Labor force trends of persons with and without disabilities

Trends in labor force participation rates of persons with disabilities follow closely those of persons of the same age and sex who are free of disabilities; in both groups, women fared better than men in the 1970–92 period

Edward H. Yelin
and
Patricia P. Katz

Employment trends from 1970 to 1992 indicate that the labor force participation of persons with disabilities is tied to overall labor market dynamics, in both the long and the short term. In the long term, a decline in the labor force participation of men over the period—particularly older men—was more pronounced among men with disabilities. By contrast, an increase in the labor force participation of women during the same period—especially younger women—benefited women with disabilities. In the short term, persons with disabilities experienced proportionally larger gains during periods of labor market expansion than did those without disabilities, but suffered proportionally greater losses during times of contraction than did their able-bodied counterparts.

Except for the fact that rates of entitlement to Social Security Disability Insurance and other forms of disability-related compensation provide an imperfect measure of the labor force participation of persons with disabilities, little is known about the employment dynamics of these individuals. This is so in part because not all who are eligible for benefits on medical grounds apply for them[1] and in part because those who do apply but who fail to become beneficiaries do not necessarily go back to work.[2] Likewise, measures of the activities in which a person is limited are not sufficient, because health is only one among many factors affecting the person's labor force participation.[3]

In two journal articles, Robert Haveman and Barbara Wolfe used data from the Current Population Survey (CPS) to report trends in the prevalence and economic well-being of persons with disabilities from 1962 through 1984.[4] These authors showed that such individuals had falling labor force participation rates during the 1980's. Their reduced earnings were buffered by transfer payments through 1980, but changes in disability compensation programs in the early 1980's reduced the size, and hence effect, of this buffer. Robert Bennefield and John McNeil also analyzed data from the CPS, for the period 1981 through 1988, and showed that there was a downward trend in labor force participation rates among men with disabilities and an upward trend among women with disabilities.[5]

In a similar vein to these works, this article describes trends in the participation of persons with and without disabilities in the 23 years culminating in 1992, a period preceding the energy crises of the 1970's and encompassing several complete economic cycles. The article then demonstrates that these trends are tied both to the rising participation of women in the labor market and to short-term fluctuations due to economic cycles.

Survey methods

We use the 1970–92 National Health Interview Survey to estimate labor force participation rates

Edward H. Yelin is professor of medicine and health policy and Patricia P. Katz is assistant professor of medicine at the University of California, San Francisco. The views expressed in this article are the authors' and are not a statement of the views of the Bureau of Labor Statistics.

among persons with and without disabilities in each year and to compare the change in the rates for the two groups over time. This survey is the principal Federal survey used to measure the extent and consequences of disability in the U.S. population. Administered by the Census Bureau for the National Center for Health Statistics, the National Health Interview Survey is an annual cross-sectional survey of approximately 110,000 individuals in 40,000 households.[6] The sampling universe is the U.S. civilian, noninstitutionalized population. Thus, the survey ignores the substantial number of individuals with disabilities who are confined to institutions, all military personnel, and all U.S. citizens living in other nations. In describing labor force participation rates, we have compiled separate analyses for men and women, partitioned into three age groups: 18–44 years ("young" workers), 45–54 years (those in the "prime" of a career), and 55–64 years ("older" workers).

In the National Health Interview Survey, *disability* is defined in terms of limitation of activity due to chronic conditions, injuries, or impairments. Individuals are asked whether they are prevented entirely from doing their major activity or whether they are limited in the amount or kind of their major activity. In the analyses that follow, we combine these two categories to estimate the total impact of disability on employment. The National Health Interview Survey uses standard labor market questionnaire items to measure labor force participation. Individuals are deemed in the labor force if they are working; if they have a job, but are not currently at work for one reason or another; if they are on a layoff; or if they are are unemployed and looking for work. They are deemed out of the labor force if they are neither working nor looking for work.

We report the changes in the proportion of each gender and age stratum in the labor force in each year in relation to disability status in table 1. All analyses of the National Health Interview Survey use the survey's sampling weights, allowing inferences about the noninstitutionalized population of the United States.

