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Volume 1—Employment

Paper No. 6

THE IMPACT OF MACROECONOMIC CONDITIONS ON EMPLOYMENT OPPORTUNITIES FOR WOMEN

A STUDY

PREPARED FOR THE USE OF THE

JOINT ECONOMIC COMMITTEE CONGRESS OF THE UNITED STATES

JANUARY 3, 1977

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LETTER OF TRANSMITTAL

DECEMBER 28, 1976.

To the Members of the Joint Economic Committee:

Transmitted herewith is a study entitled "The Impact of Macroeconomic Conditions on Employment Opportunities for Women." This study was prepared by Dr. Ralph Smith, a Senior Research Associate at the Urban Institute, as part of the Committee's observance of the 30th Anniversary of the Employment Act of 1946. It is one of a number of studies undertaken to assist the Committee in developing recommendations for more adequately fulfilling the Employment Act goals of "maximum employment, production, and purchasing power."

This study analyzes the impact of the 1974–75 recession on the employment of women in the American economy and shows how the employment prospects for women will be affected by the pace of the economic recovery.

Using the Urban Institute's econometric model of the American labor market, Dr. Smith found that the recession cost women 1.8 million jobs. These are jobs which would have been available if the Nation's economy had achieved full employment, but which evaporated in the recession. According to Dr. Smith's calculations, almost 40 percent of the jobs which disappeared because of the recession were lost by women, many of whom were supporting families or making necessary contributions to family income. In addition, Dr. Smith found, if the recession had not been so concentrated in construction and heavy industry but had been more evenly distributed through the economy, women would have lost up to 500,000 more jobs than they actually did.

For the future, women have an even greater stake in a strong recovery than men do. When Dr. Smith compared a strong recovery path (6 percent annual growth in GNP) with a weak path (5 percent growth), he discovered that more than half the additional jobs created under a strong growth path will go to women, and that women will have 1.4 million more jobs by 1980 under the strong recovery path than under the weak one.

In this wide-ranging and comprehensive analysis, Dr. Smith also looks at how the recession and recovery affect total joblessness for women where joblessness includes both those women who are officially counted as unemployed as well as those who have become so discouraged by inadequate job opportunities that they have simply given up looking for work. Here again, women are more seriously affected than men by the state of the economy, since they tend to drop out of the labor force more than men during bad times and reenter more during good times.

I would like to take this opportunity to thank Dr. Smith for the valuable work he has done to assist the Committee. I believe Members of the Joint Economic Committee and other Members of Congress will find this study most helpful and informative.

The views expressed in the study are those of the author and do not necessarily represent the views of the Members of the Joint Economic Committee or of the committee staff.

Sincerely,

HUBERT H. HUMPHREY,
Chairman, Joint Economic Committee.

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THE IMPACT OF MACROECONOMIC CONDITIONS ON EMPLOYMENT OPPORTUNITIES FOR WOMEN

By **Ralph E. Smith***

SUMMARY AND CONCLUSIONS

This study examines the extent to which the state of the overall economy affects the success of women in the labor market. What stake do working women have in the achievement of a high-growth economy? The depth of the recent recession and the uncertainty of the dimensions of the recovery, combined with the continued growth in the proportion of working-age women who want to work outside the home, make this a vital issue for people concerned with the achievement of equality between the sexes.

The study has two parts. The first examines what happened to women in the labor market since the start of the recession in late-1973. The second examines their employment prospects through the remainder of the decade under alternative assumptions about overall economic conditions and about women's own interest in participating in the labor market. An appendix includes information about the labor market model used in this study and about the differences in impacts by race and by age. This summary presents the key elements of the techniques used and our major findings.

Methods

The major task in measuring the impact of fluctuations in overall economic conditions on women's employment is to distinguish between what actually occurred and what would have occurred in the absence of the cyclical variation. Data depicting actual experiences are available from regular household surveys conducted by the Census Bureau for the Bureau of Labor Statistics. An econometric model of the U.S. labor market, developed at the Urban Institute, is used to estimate what would have occurred had the economy expanded at a steady rate, providing sufficient job opportunities to maintain a four percent national unemployment rate. The same model is used to project the labor market status of men and women through the remainder of the decade under alternative growth rates.

