Rogers, Brenda S. Mitchell, and Steven N. Blair of the Institute for Aerobics Research, was prepared for the Washington Business Group on Health under a cooperative agreement with the Office of Disease Prevention and Health Promotion, U.S. Department of Health and Human Services. For copies of this report, send $10 to the Washington Business Group on Health, 229½ Pennsylvania Ave. SE, Washington, DC, 20003.   □

Young women's work expectations

Today, young women expect to spend a much greater fraction of their adult lives working in the labor market than their mothers did.

Young women are changing their training and initial job plans as they anticipate greater commitment to the labor force. This is evident in the increased proportion going to college. Women now receive about half of the bachelor's and master's and more than one-third of the doctoral degrees. The sharpest growth in the past decade has been in professional degrees. In 1985, women received 30 percent of the degrees in medicine (up from 13 percent in 1975), 21 percent in dentistry (up from 3 percent in 1975), and 38 percent in law (up from 15 percent in 1975).

Women's college major choices are converging toward those of men. In 1960, 46 percent of degrees awarded to women were in education. Since then, the increased commitment of women to the labor force has led them to choose a greater variety of college majors. In the fall of 1985, only 10 percent of women beginning college intended to major in education, while 28 percent opted for business, making it the most popular major for women as well as for men. Roughly equal numbers of male and female college graduates now major in the arts and humanities, as well as in the biological sciences and management. Although considerably fewer women major in education than before, 76 percent of education majors are women. Women represent only 13 percent of engineering majors, but a decade earlier they represented a mere 2 percent.

——ECONOMIC REPORT TO THE PRESIDENT, TOGETHER WITH THE
ANNUAL REPORT OF THE COUNCIL OF ECONOMIC ADVISERS,
TRANSMITTED TO THE CONGRESS JANUARY 1987
(Washington, Superintendent of
Documents, 1987), pp. 215–17.