

# International comparisons of labor force participation, 1960–81

*Since 1960, rates of labor force activity have risen in four industrial nations, remained stable in one, and declined in four others; overall national participation estimates mask significant variations in trends by age and sex*

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A nine-country comparison of labor force participation rates reveals wide international differences in the proportion of the population offering their services in the labor market. For example, in 1981, when the U.S. labor force participation rate was 64 percent, 67 percent of all Swedes but only 48 percent of all Italians of working age were in the labor force. Participation rates have risen in the United States, Canada, Australia, and Sweden over the past two decades but have declined in France, Germany,<sup>1</sup> Italy, and Japan. British rates have remained virtually unchanged.

Large international differences in participation rate levels and trends are especially apparent for women and young people. The differences for youth reflect variations in their propensity to continue in school or enter the labor market, or to combine work with school. The differences for women stem from their decision to work in the home or outside the home, to which the availability of part-time jobs and attitudes toward the role of women are contributing factors.

Data on participation rates help to explain the large

long-term differences in labor force trends among the industrial nations. For instance, the United States and Japan have had similar rates of population growth over the past two decades, yet the U.S. labor force has grown much faster than Japan's because participation rates for women and youth have risen in the United States while they have been falling in Japan. Short-term deviations in the trend of participation rates are an indicator of a dimension of labor slack—withdrawals from the labor force—which is not covered by the unemployment rate.<sup>2</sup>

This article presents internationally comparable data on civilian labor force participation rates<sup>3</sup> for nine industrial nations over the past two decades. Participation rates are also presented separately by sex and for youths and adults, because overall rates mask marked differences in the trends and levels for men, women, young persons, and the elderly. The technical appendix gives a short description of data sources and adjustment methods.

## General levels and trends

Labor force participation rates, also known as activity rates, were over 60 percent in 1980 in the United

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States and five other nations—Canada, Australia, Japan, Great Britain, and Sweden. Sweden had the highest activity rate at 67 percent; in the other countries, the rates were 62 to 64 percent. Italy, with only 48 percent of the working-age population economically active, had the lowest rate among the countries studied.<sup>4</sup> Germany and France also had relatively low rates, at 52 and 56 percent.

Participation rates have risen significantly in the United States and Canada, and moderately in Australia and Sweden over the past two decades. In contrast, sharp declines in labor force activity have occurred in Germany, Italy, and Japan, and a more modest decline was posted in France. (In 1960, Japan had the highest participation rate at 68 percent and Canada the lowest, at 56 percent.) British participation rates have remained relatively stable over the 20 years. (See table 1.)

In Canada and Sweden, the most rapid increases occurred after 1970, and in the United States, after 1975. (Activity rates in Sweden had fallen slightly between 1960 and 1970.) In Australia and Great Britain, participation rates have declined slightly in recent years from mid-1970 peaks; whereas in the four countries with overall 20-year declines (France, Germany, Italy, and Japan), activity rates have stabilized in recent years.

The overall activity rate is the net result of divergent movements for men and women in most countries. (Chart 1 shows these trends for six countries. The trends for Australia and Canada are similar to those for the United States. French trends are similar to those for Germany.) Moreover, the aggregate participation rate masks major differences in labor force behavior of young people and older persons.

The United States, Canada, Australia, and Sweden showed aggregate participation rate growth from 1960 to 1980 because sharp increases in women's activity more than offset declining rates for men. Further, these four countries were the only ones with higher youth participation rates in 1980 than in 1960.

On the other hand, in the four countries with significant declines in aggregate participation rates—France, Germany, Italy, and Japan—male rates fell more steeply and female participation showed overall drops or only small increases. In addition, substantial declines in youth participation occurred in all of these countries.

The relatively stable British participation rate over the past 20 years was the result of a sharp drop in male activity and an almost equally large increase in female activity. Youth participation declined moderately.

A falloff in participation rates for older persons (age 55 and over) occurred in all countries studied. Participation rates for older men fell everywhere, but activity rose among 55- to 64-year-old women in all countries except Italy and Japan. For women age 65 and over, participation rates declined in all countries.

## Participation by men declines everywhere

Participation rates for men declined in all countries throughout most of the post-1960 period. The largest drop occurred in Italy, where the rate fell from 85 to 68 percent over the past two decades. French and German men also had above average declines, while the smallest decreases occurred in Canada, Japan, and the United States. (See table 1.)

The downward trend in male participation rates observed in all the countries is largely attributable to longer years of schooling and earlier retirement. Changes in the age structure of the population also have some effect. For example, the movement of a greater proportion of the male population into the retirement age group exerts a downward pressure on participation rates, even if ages at retirement do not change. Italy had the largest increase in the proportion of men age 65 and over in the population, from 10.9 percent in 1960 to 14.8 percent in 1980. Canada and the United States had very slight declines in their proportions of older men in the population.

Male activity rates in 1980 ranged from a high of almost 80 percent in Japan and Australia to a low of 68 percent in Italy. With 77 percent of men economically active, the United States appeared in the middle of the ranking. Only three countries—France and Germany, in addition to Italy—had fewer than three-fourths of their working-age men in the labor force.

The comparative picture was different in 1960, when British men had the highest rate—88 percent—and French men had the lowest—81 percent. Japanese men, who had the highest level of activity in 1980, were in the middle of the array in 1960. Italian men ranked much higher in 1960, with their rate surpassing those in five other countries, including the United States.

## Participation by women increases

Labor force participation rates of women have shown a strong, sustained rise since 1960 in North America, Australia, Sweden, and Great Britain. In Japan and the remaining European countries studied, female activity rates dropped until the 1970's, then began to rise. For French and Italian women, the rise began in the early 1970's; for Japanese and German women, it began in the latter part of the decade.

The international gap between the highest and lowest activity rates was much wider for women than for men. In 1980, Sweden had, by far, the highest female rate—almost 60 percent—while that for Italian women was 30 percent—half the Swedish level. Only the United States, Sweden, and Canada had more than half of their female populations in the labor force. (See table 1.)

Swedish women also had a comparatively high activity rate in 1960, but their rate was surpassed at that