Most of the analysis reported here focusses on the impact of overall economic conditions on the number of jobs women hold. A more comprehensive examination should include the impacts of these conditions on the quality of these jobs, including wages, hours, working conditions, and opportunities for advancement. However, even estimating the number of jobs lost by women due to the recent recession and their stake in the recovery is a substantial task.

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*The author is a Senior Research Associate at the Urban Institute. The research reported here was supported by the Ford Foundation through a grant to the Urban Institute's Program on the Social and Economic Status of Women. The opinions expressed are those of the author and do not necessarily reflect the views of the Urban Institute or its sponsors.

Impact of the Recent Recession

The analysis covers the period between the start of the recession in the fourth quarter of 1973 and the fourth quarter of 1975. During this 2-year period, the number of people unemployed rose by 3.6 million, the largest increase since the Depression. The major conclusions from our analysis of this period are:

The total losses in employment opportunities associated with the recession are much larger than the traditional employment and unemployment statistics would suggest. The unemployment statistics exclude people who are not actively seeking jobs; changes in employment level over the course of the recession do not take into account the growth in jobs required merely to accommodate a normally growing labor force. Using a jobless statistic which does take these forces into account, it is estimated that the recession caused a 4.5 million reduction in job opportunities—a 3.6 million increase in unemployment and a 0.9 million reduction in the number of people in the active labor force.

Women experienced substantial job losses due to the recession, losses similar to those of men. Between 1973–IV and 1975–IV, female employment rose by 1.8 million less than it would have risen in the absence of the recession. Women held two of five jobs prior to the recession and incurred two out of five of the job losses resulting from the recession.

The main reason that women did not do worse appears to be that the recession struck hardest at industries and occupations in which women are most underrepresented. Jobs in the construction and durable goods manufacturing industries declined substantially; neither industry had many women on their payrolls. The major sources of jobs for women—retail trade and services—were least affected by the recession. Had the recession struck all industries with equal force, about 500,000 more women would have lost jobs.

Women's employment share rose in some industries, but declined in others, the most notable decline occurring in the durable goods manufacturing sector. In that industry—where massive layoffs occurred and where seniority rules prevailed—women lost about 100,000 more jobs in 1975 than if the employment losses had been proportionate to previous employment.

Outlook for the Recovery

The recovery from the recent recession is underway, but there is considerable uncertainty about its future course. To indicate the degree to which women's prospects in the labor market are tied to the future state of the overall economy, this study estimated women's employment outlook under two alternative recovery paths through the remainder of the decade. These correspond to the two sets of macroeconomic assumptions used by the Congressional Budget Office to make budget estimates through fiscal year 1981.[1] Under

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[1] "Five-Year Budget Projections, Fiscal Years 1977–81," CBO, January 26, 1976. These are not predictions of future economic conditions. In December 1976 the CBO published projections for fiscal years 1978 through 1982, using different sets of assumptions. Under their new baseline projections, the unemployment rate would decline to 4.8 percent in 1980. Under the assumption of a less vigorous economic expansion, it would decline to 5.8 percent.

Path A a strong growth in the economy would reduce the national unemployment rate from 8.5 percent in 1975 to 4.5 percent in 1980; under Path B, the unemployment rate would be 6.3 percent in 1980.

Working women's share of the gains from recovery will depend, of course, on the recovery's specific course, especially its industrial composition. It will also depend on the extent to which the proportion of women seeking to participate in the paid labor force continues to rise and their success in entering new fields. Most of the estimates presented in this study are based on a labor market model which implicitly assumes that underlying trends and cyclical patterns for men and women will continue. Some alternative estimates are based on a more rapid growth in the female labor force. The major results of these projections include:

If past patterns continue, total employment must increase by 11.4 million between 1975 and 1980 to reduce the unemployment rate to 6.3 percent and by an additional 2.8 million to reach 4.5 percent. Most of these jobs will be needed to accommodate the growth in the labor force expected from increases in the working-age population and in the proportion of that population participating in the labor force. The growth in the labor participation rate, in turn, will be affected by the growth in job opportunities. A more rapidly growing economy encourages more people, especially women and teenagers, to actively seek work.

The total employment impact of achieving a higher economic growth rate is much larger than indicated by the unemployment projections. For example, in addition to the 1.8 million difference in unemployment for 1980 between Path A and Path B, another 1.0 million people would be in the labor force under Path A.