In 1981, the March supplement to the CPS began to collect information on the proportion of respondents claiming to have a disability that entirely prevented them from working or that affected the kind or amount of work they could do.[7] Because of the specificity of this limitation on *work*, in contrast to the more encompassing limitation on *activity* measured in the National Health Interview Survey, the CPS yields a lower estimate of the prevalence of disability. Nevertheless, the trends in employment based on these two measures are similar. We summarize the CPS trends in table 2 and present data on part-time

Table 1. **Change in labor force participation rate, by sex, age, and disability status, 1970–72 to 1990–92[1]**

[In percent]

Sex and age	Total	With disability	Without disability
Both sexes: 18–64 years	13.7	1.1	11.1
18–44 years	17.3	5.2	18.6
45–54 years	12.8	2.8	14.9
55–64 years	–5.3	–19.8	–1.2
Men: 18–64 years	–2.6	–15.3	–1.6
18–44 years	–.2	–13.2	1.0
45–54 years	–2.9	–13.3	–1.3
55–64 years	–16.0	–29.3	–13.7
Women: 18–64 years	39.8	41.5	40.8
18–44 years	44.8	49.6	45.5
45–54 years	37.4	44.2	39.3
55–64 years	12.3	6.0	16.8

[1] Rates are derived as follows:

$$\text{(1)} \quad \text{1970–72 participation rate of those with disabilities} = \frac{\text{Average number of disabled aged xx to yy years in labor force in 1970–72}}{\text{Average of total disabled aged xx to yy years in each of 1970–72}};$$

$$\text{(2)} \quad \text{1990–92 participation rate of those with disabilities} = \frac{\text{Average number of disabled aged xx to yy years in labor force in 1990–92}}{\text{Average of total disabled aged xx to yy years in each of 1990–92}};$$

$$\text{(3)} \quad \text{Change in participation rate of those with disabilities} = \left[\frac{\text{1990–92 participation rate of those with disabilities}}{\text{1970–72 participation rate of those with disabilities}} - 1\right] \times 100;$$

$$\text{(4)} \quad \text{1970–72 participation rate of those without disabilities} = \frac{\text{Average number of nondisabled aged xx to yy years in labor force in 1970–72}}{\text{Average of total nondisabled aged xx to yy years in each of 1970–72}};$$

$$\text{(5)} \quad \text{1990–92 participation rate of those without disabilities} = \frac{\text{Average number of nondisabled aged xx to yy years in labor force in 1990–92}}{\text{Average of total nondisabled aged xx to yy years in each of 1990–92}};$$

$$\text{(6)} \quad \text{Change in partcipation rate of those without disabilities} = \left[\frac{\text{1900–92 participation rate of those without disabilities}}{\text{1970–72 participation rate of those without disabilities}} - 1\right] \times 100;$$

$$\text{(7)} \quad \text{1970–72 total participation rate} = \frac{\text{Average number in labor force in 1970–72}}{\text{Average of total aged xx to yy years in each of 1970–72}};$$

$$\text{(8)} \quad \text{1990–92 total participation rate} = \frac{\text{Average number in labor force in 1990–92}}{\text{Average of total aged xx to yy years in each of 1990–92}};$$

$$\text{(9)} \quad \text{Change in total participation rate} = \left[\frac{\text{1990–92 total participation rate}}{\text{1970–72 total particitation rate}} - 1\right] \times 100.$$

Because equation 7 is the total participation rate for the period 1970–72 and equations 1 and 4 are participation rates for subgroups during the same period, the value of equation 7 will always lie between that of equation 1 and that of equation 4. The total rate will be much nearer the rate from equation 4 because the number of persons without disabilities far exceeds the number of persons with disabilities. A similar relationship holds for equations 2, 5, and 8, for the same reasons. In the case of equations 3, 6, and 9, however, the value of equation 9 need not lie between that of equation 3 and that of equation 6. The changes in labor force partcipation rates for the total and for the disabled and nondisabled subgroups between different years involve different denominators and changing labor force sizes. Consequently, there is no simple relationship among the measures of change. Thus, the entry in the "Total" column for both sexes, 18–64 years, is not between the entry in the same row for the "With disability" column and the entry in the same row for the "Without disability" column; and, similarly, the entry in the "Total" column for women, 18–64 years, is not between the entry in the same row for the "With disability" column and the entry in the same row for the "Without disability" column.

NOTE: Data are averaged over 1970–72 and 1990–92 to provide more stable estimates.

SOURCE: Analysis of data from the National Health Interview Survey, conducted for the National Center for Health Statistics by the U.S. Bureau of the Census.