**Table 1. Labor force participation rates by sex, nine countries, 1960-81**

Year	United States	Canada	Australia	Japan	France	Germany	Great Britain	Italy	Sweden
<b>Both sexes</b>									
1960	59.4	<sup>1</sup> 56.2	( <sup>2</sup> )	67.9	<sup>3</sup> 59.7	60.0	62.4	58.0	( <sup>2</sup> )
1961	59.3	<sup>1</sup> 56.2	( <sup>2</sup> )	67.8	( <sup>2</sup> )	59.9	62.5	57.4	64.5
1962	58.8	<sup>1</sup> 56.0	( <sup>2</sup> )	66.9	<sup>3</sup> 59.4	59.6	62.5	56.3	65.2
1963	58.7	<sup>1</sup> 55.9	( <sup>2</sup> )	65.7	58.4	59.4	62.6	54.7	65.8
1964	58.7	<sup>1</sup> 56.2	59.4	64.8	<sup>3</sup> 58.3	59.0	62.5	53.9	64.3
1965	58.9	<sup>1</sup> 56.5	59.9	64.4	57.7	58.7	62.5	52.8	64.0
1966	59.2	57.3	60.6	64.6	<sup>3</sup> 57.8	58.2	62.6	51.2	64.2
1967	59.6	57.6	61.2	64.8	57.0	57.0	62.3	51.2	63.3
1968	59.6	57.6	61.2	64.9	56.6	56.9	61.9	50.5	63.8
1969	60.1	57.9	61.4	64.6	56.3	57.0	61.7	50.1	63.5
1970	60.4	57.8	62.1	64.5	56.4	56.9	61.3	49.5	64.0
1971	60.2	58.1	62.2	64.2	56.1	56.4	60.8	49.2	64.2
1972	60.4	58.6	62.3	63.8	56.3	55.7	61.2	48.0	64.1
1973	60.8	59.7	62.6	64.0	56.2	55.3	62.8	47.9	64.1
1974	61.3	60.5	63.0	63.0	56.3	54.4	62.6	47.9	64.9
1975	61.2	61.1	63.2	62.4	57.0	53.4	63.2	47.9	65.9
1976	61.6	61.1	62.7	62.3	57.0	52.8	63.4	48.2	66.0
1977	62.3	61.5	62.7	62.5	57.3	52.4	63.4	48.0	65.9
1978	63.2	62.6	62.0	62.8	56.7	52.3	63.4	47.7	66.1
1979	63.7	63.3	61.7	62.7	57.2	<sup>4</sup> 52.3	62.8	47.8	66.6
1980	63.8	64.0	62.2	62.6	56.0	<sup>4</sup> 52.5	62.0	48.0	<sup>4</sup> 67.1
1981	63.9	64.7	62.0	62.6	55.8	<sup>4</sup> 52.4	<sup>4</sup> 61.4	<sup>4</sup> 48.0	<sup>4</sup> 67.1
<b>Men</b>									
1960	83.3	<sup>1</sup> 82.8	( <sup>2</sup> )	84.2	<sup>3</sup> 81.4	82.7	87.9	84.7	( <sup>2</sup> )
1961	83.2	<sup>1</sup> 81.8	( <sup>2</sup> )	84.3	( <sup>2</sup> )	82.7	87.4	83.8	84.9
1962	82.0	<sup>1</sup> 81.1	( <sup>2</sup> )	80.5	<sup>3</sup> 80.9	82.2	86.8	82.4	84.6
1963	81.4	<sup>1</sup> 80.5	( <sup>2</sup> )	82.5	80.6	81.8	86.7	80.9	84.3
1964	81.0	<sup>1</sup> 80.1	85.3	81.5	<sup>3</sup> 79.6	81.4	85.9	80.3	82.8
1965	80.7	<sup>1</sup> 79.9	85.1	81.1	78.8	80.8	85.3	79.2	82.0
1966	80.4	79.8	85.4	81.1	<sup>3</sup> 78.5	80.5	84.8	77.5	81.5
1967	80.4	79.3	84.9	81.0	77.1	79.3	84.6	77.5	80.3
1968	80.1	78.6	84.5	81.7	75.6	79.0	83.4	76.3	80.2
1969	79.8	78.3	84.2	81.5	74.9	79.0	82.5	75.5	78.8
1970	79.7	77.8	84.1	81.5	74.9	78.7	81.4	74.5	78.5
1971	79.1	77.3	83.8	81.9	74.4	77.6	81.3	74.1	78.0
1972	78.9	77.5	83.6	81.8	74.1	76.4	81.3	72.6	77.3
1973	78.8	78.2	83.2	81.8	73.3	75.2	82.5	71.7	76.8
1974	78.7	78.7	82.7	81.5	73.0	73.5	80.9	71.3	76.9
1975	77.9	78.4	82.2	81.0	73.2	72.0	81.3	71.0	77.0
1976	77.5	77.6	81.5	80.9	72.6	71.0	81.3	70.9	76.5
1977	77.7	77.6	81.0	80.3	71.6	70.1	80.8	69.2	75.6
1978	77.9	77.9	79.8	80.1	71.4	69.9	80.2	68.6	75.1
1979	77.8	78.4	79.5	79.9	71.6	<sup>4</sup> 69.4	79.1	68.2	75.2
1980	77.4	78.3	79.2	79.6	70.6	<sup>4</sup> 69.4	78.1	67.8	<sup>4</sup> 75.0
1981	77.0	78.3	78.9	79.6	69.9	<sup>4</sup> 69.3	<sup>4</sup> 77.7	( <sup>2</sup> )	<sup>4</sup> 74.0
<b>Women</b>									
1960	37.7	<sup>1</sup> 30.1	( <sup>2</sup> )	52.7	<sup>3</sup> 41.6	41.2	39.5	33.8	<sup>2</sup>
1961	38.1	<sup>1</sup> 31.0	( <sup>2</sup> )	52.4	( <sup>2</sup> )	41.0	40.0	33.8	44.5
1962	37.9	<sup>1</sup> 31.3	( <sup>2</sup> )	51.3	<sup>3</sup> 41.3	40.7	40.3	33.0	46.5
1963	38.3	<sup>1</sup> 31.9	( <sup>2</sup> )	50.0	39.5	40.7	40.7	31.2	48.0
1964	38.7	<sup>1</sup> 32.9	33.8	49.3	<sup>3</sup> 40.1	40.3	41.0	30.1	46.7
1965	39.3	<sup>1</sup> 33.8	34.8	48.8	39.3	40.0	41.6	28.9	46.6
1966	40.3	35.4	36.3	49.2	<sup>3</sup> 40.0	39.4	42.0	27.4	47.5
1967	41.1	36.5	37.8	49.6	39.5	38.4	41.8	27.4	46.8
1968	41.6	37.1	38.3	49.2	39.8	38.5	41.7	27.2	47.9
1969	42.7	38.0	39.0	48.8	39.9	38.5	41.8	27.1	48.6
1970	43.3	38.3	40.4	49.3	40.1	38.4	42.0	26.8	50.0
1971	43.4	39.4	41.0	47.7	39.8	38.3	42.4	26.6	50.9
1972	43.9	40.2	41.2	46.8	40.5	38.0	43.2	25.7	51.5
1973	44.7	41.9	42.4	47.3	41.0	38.2	45.0	26.1	51.7
1974	45.7	43.0	43.5	45.7	41.6	37.9	46.2	26.6	53.3
1975	46.3	44.4	44.5	44.8	42.5	37.4	46.8	26.9	55.2
1976	47.3	45.2	44.3	44.8	42.9	37.2	47.2	27.6	55.8
1977	48.4	46.0	44.8	45.7	44.2	37.1	47.7	28.6	56.7
1978	50.0	47.8	44.5	46.4	43.3	37.2	48.2	28.6	57.5
1979	50.9	48.9	44.3	46.6	44.3	<sup>4</sup> 37.6	48.0	29.2	58.5
1980	51.5	50.3	45.5	46.6	42.7	<sup>4</sup> 37.8	47.7	29.9	<sup>4</sup> 59.5
1981	52.1	51.6	45.5	46.7	43.1	<sup>4</sup> 38.5	<sup>4</sup> 46.6	( <sup>2</sup> )	<sup>4</sup> 60.5

<sup>1</sup> Estimates by BLS based on new survey definitions. Statistics Canada revised the data for 1966 onward on the new survey basis.

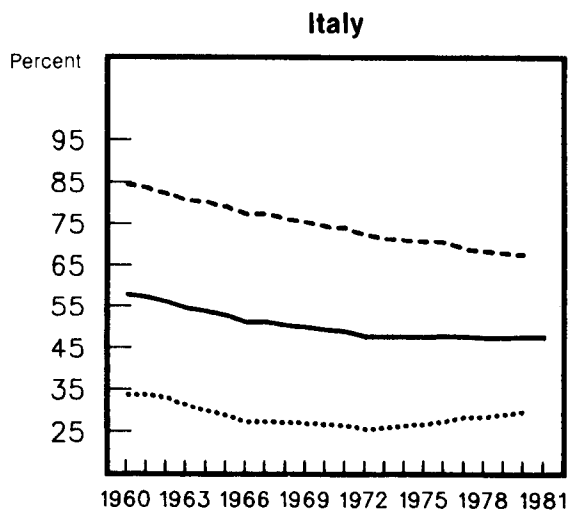
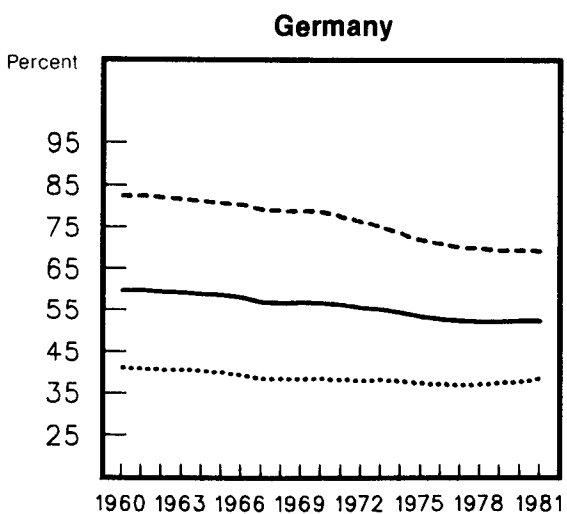
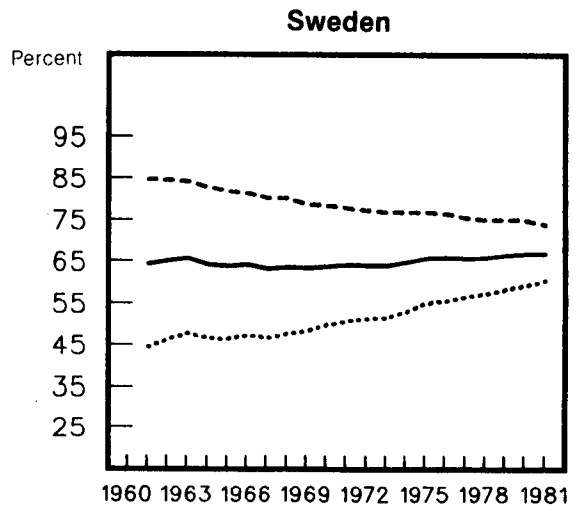
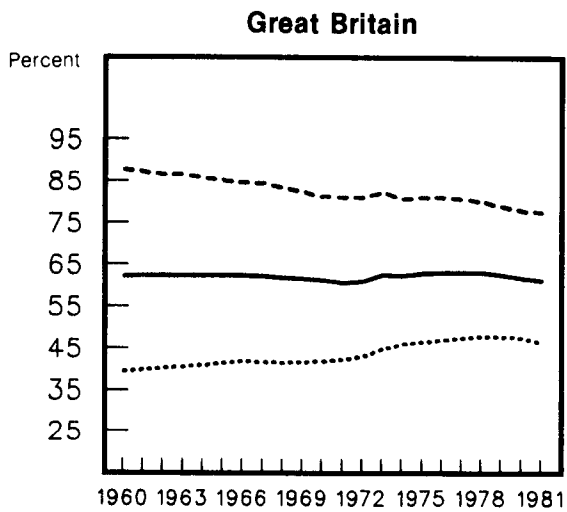
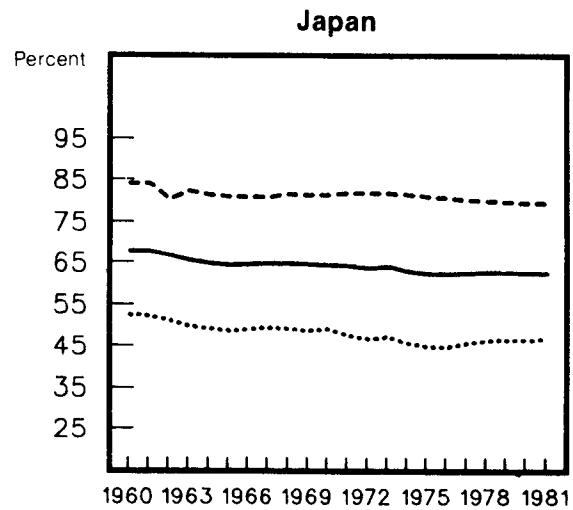
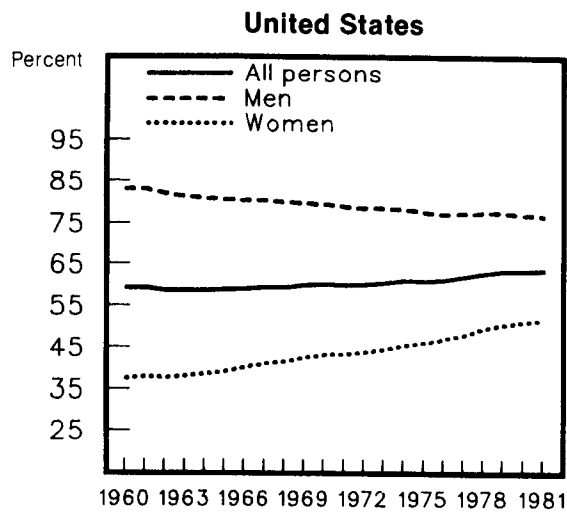
<sup>2</sup> Not available.