Women's employment stake in achieving a higher growth rate is larger than men's. Half of the aggregate employment gains would go to women, even though women would account for 43 percent of the labor force.

The absolute and relative importance to women of achieving more rapid recovery is understated by examination of unemployment alone. Of the 1.4 million additional jobs women would hold under the higher growth path, less than 0.6 million are reflected in lower unemployment; the remainder would go to absorbing a higher labor force participation rate. The unemployment rate for women would be 1.4 percentage points lower under Path A than Path B; their jobless rate (which reflects labor force responses as well) would be 3.3 points lower.

If the growth in the female labor force is larger than past patterns suggest, more aggregate demand will be required to reduce the national unemployment rate. Female participation is quite difficult to predict. If, for example, the female labor force grew by one million more than we originally projected for 1980, then the same number of jobs that generated a 4.5 percent unemployment rate under Path A would result in a 4.9 percent rate; the growth in jobs that generated a 6.3 percent unemployment rate under Path B would yield a 7.0 percent rate.

A higher female labor force growth would result in more employment for women and less for men, unless accompanied by increased aggregate demand. There is not a one-for-one employment trade-off between men and women, since some of the additional female

employment would reduce job vacancies. A high-growth economy facilitates a more rapidly growing female labor force.

All of the findings reported here are based on data and estimation techniques subject to a variety of potential errors. Use of past patterns as a guide to future conditions is an especially error-prone activity. The recent history of economic forecasts does not inspire confidence. Nonetheless, the evidence in support of the basic conclusions contained in this report is quite strong. The proportion of women seeking to work outside the home has been rising for many years. Their success in finding jobs has been closely related to the state of the overall economy. There is no reason to expect that in the next few years these patterns will dramatically change.

I. THE IMPACT OF THE RECENT RECESSION: HAS THE RECESSION BEEN AN EQUAL OPPORTUNITY DISEMPLOYER?[1]

Since the start of the recession in late-1973, slack aggregate demand has caused millions of potential workers to be without jobs. In assessing the damages of this recession it is useful to examine whose jobs were lost. This chapter focuses on the impact of the recession on the employment of women. Groups concerned with the achievement of equality for women have expressed considerable concern that this recession could halt or reverse whatever gains in the paid labor market women have made in recent years.

Previous research has suggested that the conventional measures of job market success and failure can be misleading when applied to this group's activities.[2] Since many women react to job losses by leaving the labor force, their unemployment rate understates their joblessness. In addition, movements in their employment level reflect both cyclical variation in job opportunities and a pronounced upward trend in the size of the female labor force, due to population growth and a secular rise in their labor force participation rate.

We begin with a discussion of the problems associated with measuring the demographic incidence of a recession and present our methods for dealing with them. Next, we present estimates of whose jobs were lost during the recent recession. Particular attention is given to determining whether the job losses of women were proportional to their share of total employment. The last two sections interpret our findings and discuss some of their implications for the post-recession outlook for women.

Methods

In a static labor market with the size and composition of the labor force held constant, the measurement of the recession's employment and unemployment impacts would be a trivial task. A low-unemployment base period could be selected and each recession-caused impact could be directly measured as the change from the base level. However, this comparison does not take into account normal labor force growth resulting from total population growth, changes in the demographic distribution of the population, and changes in the rate of labor force participation within each group. The full employment target is moving and moving at different rates for different groups.

Recently, the civilian noninstitutional population, age 16 and over, has been growing by about 2.7 million per year. With at least 61

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[1] An earlier version of this chapter has been circulated as *Urban Institute Working Paper 876–01* (March 1976) and was presented to the American Economic Association in September 1976.

[2] R. E. Smith, J. E. Vanski, and C. C. Holt, "Recession and the Employment of Demographic Groups," *BPEA* (3: 1974), pp. 737–760, and R. E. Smith and J. E. Vanski, "The Jobless Rate: Another Dimension of the Employment Picture," *Urban Institute Paper 850–76*, 1975.

percent of the population seeking jobs, the labor force normally grows by over 1.6 million people each year from population growth alone. Therefore, employment opportunities must expand just to keep pace with the population increase.