Table 2. **Change in labor force participation rate and in proportion working part time for economic reasons, by survey and disability status, 1981–92**

[In percent]

Period	National Interview Health Survey		Current Population Survey			
	Change in labor force participation rate		Change in labor force participation rate		Change in proportion working part time for economic reasons	
	With disability	Without disability	With disability	Without disability	With disability	Without disability
1981–92	5.2	6.9	5.1	5.5	58.7	30.2
1981–83	–4.5	–1.0	–7.2	–3.9	60.3	46.5
1983–90	14.0	8.8	28.2	11.1	–9.9	–34.9
1990–92	–4.1	–.8	–11.6	–1.2	9.9	36.6

SOURCE: Analysis of data from the U.S. Bureau of the Census, National Health Interview Survey, and Current Population Survey.

employment as well—information not available in the National Health Interview Survey. The CPS analyses also incorporate sampling weights, again allowing inferences about the U.S. noninstitutionalized population.[8]

Labor force dynamics

Employment trends among U.S. men and women since 1970 are mirror images of each other. For men, labor force participation rates have been declining quite dramatically among those 55 to 64 years, while holding reasonably steady among those 18 to 44 years and those 45 to 54 years. In contrast, for women, rates have risen quite dramatically among those 18 to 44 years and those 45 to 54 years, while holding reasonably steady among those 55 to 64 years in the 1970's and rising slowly thereafter. (See table 1.)

Both the decline among older men and the increase among younger women were especially pronounced in the 1970's, and both trends abated in the 1980's. After 1990, labor force participation rates among men in each age group declined, reflecting the recession, while among women, only those 18 to 44 years experienced a decline in their rates.

In 1970, women 18 to 44 years were only about 60 percent as likely as 55- to 64-year-old men to be in the labor force; by 1992, these women experienced higher participation rates than the older men did. Indeed, among all working-age adults, the ratio of female to male labor force participation rates rose from 0.56 in 1970 to 0.81 in 1992. Thus, between those years, older men left the labor force and younger women entered it.

Comparing men with and without disabilities by age shows that the labor force participation rates of men 18 to 44 years who were without disabilities varied with economic cycles, declining in the recessions occurring in the early 1980's and 1990's and rising with the expansion of the mid- through late 1980's. Overall, however, their rates changed very little between 1970 and 1990. (See chart 1, panel 1.) Likewise, the labor force participation rates of men 18 to 44 years who had disabilities also rose and fell with economic cycles, but with each major peak and trough, the rate declined from the previous one. The pattern among men 45 to 54 years was similar: men in this age group who were without disabilities maintained relatively high labor force participation rates throughout the period, while labor force participation among those with disabilities eroded steadily. (See chart 1, panel 2.) Among men 55 to 64 years, labor force participation rates declined substantially regardless of disability status, particularly in the first part of the period covered. Still, the relative change was greater for those with disabilities.

The dramatic increase in the labor force participation rates of women without disabilities spilled over to those with disabilities. (See chart 2.) The increase among women 18 to 44 years with disabilities and women 45 to 54 years with disabilities was especially noteworthy because it continued throughout the entire period under study, with the exception of the early 1980's. Thus, although the exit of men from the labor force—particularly older men with disabilities—abated somewhat in the 1980's, the entry of women, including those with disabilities, continued.

Chart 3 shows aggregated data on the labor force participation of men and women with disabilities. Younger workers with disabilities experienced increased labor force participation rates from 1970 to 1992, but the recessions of the mid-1970's and early 1980's affected them more than they did persons 45 to 54 years and 55 to 64 years with disabilities. Participation rates of those 45 to 54 years with disabilities were reasonably stable over the period, falling slightly in the 1970's and then rising somewhat in the 1980's. Persons 55 to 64 years with disabilities saw their labor force participation rates fall substantially between 1970 and 1983 and then recover somewhat in the mid- to late 1980's, before slipping during the recession of the early 1990's.

Table 1 shows the change in the proportion of each gender, age, and disability group in the labor force from 1970–72 to 1990–92. (Rather than use the single starting year 1970 and ending year 1992, we average the data over 1970–72 and 1990–92, to provide more stable estimates of the proportions.) The proportion of all working-age adults in the labor force surged 13.7 percent from 1970 to 1992. This increase included persons with disabilities, whose participation rate increased by a lesser 1.1 percent. All of the increase

text continues on page 41.