<sup>3</sup> Data for October of 1960, 1962, 1964, and 1966. Data for all other years are for March.

<sup>4</sup> Preliminary estimate.

Note: Data relate to the civilian labor force approximating U.S. concepts as a percent of the civilian noninstitutionalized working age population. Working age is defined as 16-year-olds and over in the United States, France, and Sweden; 15-year-olds and over in Australia, Canada, Germany, and Japan; and 14-year-olds and over in Italy. For Great Britain, the lower age limit was raised from 15 to 16 in 1973. The institutionalized population is included in Japan and Germany.

**Chart 1. Trends in labor force participation rates, for all persons and by sex, selected countries, 1960-81**



time by Japanese women. Furthermore, in 1960, the U.S. female rate was surpassed by three other European countries—France, Germany, and Great Britain—while Canada had the lowest rate—30 percent.

The varied trends in female activity rates reflect, in part, changes in the industrial structure of the economy. First, female participation rates generally fall along with the decline in the importance of agriculture, because women who were economically active as unpaid family workers on the farm generally withdraw from the labor force after a family moves from farm to city. This accounted for the sharp decline in female activity rates in Japan and Italy during the 1960's. Both countries began that decade with about 30 percent of total employment in the agricultural sector; by 1980, the proportions had fallen to 10 percent in Japan and 14 percent in Italy. Furthermore, as with men, higher educational requirements in industry may raise the average age for leaving school, and improved pensions may encourage earlier retirement.

Eventually, however, female labor force participation enters a second stage during which activity rates begin to rise again. By 1960, women in the United States, Canada, Australia, Sweden, and Great Britain were already well into this second stage. Women in Japan, Germany, Italy, and France, however, entered into the second stage only during the 1970's.

Underlying recent increases in female participation rates in many countries are the following factors: expansion of the service sector; declines in fertility rates; increased availability of part-time work; extension of higher education for women; abating job discrimination against women; and changing attitudes towards women's role in society. A review of trends in two dissimilar societies—Sweden and Japan—serves to illustrate the pervasive effect of these factors.

*Service sector expansion.* In all countries studied, the service sector has expanded rapidly over the past two decades. By 1980, two-thirds of all civilian workers in the United States and Canada were engaged in services. Over 60 percent of employment in Australia, Sweden, and Great Britain was in the service sector. Italy had the lowest proportion of employment in services, at 48 percent.

Female employment is heavily concentrated in the service sector. In the United States, Australia, Canada, and Sweden, about four-fifths of all working women are in service jobs. The other country with rising female participation since 1960, Great Britain, has three-quarters of total female employment in services. In the countries with overall declines in participation by women, the proportions of total female employment in services were much lower—for example, 56 percent in Italy and 58 percent in Japan. However, even these low

figures represent large increases over the 1970 proportions, which were under 40 percent.

*Declining fertility rates.* In all periods, the major reason women have had lower activity rates than men is that women bear the chief responsibility of rearing children. Married women with children have the lowest activity rates, and the younger their children, the lower their activity rates. However, during the 1960's and 1970's, declining fertility rates tended to reduce the home responsibilities of women, facilitating their rising labor force activity rates in many countries.

Comparative fertility rates over the past two decades are shown in table 2. The number of live births per 100 women age 15 to 44 shows a marked downturn between 1960 and 1980 in all countries except Japan and Sweden. However, the Japanese and Swedish fertility rates were already comparatively low in 1960. The Swedish rate rose marginally by 1970, then declined to below the 1960 level by 1980. Only Japan had a higher fertility rate in 1980 than in 1960. Table 2 also shows the ratio of young children (ages 0–4) to adult females. These are the ages at which children are the heaviest responsibility, and the current ratios are substantially below previous levels except in Japan, Italy, and Sweden, where the levels were already very low in 1960.

*Part-time jobs.* Part-time work for women is most pervasive in Sweden, where 55 percent of all employed women worked less than 35 hours a week in 1980. In the United States and Canada, 29 and 24 percent of all employed women were working part time.<sup>5</sup> The 1979 European Community household labor force survey indicates lower proportions of part-time employment for women in most member countries. For example, about one-fifth of all employed British, French, and German women held part-time jobs.

*Factors in Japan.* For Japan, a number of reasons have

**Table 2. Fertility rates and ratios of young children to adult women, nine countries, 1960, 1970, and 1980**

Country	Fertility rates <sup>1</sup>			Number of young children per 100 adult women <sup>2</sup>		
	1960	1970	1980	1960	1970	1980
United States . . . . .	11.9	8.8	7.0	56	40	31
Canada . . . . .	13.1	8.1	6.7	61	41	32
Australia . . . . .	11.2	9.9	6.9	53	46	35
Japan . . . . .	7.1	7.3	7.4	35	33	38
France . . . . .	9.5	8.3	6.7	47	41	33
Germany . . . . .	8.2	6.7	4.3	37	39	22
Great Britain . . . . .	8.8	8.5	5.7	40	43	28
Italy . . . . .	8.2	8.0	7.1	37	40	35
Sweden . . . . .	6.8	7.0	6.5	34	37	33

<sup>1</sup> Live births per 100 women age 15 to 44.

<sup>2</sup> Number of children under age 5 per 100 women age 15 to 44.

Source: Organization for Economic Cooperation and Development, *Demographic Trends 1950-1990* (Paris, OECD, 1979), pp. 10, 22.

been cited for the recent rise in female activity rates: (1) economic recovery revived demand for labor after a serious decline during the post-oil crisis recession of 1974–75; (2) expansion in the service sector has created additional demand for women workers, and more part-time jobs; (3) since 1955, when the number of working women began increasing, more women have solidly established themselves in their workplaces, shifting from temporary and irregular work to more permanent occupations; (4) the extension of higher education has prompted women to take jobs outside the home; (5) new equal employment opportunity legislation has promoted advancement of women into occupations which had long been exclusively for men; and, (6) the leveling off in head of household's wage increases and the surge in housing and educational costs have induced a number of women to join the labor force to supplement family income.<sup>6</sup>

As in other countries, life cycle changes are also occurring among Japanese women, who formerly worked only a few years before getting married, and thereafter retired permanently from the labor market. Today, Japanese women are reentering the labor force in their mid-30's, after spending some years at home because of marriage, childbirth, and childcare. (See section on age structure of participation rates.)