There has also been an increase in the fraction of the working-age population that participates in the labor force, largely attributable to a sharp increase in the participation rate of women, not entirely offset by a decrease in the male participation rate. These trends reflect fundamental changes in the attitudes and expectations of women as well as shifts in technology and in the need for women to devote all of their time to work in the home. Estimation of the total employment losses associated with the recession should be based on a comparison that takes into account these secular changes in participation.

An additional complication arises because participation rates of most demographic groups tend to fall in a recession or increase at a slower than usual rate. Adult women are especially likely to react to a reduction in job opportunities by leaving the labor force. For this reason, aggregate employment losses during a recession will be larger than the concurrent unemployment increases and their demographic distributions will differ.

In order to reflect more accurately the impacts of cyclical fluctuations on the availability of jobs, we use a jobless measure that combines both unemployment and labor force variation. Our jobless rate is equivalent to what others have called an "adjusted unemployment rate," where the adjustment consists of adding "hidden unemployment" to the official unemployment rate.[3] The unemployment rate indicates the percentage of the *current* labor force without jobs; the jobless rate is an estimate of the percentage of the *potential* labor force without jobs. The difference between the number of people who would be available and the number who are actually working is our estimate of joblessness. The jobless rate is computed as:

$$\text{Jobless Rate} = \frac{\text{Potential Labor Force–Employment}}{\text{Potential Labor Force}} \times 100,$$

where potential labor force is an estimate of the size of the labor force at full employment, and employment is the number of people employed that month according to the Current Population Survey. We use a four percent unemployment rate in defining the full employment economy, the rate currently used by the Council of Economic Advisers in determining the nation's potential GNP and the full employment government surplus or deficit.[4]

Our estimates are based on the Urban Institute's monthly model of the labor market.[5] Through simulation, the model provides conditional forecasts of employment, unemployment, and labor force nonparticipation levels for sixteen demographic groups,[6] as well as the

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[3] Many of the labor participation studies that use these concepts are reviewed by H. S. Parnes, "Labor Force Participation and Labor Mobility," in G. C. Somers, ed., *A Review of Industrial Relations Research,* I (1970).

[4] *Economic Report of the President,* January 1976, p. 54. The Council is currently reviewing its procedure.

[5] A brief description of the model is provided in the Appendix; for a more detailed discussion, see R. E. Smith, "A Simulation Model of the Demographic Composition of Employment, Unemployment, and Labor Force Participation," *Research in Labor Economics,* Vol. I, Forthcoming.

[6] Ages 16–19, 20–24, 25–59, and 60 and over for white and nonwhite males and females.

monthly probabilities of transition between the three labor market states. The key exogenous variable is the total job stock, as measured by the sum of aggregate employment and job vacancies. The model's parameters are from a set of equations that relate each demographic group's labor market transition probabilities to cyclical and trend variables. These were estimated with monthly Current Population Survey data for the period, July 1967 through December 1973.

To estimate the size of each group's potential labor force, an aggregate job stock path was chosen that generated a constant four percent aggregate unemployment rate over the entire decade. The estimates through the end of 1975 are used in this chapter as a dynamic standard against which to compare the recent employment experiences of men and women. The potential labor force estimates for 1976 through 1980 are used in the next chapter to estimate the impact of alternative paths to economic recovery on each group.

We estimate that in recent years the potential labor force has been growing by about 2.1 million people per year, with females accounting for 63 percent of this growth. These estimates reflect both population growth and our estimates of each group's specific participation rate trends. Within the context of a growing economy, the female participation rate is expected to increase by 0.91 percentage points per year and the male participation rate to decline by 0.34; the aggregate rate would increase by 0.33 points.

Our potential labor force and hence our jobless estimates are subject to the usual kinds of estimation and simulation errors. However, it is unlikely that these would be large enough to alter our major conclusions. Errors in the initial (pre-recession) potential labor force and jobless levels would not affect our estimates of the impact of the recession, itself, since the impacts are measured by the changes in joblessness during the recession. Subsequent growth rates in each group's potential labor force are based on group population levels and simulated participation rate trends from our model. These participation patterns are similar to those of the late-sixties, the last period of fairly stable low unemployment.[7]

Recession's Impact

Based on both our jobless measure and real GNP, the recession began in the fourth quarter of 1973. The most severe period of the recession occurred between the third quarter of 1974 and the first quarter of 1975. During this half-year, real GNP fell by over 4 percent, employment fell 1.9 million, unemployment rose 2.4 million, and total joblessness rose by nearly 3 million people.[8] Throughout the remainder of 1975, GNP and employment rose. However, total joblessness continued to increase. This section provides estimates of the job market effects of the slack demand during the initial stage of the recession, during the period in which aggregate employment and GNP plummetted, and as the recovery began.