Chart 1. **Labor force participation of men without and with disabilities, by age, 1970-92**

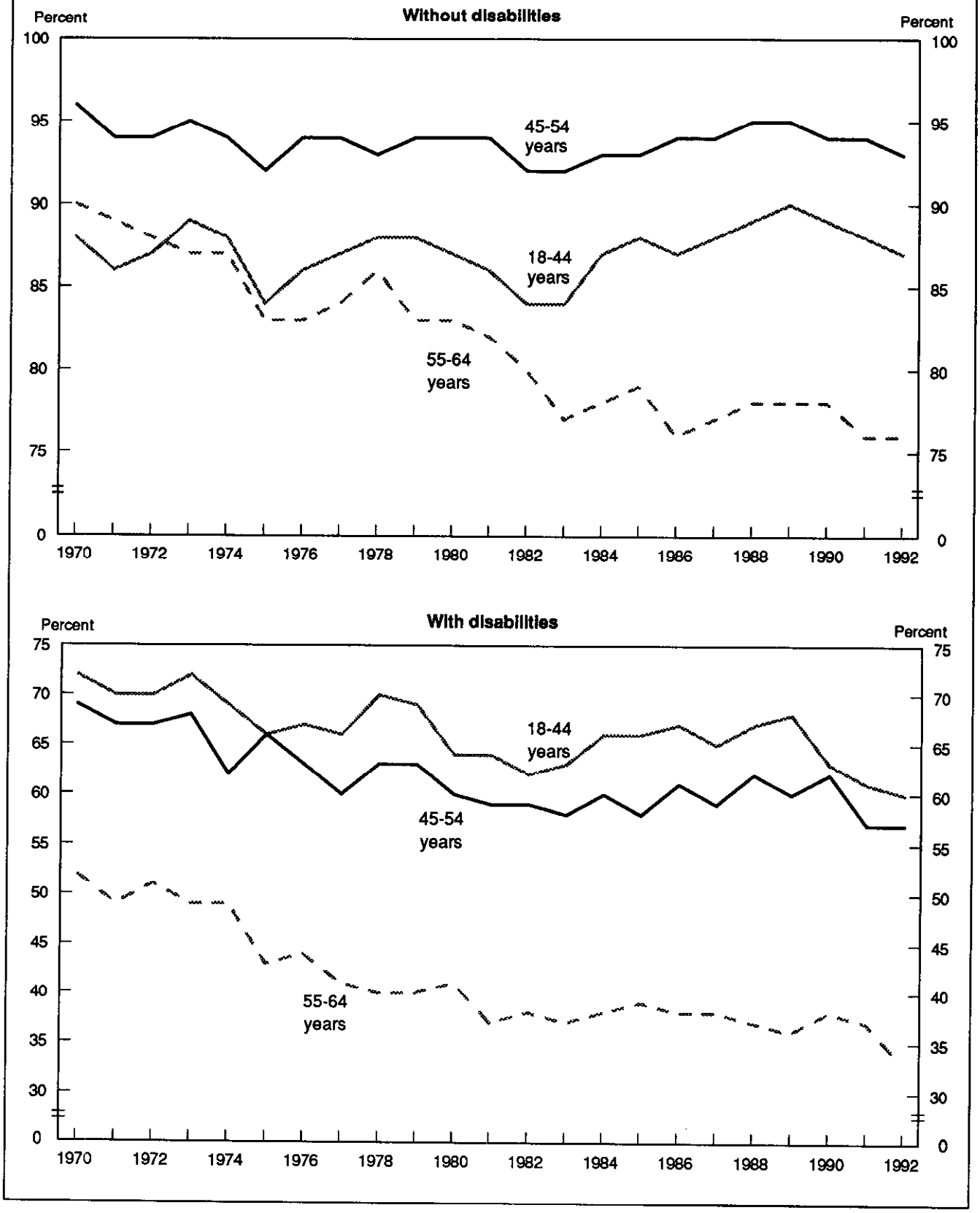


Chart 2. **Labor force participation of women without and with disabilities, by age, 1970-92**