*The Swedish situation.* Sweden's recent very high level of female labor force participation indicates an increasingly more active involvement of married women in economic life compared with other nations. In Sweden, two-thirds of all married women are labor force participants, compared with 50 percent in the United States and Japan, and just 40 percent in Germany.

Several factors are responsible for the high Swedish rate. Many married women have no children or only one child. Furthermore, government-financed day care centers provide for infant care, beginning when children are 6 months of age, at which point maternity leave expires. The introduction of separate taxation for married women in 1971, parenthood insurance in 1974, and greater flexibility in working time have also provided incentives for Swedish women to seek employment. Parenthood insurance provides that either mother or father may stay home up to 3 months after a child's birth and be reimbursed for 90 percent of his or her pay. If the mother decides to use the parenthood insurance, these 3 months are added to the 6 months of her maternity leave. Furthermore, when caring for a sick child under the age of 10, either parent is eligible for cash sickness benefits.

### Youth activity changes greatly

Aggregate participation rates mask substantial changes in participation rates for young people since 1960.

Participation rates for youth, broken down into teenagers and young adults (age 20 to 24), are presented in table 3. Activity rates for adults (25 and over) are also shown for comparison.

For the United States, Canada, Japan, Italy, and Sweden, the data in table 3 are annual averages. The only available data for the other countries relate to one month of each year, and this introduces an element of noncomparability across countries for which no adjustment can be made. The data for France, Germany, and Australia relate to a month when young people are still in school. Because summer vacation labor force participation is not covered, the activity rates for teenagers in these three countries are understated in comparison with the annual data for other countries. The British statistics are for the end of June of each year, when students may be out of school (beginning in 1976).<sup>7</sup>

Teenagers and young adults in North America have had sharply increasing participation rates over the past two decades, a much faster rise than that recorded for all ages combined. The change in the United States was almost 12 percentage points for persons under 25—from 56.4 in 1960 to 68.1 in 1980; over the same period, Canadian youth gained 10 percentage points. Australia and Sweden were the only other countries with higher youth participation rates in 1980 than during the early 1960's. Australian youth rates held steady in the 1960's, dipped in the early 1970's, then began a slow rise. In Sweden, youth activity fell during the 1960's and rose gradually in the 1970's.

Substantial declines in youth participation in the labor force occurred in all the other countries except Great Britain, where the decrease was moderate. The decline was most evident in Japan, where the participation rate for all young persons was 63 percent in 1960, but only 43 percent by 1980. The drop for Japanese teenagers was even more dramatic—more than half were in the labor force in 1960, compared with fewer than 20 percent by 1980. The rate of decline has tapered off, however. Japanese teenage participation rates dropped from 50 percent in 1960 to 32 percent in 1970 and about 20 percent in 1975, but then fell only to 17.5 percent by 1981.

Even with the rapid upward trend in North American youth activity rates, youth in three other countries still had higher rates than their North American counterparts in 1980. In Australia, Sweden, and Great Britain, 70 percent or more of all youth were in the labor force, compared with about two-thirds of U.S. and Canadian youth. Activity rates for French and German youth were 50 and 58 percent; Japanese and Italian youth had much lower rates. Among the last four countries, Germany had a relatively high teenage participation rate, and Japan, a low teenage rate. Italy's low overall youth participation rate reflects, in large part, a

very low rate for persons aged 20 to 24, particularly for young women.

The declining trends (or slower increases) in youth labor force activity outside North America reflect the rapid expansion of school attendance. In the United States and Canada, school attendance has also increased, but many youngsters in these two countries combine school with work, so that the expansion of educational enrollments has not lowered labor force activity. In the other countries, where few students also work, increases in

school enrollment rates caused youth participation rates to decline.

Foreign school enrollment rates were well below U.S. rates in 1960, when about 64 percent of U.S. teenagers were in school. Only about half of all teens in Canada were enrolled and much smaller proportions in Europe—around 35 percent in France and Germany, and fewer than 20 percent in Italy and Great Britain. About 45 percent of Japanese teenagers were in school. Between 1960 and 1975, enrollment rates rose rapidly abroad,

**Table 3. Labor force participation rates for youth and adults, nine countries, selected years, 1960-81**

Country and date	Youth			Adults	Country and date	Youth			Adults
	Total	Teenagers <sup>1</sup>	Age 20 to 24			Total	Teenagers <sup>1</sup>	Age 20 to 24	
United States:					France—Continued:				
1960	56.4	47.5	65.2	60.0	March 1977	53.7	29.3	74.3	58.1
1970	59.8	49.9	69.2	60.5	March 1978	52.2	27.0	73.5	58.1
1974	64.9	54.8	74.0	60.2	March 1979	52.7	27.9	73.7	58.6
1975	64.6	54.0	73.9	60.2	March 1980	51.4	26.0	73.3	59.0
1976	65.3	54.5	74.8	60.5	March 1981	50.3	24.7	71.7	58.9
1977	66.7	56.0	75.7	61.0	Germany:				
1978	68.2	57.8	76.8	61.7	April 1963	80.8	79.0	82.7	56.6
1979	68.6	57.9	77.5	62.2	April 1970	70.9	64.7	78.4	55.5
1980	68.1	56.7	77.2	62.5	April 1974	63.4	54.3	73.6	54.2
1981	67.7	55.4	77.3	62.8	May 1975	61.9	52.8	72.7	53.3
Canada:					May 1976	60.1	49.4	73.1	53.0
1960	<sup>2</sup> 57.8	<sup>2</sup> 47.5	<sup>2</sup> 69.4	<sup>2</sup> 55.7	April 1977	58.9	46.9	73.8	53.2
1970	56.0	42.2	71.6	58.4	April 1978	58.5	46.1	74.1	53.0
1974	62.5	51.0	75.4	59.8	April 1979	59.5	47.9	73.9	53.0
1975	62.9	51.1	75.9	60.5	April 1980	58.0	44.0	75.5	53.4
1976	62.4	49.8	76.2	60.6	May 1981	57.1	42.3	75.0	53.7
1977	63.2	50.4	77.0	61.0	Great Britain: <sup>3</sup>				
1978	64.4	51.5	78.1	62.0	April 1961	75.0	72.5	77.9	57.1
1979	66.2	54.1	78.9	62.3	June 1971	71.0	65.8	74.8	59.5
1980	67.3	55.2	79.6	62.9	June 1974	68.6	59.4	76.2	60.6
1981	67.9	55.7	79.7	63.6	June 1975	69.6	61.9	76.1	60.5
Australia:					June 1976	73.4	<sup>4</sup> 69.1	77.0	60.6
August 1964	<sup>2</sup> 68.9	<sup>2</sup> 67.1	<sup>2</sup> 75.5	<sup>2</sup> 58.6	June 1977	73.1	68.0	77.5	60.6
August 1970	68.5	59.4	77.8	59.8	June 1978	72.9	67.5	77.8	60.2
August 1974	66.9	56.8	77.3	60.7	June 1979	72.9	67.3	77.8	59.5
August 1975	68.3	59.0	78.1	60.7	June 1980	73.0	67.2	78.2	58.9
August 1976	68.0	57.8	78.8	60.2	June 1981	73.2	67.1	78.6	58.3
August 1977	69.9	60.3	80.3	60.3	Italy: <sup>3</sup>				
August 1978	68.9	59.6	78.8	59.3	1960	<sup>2</sup> 60.5	<sup>2</sup> 57.6	<sup>2</sup> 63.9	<sup>2</sup> 53.7
August 1979	69.1	58.7	80.3	58.6	1970	<sup>2</sup> 45.1	<sup>2</sup> 34.5	<sup>2</sup> 57.4	<sup>2</sup> 48.1
August 1980	71.1	61.2	81.3	59.1	1974	39.9	27.4	56.5	47.5
August 1981	70.6	59.8	81.4	58.8	1975	39.2	26.2	56.8	47.7
Japan:					1976	38.8	25.6	56.9	48.1
1960	62.8	50.1	77.7	69.0	1977	39.8	27.0	57.7	48.0
1970	55.1	32.1	75.0	67.8	1978	39.6	26.3	58.3	48.2
1974	49.5	23.4	71.4	66.7	1979	40.5	27.1	59.8	48.4
1975	47.4	20.6	70.7	66.2	1980	41.5	27.5	61.2	48.3
1976	45.7	18.6	70.4	66.3	1981	<sup>5</sup> 41.5	<sup>5</sup> 26.9	<sup>5</sup> 61.9	<sup>5</sup> 48.4
1977	44.6	18.4	69.6	66.7	Sweden:				
1978	44.2	18.8	69.4	66.9	1963	69.1	62.8	75.6	65.1
1979	43.5	18.0	69.3	67.0	1970	64.8	52.2	73.6	63.9
1980	42.9	17.6	69.3	66.9	1974	68.4	56.1	77.8	64.1
1981	43.2	17.5	69.9	66.8	1975	70.8	58.2	80.3	65.0
France:					1976	71.6	59.3	81.3	65.0
March 1963	68.7	53.1	89.4	57.5	1977	71.3	57.3	81.9	65.0
March 1970	57.1	39.4	72.1	56.7	1978	70.8	56.1	82.0	65.2
March 1974	54.4	32.6	74.1	57.4	1979	72.2	57.3	83.8	65.7
March 1975	54.6	32.2	73.7	57.9	1980	72.1	56.4	84.8	66.2
March 1976	54.3	30.1	75.0	57.9	1981	68.9	50.3	84.8	66.7

<sup>1</sup> 16- to 19-year-olds in United States, France, Great Britain (1974 onward), and Sweden; 15- to 19-year-olds in Canada, Australia, Japan, Germany, and Great Britain (prior to 1974); and 14- to 19-year-olds in Italy.