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[7] Between 1967 and 1969 aggregate unemployment declined from 3.8 percent to 3.5 percent, while the size of the military remained at around 3.5 million. The civilian labor participation rate rose by 0.07 percentage points in 1968 and by 0.38 points in 1969; the female participation rate rose by 0.49 and 1.10 points; and the male participation rate fell by 0.34 and 0.24 points.

[8] All labor force, employment, and unemployment data used here are from the 1976 *Economic Report* and *Employment and Earnings,* Vol. 22 (Feb. 1976), revised seasonally adjusted series.

The upper part of Figure 1 illustrates the growth in the potential labor force of each sex from the start of the recession through the end of 1975. Also shown are the fluctuations in each group's actual labor force and employment levels during this period. The difference between potential labor force and actual employment, depicted by the shaded areas, is the extent of joblessness experienced by each group. The difference between a group's actual labor force and employment levels is its unemployment. The corresponding jobless rate is shown in the lower part of the figure. Table 1 provides the same information for the first and last quarters and for the beginning and end of the period in which employment declined and the Appendix provides estimates by race and age.

Figure 1

Labor Market Conditions, By Sex, 1973IV-1975IV

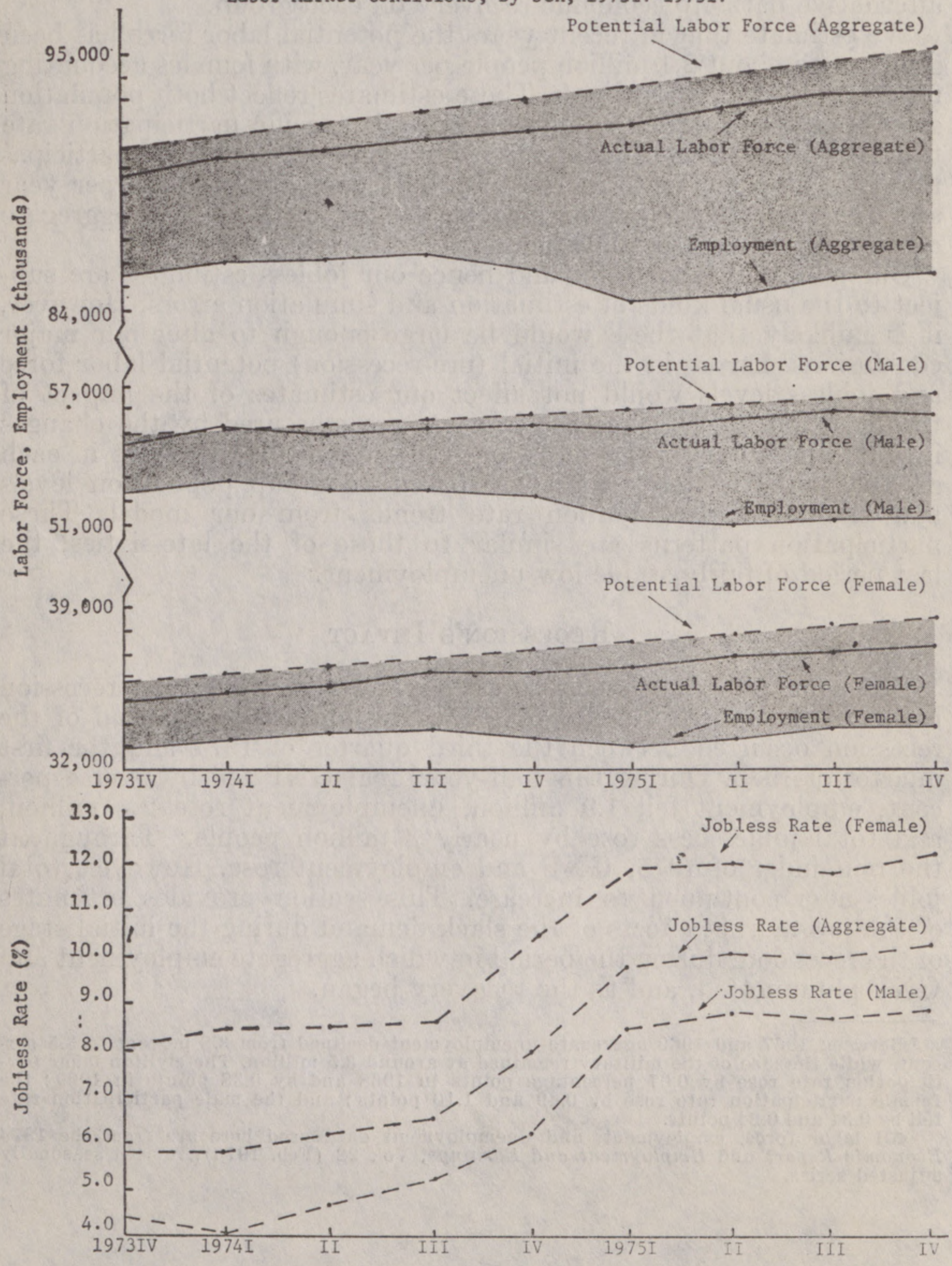

TABLE 1.—LABOR MARKET IMPACTS OF THE RECESSION, BY SEX, SELECTED QUARTERS

[In thousands, except as indicated]

	1973 IV	1974 III	1975 I	1975 IV	Change 1974 III–1975 I	Change 1973 IV–1975 IV
Aggregate:						
Labor force	89,746	91,343	91,789	93,153	446	3,407
Employment	85,428	86,206	84,313	85,241	—1,893	—187
Unemployment	4,318	5,138	7,476	7,912	2,338	3,594
Unemployment rate (percent)	4.8	5.6	8.1	8.5	2.5	3.7
Potential labor force	90,716	92,327	93,401	95,012	1,074	4,296