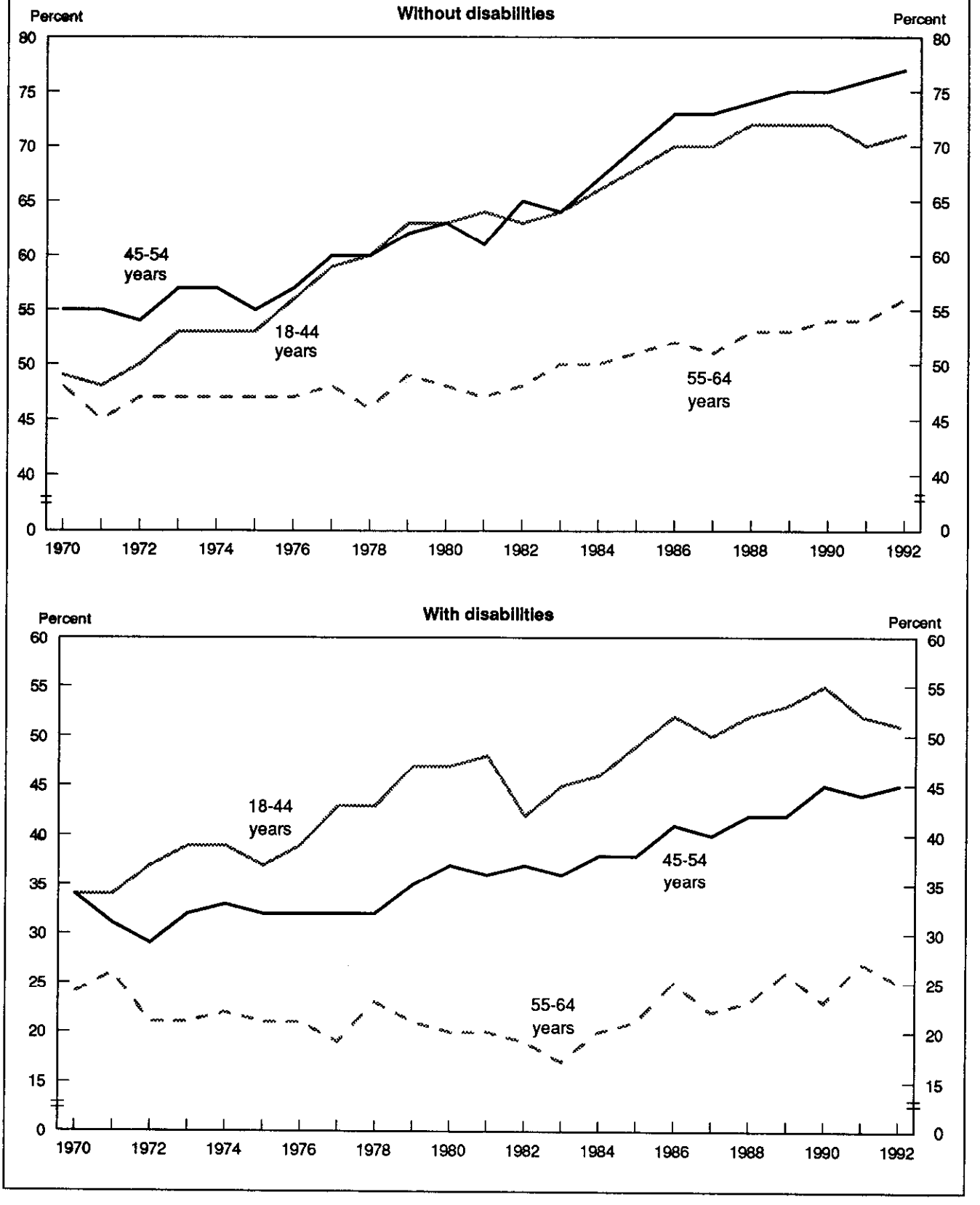
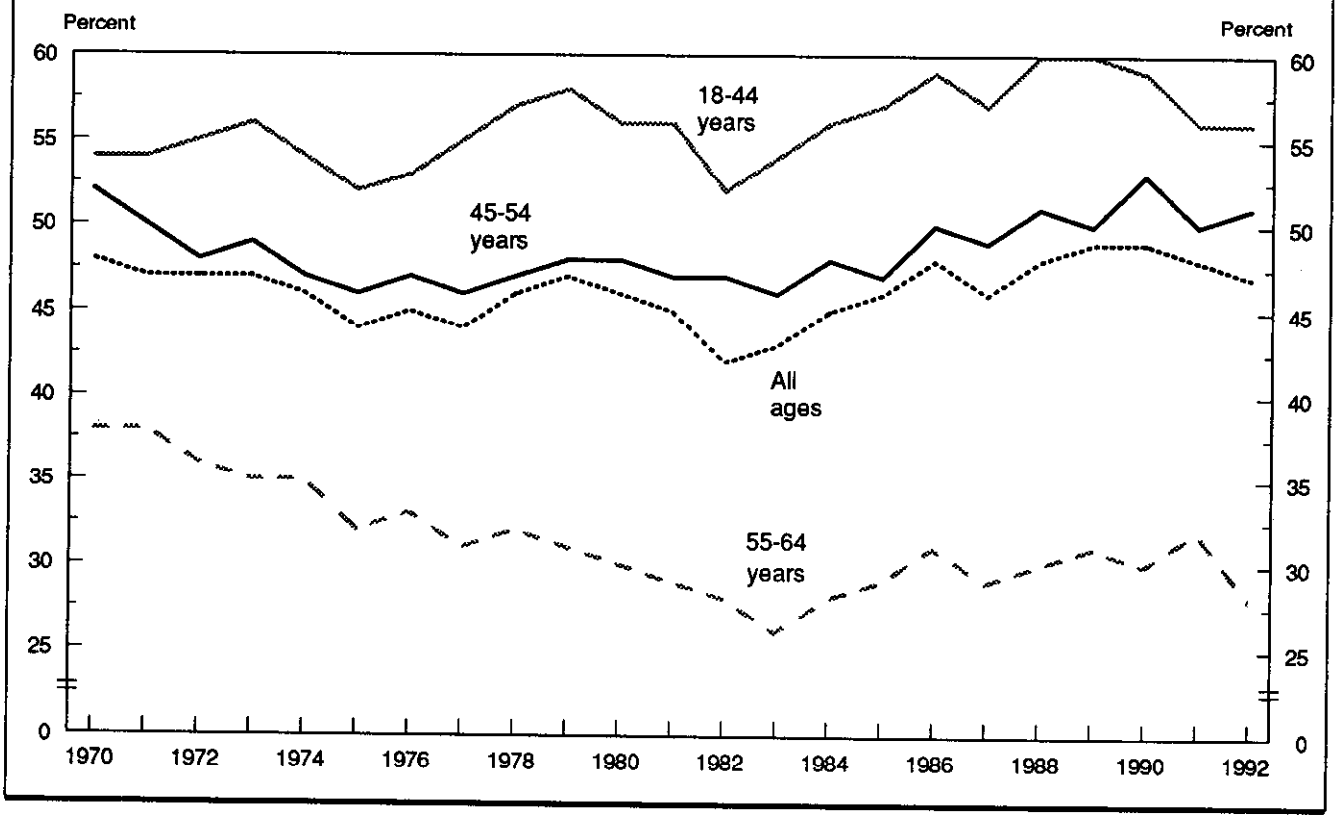