<sup>2</sup> BLS estimates adjusted for comparability with other years shown.

<sup>3</sup> Data are not fully adjusted to U.S. concepts.

<sup>4</sup> The sharp increase in teenage participation rates between 1975 and 1976 is mainly due to

a change in school-leaving regulations, allowing students who formerly left school in July to leave before that month (see appendix).

<sup>5</sup> Preliminary.

NOTE: Participation rates are based on the civilian noninstitutional population, except for Japan, Germany, and Great Britain, where the institutional population is included.

but grew more slowly in the United States, where rates were already high in 1960. By 1975, Japan had the highest proportion of teenagers enrolled in school—76 percent. During the same year, about 72 percent of U.S. teenagers were enrolled in school compared with 53 percent in France, and about 45 percent in Italy and Great Britain.<sup>8</sup> Since 1975, the foreign enrollment rates have been rising more slowly, and this has been a factor in the recent upward trends in youth participation. Also, some European students have begun to adopt the North American pattern of seeking part-time jobs while in school.

In the United States, more than half of the teenagers in the labor force are also in school. The rise of student participation in the U.S. labor force has been attributed to several factors, including need for (or preference for) earnings to supplement family income, greater participation in work-study programs, and increases in the proportion of college students in 2-year colleges, who have higher activity rates than those in 4-year colleges. By comparison, few European and Japanese students work while in school, for a variety of academic and other reasons.<sup>9</sup>

Reversals in youth participation rate movements have occurred recently in several countries. After many years of increase, both teenage and young adult participation rates declined in the United States in 1980, and the teenage decline continued in 1981. In Italy, a very sharp drop in youth activity rates persisted until 1977, when a gradual upward trend emerged. As noted earlier, Australian and Swedish youth participation rates also began to rise in the 1970's. However, in 1981, teenage participation rates dropped in both countries. The decline in Sweden was very large—a falloff of 6 percentage points to 50 percent, the lowest level recorded in the last two decades. The sharp decline was related to a large increase in the number of young persons in full-time school. This rise in school attendance was partly related to the deteriorating labor market for Swedish teenagers. The teenage jobless rate in 1981 was 9.6 percent, the highest ever recorded by the Swedish labor force survey.

### Activity by older persons declines

The tendency to shorten working lifetimes is reflected in falling participation rates for older workers over the past two decades. This trend, reinforced by the aging of the population, has increased the burden of the non-participating elderly population upon the working population, putting a strain on pension funding in many countries.

Table 4 shows participation rates for two older groups—those 55 to 64, and 65 and over—in the early 1960's and in 1980. For 55- to 64-year-olds, participation rates declined in all countries except Great Britain and Sweden, where strong increases for women overrode declines for men. Among those 65 and over, participation rates declined in all countries for both men and women. Greater coverage of pension schemes and the increased size of pensions were major factors in the decline. Institutional factors tending to lower the compulsory retirement age or to encourage workers to retire early were also important.<sup>10</sup> Since 1973, many of the European countries have adopted provisions to guarantee financial resources for older workers who leave the labor force before pensionable age, thus making room for younger workers.

Japan had relatively small declines in older worker participation, and Japanese workers over 65 had, by far, the highest participation rate among the countries studied. In 1980, their activity rate of about 25 percent was twice as high as the comparable U.S. rate, and three to five times as high as the rates for older workers elsewhere.

About 2 out of 5 Japanese men 65 years old and over are still in the labor force. In the United States, only 1 in 5 older men are economically active, and in France, Germany, Great Britain, and Italy, fewer than 1 in 10.

A relatively high proportion of older Japanese women are also working or seeking work. About 1 in 7 Japanese women 65 or over are in the work force. This compares with around 1 in 12 in the United States, down to 1 in 40 in Sweden and 1 in 55 in Italy. The relatively

**Table 4. Labor force participation rates of older workers, nine countries, early 1960's and 1980**

Country	Age 55 to 64						Age 65 and over					
	Both sexes		Men		Women		Both sexes		Men		Women	
	Early 1960's <sup>1</sup>	1980	Early 1960's <sup>1</sup>	1980	Early 1960's <sup>1</sup>	1980	Early 1960's <sup>1</sup>	1980	Early 1960's <sup>1</sup>	1980	Early 1960's <sup>1</sup>	1980
United States . . . . .	60.9	55.7	86.8	72.1	37.2	41.3	20.8	12.5	33.1	19.0	10.8	8.1
Canada . . . . .	54.7	53.9	86.7	76.2	22.0	33.7	17.5	8.9	30.0	14.7	5.6	4.3
Australia . . . . .	53.8	44.9	85.8	68.9	21.0	21.8	12.5	6.3	23.3	11.2	4.4	2.8
Japan . . . . .	65.1	61.9	85.6	85.2	44.4	43.6	38.8	25.8	56.5	40.8	24.4	14.9
France . . . . .	55.4	<sup>2</sup> 53.3	76.2	<sup>2</sup> 69.9	36.9	<sup>2</sup> 38.3	14.5	<sup>2</sup> 6.2	24.0	<sup>2</sup> 9.0	9.0	<sup>2</sup> 4.3
Germany . . . . .	51.7	44.7	81.8	67.8	27.2	28.5	13.9	5.2	24.9	7.5	7.7	3.0
Great Britain . . . . .	59.7	60.0	94.4	83.0	29.3	39.0	13.2	5.6	23.4	8.9	5.7	2.9
Italy . . . . .	45.6	34.9	73.5	57.7	20.2	14.4	15.0	4.7	25.2	8.4	7.0	1.8
Sweden . . . . .	65.1	67.1	91.1	79.2	40.5	55.6	20.7	6.5	34.8	11.6	8.6	2.5

<sup>1</sup> Data are for a year or month (France, Germany, and Great Britain) in the 1960-63 period, except for Australian data which are for August 1966.

<sup>2</sup> Data relate to March 1979.

NOTE: French, German, British, and Italian data are not adjusted to U.S. concepts. Participation rates are based on the civilian noninstitutional population, except for Japan, Germany, and Great Britain, where the institutional population is included.



**Table 5. Age structure of labor force participation rates by sex and age, nine countries, 1980**

Sex and age	United States	Canada	Australia	Japan	France <sup>1</sup>	Germany <sup>2</sup>	Great Britain <sup>3</sup>	Italy	Sweden
<b>Men</b>									
Teenagers <sup>4</sup> .....	60.5	58.0	65.4	17.0	31.0	48.5	70.7	29.3	56.9
Age 20 to 24 .....	85.9	86.2	91.5	69.0	80.1	82.0	88.4	67.6	88.0
Age 25 to 34 .....	95.2	95.4	95.9	96.8	96.8	93.6	96.9	94.5	95.6
Age 35 to 44 .....	95.5	96.0	95.6	97.5	97.8	98.2	97.5	97.4	96.9
Age 45 to 54 .....	91.2	92.6	91.2	96.3	94.6	95.1	96.1	92.3	95.0
Age 55 to 64 .....	72.1	76.2	68.9	85.2	69.9	67.8	83.0	57.7	79.2
Age 65 and over .....	19.0	14.7	11.2	40.8	9.0	7.5	8.9	8.4	11.6
<b>Women</b>									
Teenagers <sup>4</sup> .....	52.9	52.2	61.5	18.5	24.8	41.4	64.5	24.2	56.0
Age 20 to 24 .....	68.9	73.0	71.1	69.7	68.5	71.1	68.5	51.5	81.6
Age 25 to 34 .....	65.5	62.7	52.5	47.9	67.7	59.5	56.3	47.1	81.4
Age 35 to 44 .....	65.5	61.6	58.2	59.5	61.4	55.1	68.3	38.6	84.8
Age 45 to 54 .....	59.9	54.1	47.8	60.5	55.8	49.6	67.8	31.1	83.3
Age 55 to 64 .....	41.3	33.7	21.8	43.6	38.3	28.5	39.0	14.4	55.6
Age 65 and over .....	8.1	4.3	2.8	14.9	4.3	3.0	2.9	1.8	2.5

<sup>1</sup> Data relate to March 1979.  
<sup>2</sup> Data relate to April 1980.  
<sup>3</sup> Data relate to the end of June 1980.  
<sup>4</sup> Data are for 16- to 19-year-olds in the United States, France, Great Britain, and Sweden;

15- to 19-year-olds in Canada, Australia, Japan, and Germany; and 14- to 19-year-olds in Italy.  
 Note: French, German, British, and Italian data are not adjusted to U.S. concepts. Participation rates are based on the civilian noninstitutional population, except for Japan, Germany, and Great Britain, where the institutional population is included.

low participation rate for older Swedish women is in sharp contrast with the very high rates in all other age groups.