Jobless	5,288	6,121	9,088	9,771	2,967	4,483
Jobless rate (percent)	5.8	6.6	9.7	10.3	3.1	4.5
Female:						
Labor force	35,057	36,158	36,555	37,338	397	2,281
Employment	32,978	33,706	33,150	33,903	—556	925
Unemployment	2,079	2,452	3,406	3,435	954	1,356
Unemployment rate (percent)	5.9	6.8	9.3	9.2	2.5	3.3
Potential labor force	35,880	36,894	37,572	38,592	678	2,712
Jobless	2,902	3,188	4,422	4,689	1,234	1,787
Jobless rate (percent)	8.1	8.6	11.8	12.2	3.2	4.1
Male:						
Labor force	54,689	55,185	55,233	55,815	48	1,126
Employment	52,450	52,499	51,163	51,339	—1,336	—1,111
Unemployment	2,239	2,686	4,070	4,476	1,384	2,237
Unemployment rate (percent)	4.1	4.9	7.4	8.0	2.5	3.9
Potential labor force	54,836	55,430	55,826	56,420	396	1,584
Jobless	2,386	2,936	4,663	5,081	1,732	2,695
Jobless rate (percent)	4.4	5.3	8.4	9.0	3.1	4.6
Female share of aggregate:						
Labor force (percent)	39.1	39.6	39.8	40.1	89.0	67.0
Employment	38.6	39.1	39.3	39.8	29.4	----------
Unemployment	48.1	47.7	45.6	43.4	40.8	37.7
Potential labor force	39.6	40.0	40.2	40.6	63.1	63.1
Jobless	54.9	52.1	48.7	48.0	41.6	39.9

Fourth Quarter 1973 to Third Quarter 1974

At the start of the recession the economy was already operating below full employment. From our model, we estimate that to achieve a 4 percent unemployment rate in the fourth quarter of 1973 would have required jobs for 87.1 million people,[9] 1.7 million more than were employed at that time. This would have reduced the aggregate jobless rate from 5.8 percent of the potential labor force to 4.0 percent; the female jobless rate to 5.0 percent; and the male rate to 3.3 percent.[10] Note that even at "full employment," 3.6 million people—about half women—would still have been unemployed. The higher rate for women reflects labor market problems that they encounter other than those associated with slack aggregate demand. The slight weakness in the labor market in 1973 and the subsequent recession added to their problems.