Chart 3. **Labor force participation of persons with disabilities, by age, 1970-92**



among persons with disabilities was posted by women, those 18 to 44 years seeing their rate grow by 49.6 percent and those 45 to 54 years experiencing a 44.2-percent rise.

The reduction in labor force participation among men with disabilities was part of the general drop in men's labor force participation. Indeed, for men, only those 18 to 44 years who were without disabilities experienced an increase in their rates—a scant 1.0 percent at that. Substantial declines in labor force participation rates occurred among men 55 to 64 years who were without disabilities and among all men with disabilities.

The small increase of 1.1 percent in the labor force participation rate of persons with disabilities masks substantial declines among men with disabilities in each age group and substantial gains among women 18 to 44 years and 45 to 54 years who had disabilities. Compared with men without disabilities, men with disabilities fared much more poorly at every age. In contrast, women in the preceding age groups, both with and without disabilities, experienced comparable percent increases in their labor force participation rates. However, these gains must be put in perspective. Women with disabilities may have shared proportionally in a general trend toward women's participation in the labor force, but they had only about 60 percent as great a labor force participation rate as women without disabilities at the beginning and at the end of the period. And they have not yet caught up with men with disabilities, although the ratio of their labor force participation rate relative to these men's did rise substantially, from 0.48 in 1970–72 to 0.79 in 1990–92. Thus, women with disabilities shared in the increasing labor force participation rate of all women, but substantial gaps remain between them and women without disabilities and between them and men, both with and without disabilities.