The prevalence of the work ethic in Japan partly accounts for the high participation rates for older workers. Also, social security and pension benefits are relatively small. Moreover, social security payments begin at age 60 (55 for women), but the compulsory retirement age is 55 to 58 for 60 percent of Japanese men and sometimes lower for women, and lump-sum retirement payments are not enough to allow for self-sufficiency. As a result, most workers who are retired from their regular jobs continue at lower paid jobs or become self-employed out of financial necessity.

**Age structure patterns**

Table 5 presents a comparison of the detailed age structure of participation rates for one year, 1980. The data for France, Germany, Great Britain, and Italy have not been adjusted to U.S. concepts because information was not available to make adjustments by such detailed age groups. However, some conclusions may be drawn concerning the pattern of the age structures and large differences in levels of activity. Except for the British and Italian data, the unadjusted figures are closely comparable to U.S. concepts, although differences of 1 or 2 percentage points should be discounted.

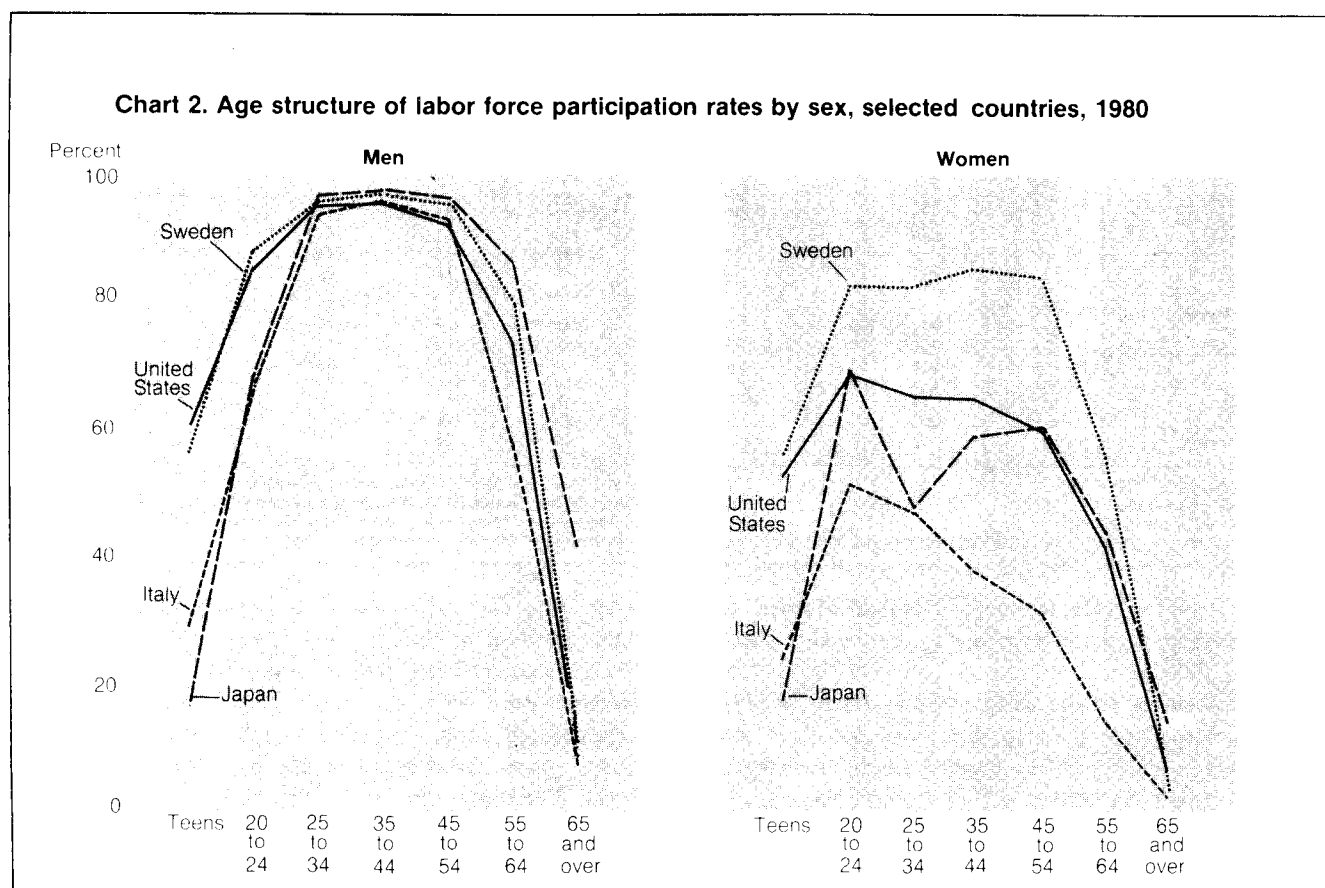
The age structure of participation rates differs greatly between the sexes. (See chart 2.) Male participation rates plotted by age group display a bell shape in all countries, while the female rates show a more irregular shape which resembles a skewed M in some countries, such as Japan. Great Britain and Australia (not shown) also have distinctly M-shaped curves for women. Curves for French and German women closely resemble the shape of the Italian curve. The Canadian curve is closer to the U.S. curve, but with a much sharper drop in activity for 25- to 34-year-old women.

*Men.* For men, high rates during the prime working ages, peaking in the 35-to-44 age group, contrast with lower rates at both ends of the age spectrum. In the teenage years and the early 20's, school attendance keeps many young men out of the work force. Retirement brings a downturn at the other end of the spectrum. There are only small international differences in participation rates for men in the prime working ages (25 to 54). Larger differences occur for youth and for older men.

*Women.* For women, the labor force participation rates are affected not only by the same factors affecting male activity rates, but also by conditions relating to women's domestic role. Generally speaking, after a peak between ages 20 and 24, a fall in economic activity rates occurs which is attributable to marriage and the birth and rearing of children. Subsequently, a number of women return to work and the female activity rate may begin to rise again sometime in the 30's, reaching a second peak in the 40's, which is generally lower than the first maximum. In some countries, however, activity rates continue to fall.

By 1980, however, the traditional pattern of female participation rates had changed in some countries. In the United States and France, the decline in activity for women 25 to 34 was small. In France, however, a more significant decline occurred after age 35. In Sweden, there was virtually no drop in activity rates for 25- to 34-year-olds, and participation rates peaked at their highest—almost 85 percent—in the 35-to-44 age bracket. This indicates that working life for Swedish women is approaching the continuity of that for men.

In Japan, a still more traditional society, there is a sharp drop in economic activity connected with marriage and the birth and rearing of children. Participation rates increase again after 35. A similar pattern occurs in Australia and Great Britain. In Great Britain,



however, the drop in activity is less sharp and later activity in the 35-to-44 age bracket is virtually as high as in the early 20's.

In Germany and Italy, the pattern is different. Activity rates for women decline about 5 to 10 percent for 25- to 34-year-olds as in Britain, but then continue to decline in later age brackets. In France, while the initial decline is small, participation rates likewise continue to decline in later life. Canadian women age 25 to 34 have a drop in activity comparable with that of German women, but subsequent decreases are much smaller.

In all countries except Sweden, the maximum rate of female labor force activity still occurs in the 20-to-24 age group—at 69 to 73 percent (52 percent in Italy). This compares with maximum male participation rates of 96 to 98 percent in the 35-to-44 age bracket.