From the beginning of the recession through the third quarter of 1974, the quarter in which aggregate employment peaked, the labor force grew by 1.6 million people, equal to the growth in the potential labor force. Since job opportunities increased by only half this amount, joblessness rose by 800,000.

During this early stage of the recession, women fared much better than men. Females received over 90 percent of the net increase in jobs. While women held 39 percent of the jobs at the start of the recession, they incurred only 34 percent of the total increase in joblessness. Their jobless rate rose by 0.5 percentage points, about half the increase for men.[11]

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[9] Ninety-six percent of the 90.7 million potential labor force.

[10] These estimates are derived from the same model simulation used to generate our potential labor force estimates.

[11] The number of women in the labor force rose substantially during this period, by 100,000 more than expected under full employment conditions. The male labor force grew by less than its potential. Consequently, examination of changes in their relative unemployment rates, alone, would suggest that the two groups incurred similar losses.

Third Quarter 1974 to First Quarter 1975

During the steep decline in employment that began in the third quarter of 1974, total joblessness increased by nearly 3 million people. Unemployment increased 2.3 million, while the labor force grew by 600,000 less than its potential. The jobless rate rose by 3.1 percentage points to 9.7 percent.

Based on our jobless estimates, women did about as poorly as men, but no worse. Their share of total employment losses (29 percent) was less than their employment share. Taking into account their more rapid potential labor force growth, their share of the increased joblessness was almost identical to their employment share.

Each group's labor force growth fell considerably below its potential, with that of men hardly growing at all. Hence jobless rates rose by more than unemployment rates. The unemployment rates of each group increased by 2.5 percentage points, while the jobless rate of females rose 3.2 points and of males 3.1 points.

First Quarter to Fourth Quarter 1975

The economy began to recover in 1975, but the expansion in employment was insufficient to keep pace with the growing supply of labor. From the first quarter to the fourth quarter of 1975 employment rose by 900,000, while the active labor force rose by 1.4 million, slightly under its potential growth rate. The national unemployment rate rose 0.4 percentage points during period, while the jobless rate rose 0.6 points. Women accounted for 39 percent of the nearly 700,000 additional people made jobless by inadequate labor demand during this period, slightly reducing their share of total joblessness.

Net Impact

Over the entire 2-year period of this analysis, employment fell by 200,000 while the potential labor force rose by 4.3 million people, resulting in a 4.5 million net increase in the number of potential workers without jobs. All but 900,000 of this increase is observed in the rise in aggregate unemployment; the remainder is reflected in the slower growth in the labor force.

Women accounted for 40 percent of the increase in joblessness—nearly identical to their pre-recession employment share. They entered the recession with 55 percent of the job losses associated with a slack labor market and reduced their share to 48 percent 2 years later.[12] Female employment rose by 900,000, while male employment fell by 1.1 million. Females incurred only 38 percent of the increase in total unemployment. By any of these measures, their relative position since the start of the recession has not worsened. For women, the recession *has* been an equal opportunity dis-employer.

Interpretation of Recent Patterns

We now turn to a more speculative set of issues. Why did women not do worse in this recession and what is the likelihood that their relative position will survive the recovery? Three kinds of explanations are possible, each with its own implications for assessing the present recession and the equal opportunity outlook.

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[12] From 1973–IV to 1974–I, women's share of total joblessness rose from 54.9 percent to 57.3 percent. Their jobless shares in the subsequent seven quarters were: 54.5, 52.1, 52.9, 48.7, 57.8, 47.9, and 48.0 percent.

First, the composition of this recession may have favored women; "women's jobs" may have been relatively unaffected. The construction and automobile manufacturing industries, for example, have been particularly hard hit and employ relatively few women.[13] To the extent that this accounts for the relative gains of women, there is less reason to expect either a permanent increase in women's employment share or in their invulnerability to recessions. The transitory gains in the relative position of black workers during the 1970–71 downturn due to their small representation in the aerospace industry is analogous.