Table 2 uses data from the National Health Interview Survey and the CPS to trace the labor market dynamics of persons with and without disabilities for 1981–92, the period covered by both surveys. Both surveys indicate that, over the entire span, persons with disabilities experienced an increase in their labor force participation rates slightly smaller than that of persons without disabilities. Both surveys also indicate that persons with disabilities had a substantially larger falloff in their rates than did those without disabilities during the recessions in the early 1980's and 1990's and that persons with disabilities sustained a substantially larger increase in their rates during the expansionary period 1983–90.

The findings from the CPS on the change in the proportion of persons with and without disabilities who work part time for economic reasons are broadly consistent with CPS results concerning overall labor force participation rates. For the entire period 1981–92, persons with disabilities experienced almost twice the increase of persons without disabilities in the proportion working part time for economic reasons. Not surprisingly, they sustained a larger increase in this category during the recession of the early 1980's and a smaller decrease in the expansionary period of 1983–90. However, contrary to expectations, persons with disabilities did not experience as large a relative increase in the proportion working part time for economic reasons as did persons without disabilities during the *recent* recession. Even so, the absolute proportion working part time for economic reasons remains larger (10.0 percent, compared with 5.6 percent).

IN SUM, the data presented in this article are consistent with the notion that persons with disabilities tend to be hired in good times—even more so than those without disabilities—and displaced in bad times—again, even more so than those without disabilities. Thus, the labor force participation of persons with disabilities would appear to be tied to phenomena that transcend economic cycles, as well as to the economic cycles themselves. For example, just as older men generally did, men with disabilities experienced a decline in labor force participation over the period of study, but in a more pronounced form. In contrast, women with disabilities saw their participation rates expand as a part of the general expansion in the rates of all women. The labor force participation rates of young women in particular increased by about half between the first and last 3-year periods covered in the study.

Footnotes

ACKNOWLEDGMENT: The research for this paper was supported by a grant from the Milbank Memorial Fund in New York City as part of the fund's health policy review, "Opportunities in Prevention Policy"; a grant from the National Institute of Arthritis, Musculoskeletal, and Skin Diseases in Bethesda, MD; and a grant from the Arthritis Foundation in Atlanta, GA. The authors thank Miriam Cisternas for her sound advice regarding statistical matters.

[1] See "Population Profile of Disability," report by Mathematica Policy Research, Inc., to the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services, October 1989, especially p. 21.

[2] See Ralph Treitel, "Recovery of Disabled Beneficiaries: A 1975 Followup Study of 1972 Allowances," *Social Security Bulletin*, April 1979, pp. 3–23; and John Bound, "The Health and Earnings of Rejected Disability Insurance Applicants," *American Economic Review*, December 1989, pp. 482–503.

[3] See Saad Nagi, "An Epidemiology of Disability in the U.S.," *Milbank Quarterly*, Vol. 54, 1976, pp. 439–68; Edward Yelin, Michael Nevitt, and Wallace Epstein, "Toward an Epidemiology of Work Disability," *Milbank Quarterly*, vol. 58, 1980, pp. 386–415; and Richard Burkhauser and Mary Daly, "The Economic Consequences of Disability: A Comparison of German and American People with Disabilities," *Journal of Disability Policy Studies*, in press.

[4] Robert Haveman and Barbara Wolfe, "The Economic Well-Being of the Disabled," *Journal of Human Resources*, vol. 25, 1990, pp. 32–54; and Barbara Wolfe and Robert Haveman, "Trends in the Prevalence of Work Disability from 1962–1984," *Milbank Quarterly*, vol. 68, 1990, pp. 53–80.

[5] Robert Bennefield and John McNeil, "Labor Force Status and Other Characteristics of Persons with a Work Disability: 1981 to 1988," *Current Population Reports*, series P–23, No. 160, 198.

[6] Mary Kovar and Gary Poe, "The National Health Interview Survey Design, 1973–1984, and Procedures, 1975–1983," *Vital and Health Statistics*, ser. 1, no. 18, 1985.

[7] See Bennefield and McNeil, "Labor Force Status."

[8] The methods of the March supplement to the CPS are described in *Current Population Survey, March 1993, Technical Documentation* (Bureau of the Census, 1993).