*Historical patterns.* Although the levels have changed slightly, the characteristic bell shape of the male age structure curve has remained unchanged throughout the past two decades. In contrast, there have been major changes in the pattern of the female age structure curves. Chart 3 depicts the changing shapes and levels of the age structure of participation rates for women over the past two decades. Six of the countries are

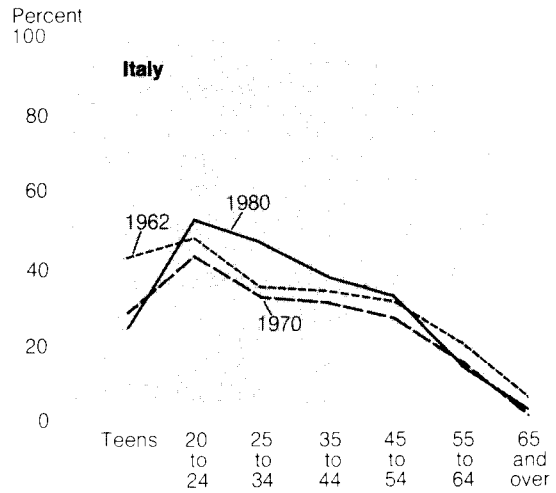
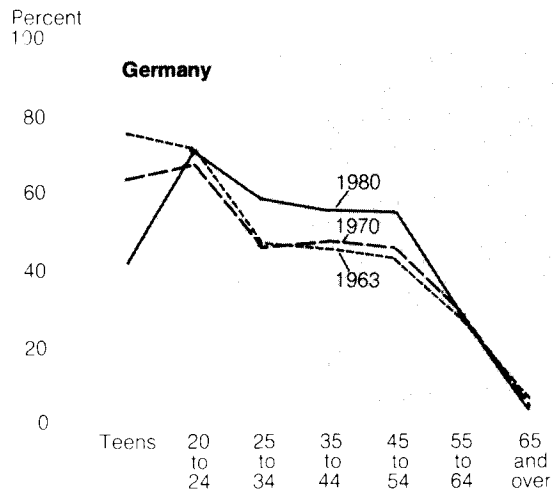
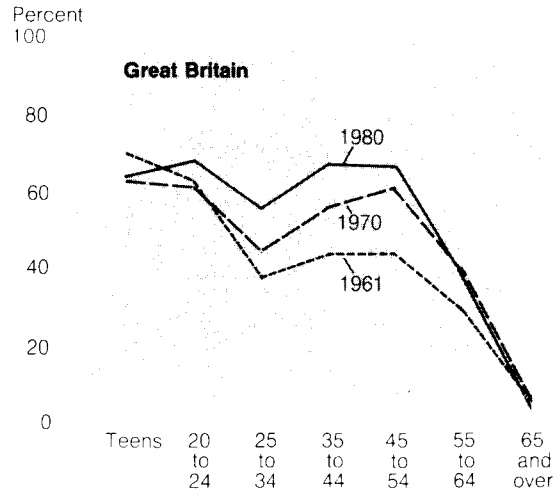
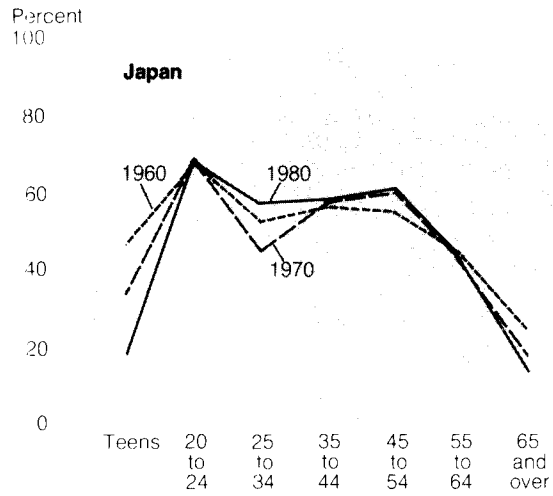
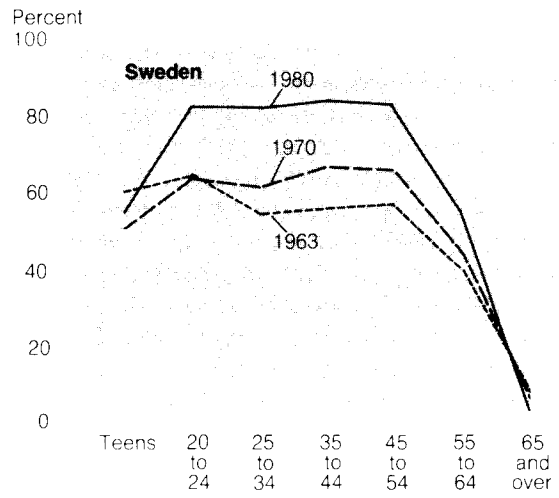
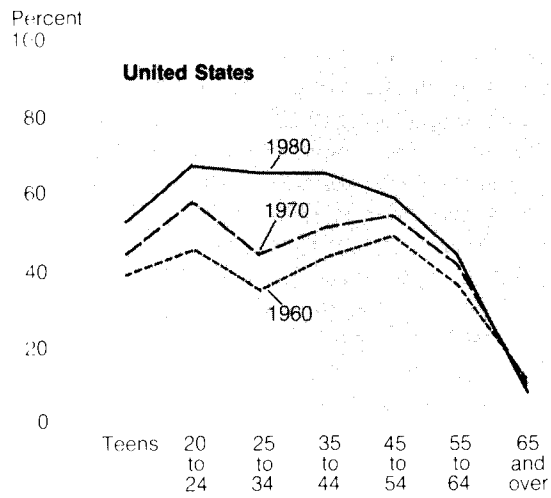
shown, three with overall increases in working activity by women—the United States, Sweden, and Great Britain—and three with aggregate declines—Japan, Germany, and Italy.

The chart shows that participation rates have risen for women in the primary working ages of 25 to 54 in all of the countries. In the United States, Sweden, and Great Britain, the increases for these age groups have been large and continuous. In contrast, Japan, Germany, and Italy show declines in one or more of the age groups from 25 to 54 between 1960 and 1970, followed by increases from 1970 to 1980. The latter increases were only marginal in Japan, but more significant in Germany and Italy.

In the United States, the distinctly M-shaped curve noted in 1960 and 1970 had flattened out by 1980. Prior to 1976, participation rates for women 25 to 34 were lower than for those 35 to 44. By 1976, the rates were about the same for both age groups, and this relationship continued in 1980.

In Sweden, an already less distinct M-shaped curve in 1960 and 1970 had all but disappeared in 1980. Chart 3 shows that labor force activity by Swedish women peaked at ages 20 to 24 in 1960, but by 1970 a new peak occurred in the 35-to-44 age bracket. By 1980,

**Chart 3. Age structure of labor force participation rates for women, six countries, selected years**



participation rates were much higher for all adult age brackets, except for women 65 and over, and the rate decline in the 25-to-34 group had virtually disappeared.

In contrast to the significant changes in level and shape of the age structure curves in the United States and Sweden, the Japanese curves were practically identical in 1970 and 1980. The 1960 curve also had a similar shape, although the increase in participation after ages 25 to 34 was not nearly as great as in the later years.

Germany's curves for 1963 and 1970 were very close in shape and level, except for teenage girls. In 1963, female labor force activity declined after a peak in the teenage years; by 1970, peak participation occurred in the 20-to-24 age group. By 1980, participation rates had increased significantly for women between the ages of 25 to 54, but the highest rate remained in the 20-to-24 age bracket, with activity lower for each older group.

Like Germany, British female participation rates also were highest in the teenage years in 1960. But in Great Britain, this was also true in 1970. In both countries,

the very high levels of teenage labor force participation were related to the widespread apprenticeship programs for youth. Unlike the case for Germany, labor force activity by British women increased again after the sharp decline in the 25-to-34 age bracket. By 1980, the British peak had moved to the 20-to-24 age group, with a similar peak again at ages 35 to 44.

The Italian curves for 1962 and 1970 were almost identical in shape, but the 1970 curve was lower in level. Italy was the only country studied which had a drop in female participation throughout the age spectrum between 1960 and 1970. By 1980, participation rates were higher for women age 20 to 54. The Italian curves were similar in shape to those for Germany—both having peaks at ages 20 to 24, and then subsequent continuous declines. While the M-shape characteristic for other countries shown in the charts did not occur in Germany and Italy, both of these countries have had substantial increases in the level of participation rates for women age 20 to 54 over the past decade. □

#### FOOTNOTES

<sup>1</sup> The Federal Republic, plus West Berlin.

<sup>2</sup> International cyclical trends in participation will be analyzed in a future article.

<sup>3</sup> Elsewhere, two types of labor force participation rates are published for the United States: the total labor force participation rate, which is the ratio of the total labor force to the total non-institutional population, and the civilian participation rate, which is the ratio of the civilian labor force to the civilian noninstitutional population. The only difference is that the armed forces are included in the total participation rate and excluded from the civilian rate. In 1981, the total rate for the United States was 64.4; the civilian rate was 63.9. Discussion in this article is limited to civilian labor force participation rates for the United States and the eight other countries covered.

<sup>4</sup> In all societies, there is some degree of illegal or unrecorded labor force activity. This hidden economy includes people working in legal jobs which are not reported so that taxes or other kinds of regulations can be avoided. Italy has a particularly large sector of unreported employment known as *il lavoro nero*, or the labor black market. No attempt has been made here to determine the effect of the labor black market on the Italian participation rates. It is likely that most illegally employed workers will not report their off-the-books jobs in the labor force survey. However, many illegal jobs are second jobs for persons who would be recorded as economically active in their primary, legal employment. To the extent that primary work activity is undeclared, the Italian activity rate will appear lower than it actually is.

<sup>5</sup> For the United States, Canada, and Sweden, data are available on

both voluntary and involuntary part-time work. In Sweden, 51 percent of the employed women were voluntarily working at part-time jobs. The remaining 4 percent were on part time for economic reasons and would have preferred more work. The U.S. and Canadian figures for voluntary part time were 23 and 20 percent of total female employment. Data on voluntary part time were not separately available for the European Community countries.

<sup>6</sup> Japan Institute of Labor, *Problems of Working Women*, Japanese Industrial Relations Series 8 (Tokyo, 1981), p. 6.

<sup>7</sup> From June 1976 onward, the participation figures for teenagers are overstated in relation to those countries with annual average data and also in relation to the British data for prior years. The large increase in teenage participation rates between 1975 and 1976 should be discounted because new school regulations were introduced in 1976 which allowed a greater proportion of 16-year-olds to leave school before the end of June. Estimates based on other sources indicate that the teenage participation rates for 1976 onward would be about 5 percentage points lower on an annual average basis. For the other age groups, the midyear estimates are closely comparable to annual averages (see appendix).

<sup>8</sup> See Beatrice G. Reubens and others, *The Youth Labor Force 1945-1995: A Cross-National Analysis* (New Jersey, Allanheld, Osmun, 1981), p. 70.

<sup>9</sup> See *Youth Unemployment: An International Perspective*, BLS Bulletin 2098 (U.S. Bureau of Labor Statistics, 1981), pp. 18-22.

<sup>10</sup> Martin B. Tracy, "Trends in Retirement," *International Social Security Review*, Number 2, 1979, pp. 131-59.

#### APPENDIX: Data sources and adjustments

Data used in the calculation of participation rates relate to the civilian labor force, adjusted to U.S. concepts. The methods used to make the adjustments are described in *International Comparisons of Unemployment*, BLS Bulletin 1979 (August 1978), appendixes C and D; and in "Supplement to Bulletin 1979," un-

published (January 1982), which is available from the Bureau upon request.

The population base for the participation rates is defined as the civilian noninstitutional population of working age. For most countries, the armed forces had to be excluded from the regularly published population

figures. Lower age limits for the population were adapted to conform to the age at which compulsory schooling ends in each country. This age varied from 14 in Italy to 16 in the United States, France, and Sweden (see note to table 1).

The regularly published population data for the United States, Canada, and Italy refer to the noninstitutional population. In the United States, there were 2.4 million persons age 16 and over residing in institutions—prisons, nursing homes, mental institutions, and so forth—in 1978; this amounted to 1.5 percent of the total population age 16 and over.

Published data for Australia, France, Great Britain, and Sweden include the institutional population. Adjustments have been made to exclude such persons based on published or, in some cases, unpublished estimates obtained from these countries. (The British data by age in tables 3, 4, and 5 could not be adjusted to a noninstitutional basis.) Participation rates for Japan and Germany, however, are still based on data including the institutionalized population, because data on the size of this population group were not available.

In cases where adjustment was possible, the effect of the exclusion of the institutional population was to raise the labor force participation rate by about 1 percentage point, except for the French participation rates. The French rates were raised by only two-tenths of a percentage point, because a majority of the institutionalized population is already excluded from the scope of the labor force survey. There was no significant difference in the impact on participation rates by sex. In all of the countries, the number of men and women residing in institutions is roughly equal.

*Participation rates by age.* Participation rates by age, shown in tables 3, 4, and 5, are based on data on labor force and population by age, adjusted to U.S. concepts where possible. However, the French, German, British, and Italian data in tables 4 and 5 and the British and Italian data in table 3 could not be adjusted to U.S. concepts. Data for France and Germany in tables 4 and 5 are closely comparable with U.S. concepts. The British and Italian data diverge from U.S. concepts to a greater extent. Adjustments were made for the other countries mainly to exclude the institutional population (where possible), military personnel, and unpaid family workers who worked less than 15 hours per week. For most countries, the relevant population and labor force data by age were obtained directly from labor force surveys.

The age distribution of the German labor force prior to 1975 is based upon estimates made by the *Institut Fur Arbeitsmarkt-und Berufsforschung* (IAB). The IAB has adjusted the German labor force survey results so that they constitute a consistent time series. This was

necessary because the survey used a different method of determining the respondent's age beginning in 1975. Previous data were based on the "birth year method," whereby age was determined by subtracting the birth year from the survey year. From 1975 onward, the survey used the "age year method"—that is, the respondent's actual age at the time of the survey was recorded. Use of these two different methods had a large effect on the participation rates for teenagers, 20- to 24-year-olds, and 60- to 64-year-olds, but hardly any effect on other age groups. The large effect on the aforementioned age groups was due to the fact that data for these groups represent the sum of very different participation rates by single years of age—that is, the participation rate for 15-year-olds is much lower than that for 16-year-olds, and so on. Whether someone's age was recorded as 14 or 15 or as 19 or 20 had a large impact on the data for 15- to 19-year-olds. The IAB used data collected on the basis of both age measurement methods for several years in order to estimate a consistent time series of labor force data by age. The following example indicates the extent of the adjustment: from 1974 to 1975, the unadjusted data indicate an increase in teenage participation rates of almost 8 percentage points; the adjusted data show a decline of 1.5 percentage points.

For Great Britain, the data on labor force by age are obtained from estimates through 1979 and projections for 1980 and 1981 made by the British Department of Employment. The department derives these estimates and projections from household survey and census data, supplemented by other information. The agency has adjusted the labor force data to include the unregistered unemployed. However, the figures still differ from U.S. concepts because (1) they exclude all full-time students who are economically active, and (2) they include the armed forces. BLS has made an adjustment to exclude the armed forces. However, no adjustment could be made with regard to working students. The British estimate that the activity rates for teenagers would be raised by about 3 percentage points if working students were included as economically active. The effect on activity rates of young adults age 20 to 24 would be an increase of about 1 percentage point.

The British statistics by age relate to the end of June of each year. This introduces a further element of non-comparability with other countries where data are either annual averages (United States, Canada, Japan, Italy, and Sweden) or relate to periods when students are in school (France, Germany, and Australia). Until 1976, most British students graduated from school in July; therefore, their labor force participation was not covered in the pre-1976 figures. In 1976, new school-leaving regulations were introduced which allowed a greater proportion of 16-year-olds to leave school before the

end of June. This resulted in a large increase in teenage participation rates between 1975 and 1976 which would not have occurred otherwise; the teenage activity rates are overstated in relation to prior years and also in relation to the data for other countries.

The June 1977 data for Great Britain can be compared with a European Community (EC) survey taken in April 1977, a time when most students were still in school. Definitions used in the two sources are very similar, except that the EC survey counts full-time students as economically active. (However, it should be noted that the EC survey still underestimates the true numbers of working students to an unknown degree because it is limited to households, and therefore does not cover students in boarding schools.) The following table shows the participation rates by age according to these two sources.

	<i>EC survey, April 1977</i>	<i>Department of Employment, June 1977</i>
Under age 25 . . . . .	71.0	73.1
16 to 19 years . . . . .	61.1	68.0
20 to 24 years . . . . .	79.5	77.5
25 years or over . . . . .	61.0	60.6

Assuming that the April figures are representative of participation rates for teenagers over 9 months of the year (school term), and that the June figures are representative of the 3 vacation months, an annual average participation rate for teenagers in 1977 would be roughly 63 percent. Therefore, the midyear figures shown in table 3 for 1976 onward are overstated by about 5 percentage points, in terms of an annual average rate. The teenage participation rates for the years before 1976 are somewhat understated in relation to annual averages because they do not include the summer influx of young people into the labor market. For the other age groups, the midyear figures closely approximate the annual average.

For Italy, the participation rates by age could not be fully adjusted to U.S. concepts because age breakdowns were not available for all the required data. In table 1, the data are fully adjusted to U.S. concepts, and they show an overall participation rate of 48.0 in 1980. In table 3, which shows participation rates for youth and adults, the overall participation rate (not shown) would be 46.9 percent, indicating that the participation rates by age are slightly understated in relation to U.S. concepts.

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#### A note on communications

The *Monthly Labor Review* welcomes communications that supplement, challenge, or expand on research published in its pages. To be considered for publication, communications should be factual and analytical, not polemical in tone. Communications should be addressed to the Editor-in-Chief, *Monthly Labor Review*, Bureau of Labor Statistics, U.S. Department of Labor, Washington, D.C. 20212.

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