This hypothesis is supported by recently published annual cross-tabulations from the Current Population Survey on employment by industry and sex.[14] Between 1974 and 1975, total employment decreased by almost 1.2 million, while female employment rose by over 100,000. Using the techniques presented earlier, we estimate that total joblessness rose 3.3 million, including 1.2 million women. From the industrial data we estimated the number of women who would have been employed in 1975 if the decline in total employment had affected all industries proportionately.

Table 2 presents our estimates. The first four columns provide the actual employment levels in each of 12 major industries in 1974 and 1975 for all workers and for women. For these industries, employment in 1975 was an average of 1.33 percentage points below the 1974 level. The next column shows the number of people who would have been employed in each industry if employment in each industry had decreased by the average percentage. The final column indicates the number of women who would have been employed in each industry if the industry had experienced the hypothetical employment loss; this was computed by multiplying the industry employment in the

TABLE 2.—IMPACT OF A SHIFT IN INDUSTRIAL STRUCTURE ON FEMALE EMPLOYMENT

[Annual averages in thousands]

Industry	Total employment [1] 1974	Total employment [2] 1975	Female employment [1] 1974	Female employment [2] 1975	Hypothetical total employment [3] 1975	Hypothetical female employment [4] 1975
	(1)	(2)	(3)	(4)	(5)	(6)
Agriculture	3,492	3,381	592	579	3,445	589
Mining	655	732	61	70	646	62
Construction	5,454	5,015	323	311	5,381	334
Manufacturing durables	12,523	11,441	2,800	2,479	12,355	2,681
Manufacturing nondurables	8,356	7,834	3,225	3,031	8,244	3,190
Transportation public utilities	5,716	5,623	1,203	1,231	5,639	1,235
Wholesale trade	3,323	3,333	753	760	3,278	747
Retail trade	13,930	14,137	6,726	6,844	13,743	6,652
Finance insurance real estate	4,697	4,665	2,431	2,396	4,634	2,382
Private household services	1,430	1,378	1,261	1,213	1,411	1,242
Other services	21,706	22,477	12,663	13,162	21,415	12,549
Public administration	4,654	4,770	1,379	1,477	4,592	1,423
Total	85,936	84,786	33,417	33,553	84,783	33,086

[1] G. P. Green "Publication of Industry Employment Estimates from the Current Population Survey" "Employment and Earnings" vol. 22 (February 1976) p. 18.
[2] Ibid., p. 19.
[3] See text for calculation method. Hypothetical total employment should equal actual total employment except for rounding error.
[4] See text for calculation method.

[13] R. L. Stein and D. P. Klein attribute the sharp increase in unemployment among male household heads to the industrial composition; see "Unemployment Among Household Heads," *BLS Report 443* (May 1975).
[14] G. P. Green, "Publication of Industry Employment Estimate from the Current Population Survey," *Employment and Earnings*, Vol. 22 (February 1976), pp. 11–27.

preceding column by women's actual proportion of employment in that industry in 1975.

If the 12 industries had suffered proportionate employment losses, 33.1 million women would have held jobs in 1975, about 500,000 fewer women than actually were employed. That is, because the actual employment losses in 1975 were smaller in industries in which women were concentrated, women lost 500,000 fewer jobs. For example, comparison of the actual and hypothetical employment estimates in columns (2) and (5) shows that about 400,000 more construction jobs and 900,000 more jobs in durable goods manufacturing were lost in 1975 than would have been lost if the recession had cut across all industries with equal severity; women held only about 6 percent of the construction jobs and 22 percent of the durable goods jobs. On the other hand employment in retail trade and non-household services continued to grow in 1975, both of which are major employers of women.

From these calculations we estimate that, had the industrial composition of employment not shifted, female employment would have fallen by about 300,000 from 1974 to 1975 and their joblessness would have increased by 1.7 million. Fifty-one percent of the net increase in joblessness would have been women, rather than the 37 percent share they actually incurred due to the recession. Under these conditions, the recession would *not* have been an equal opportunity dis-employer.[15]

A similar analysis was performed using Current Population Survey tabulations of employment by occupation and sex. Our findings are reported in Table 3. From them, we estimate that the shift in the occupational mix of employment between 1974 and 1975 increased female employment by approximately 500,000—the same estimate as in the industrial analysis. To some extent they reflect two different ways of measuring the same underlying phenomena. The occupations

TABLE 3.—IMPACT OF A SHIFT IN OCCUPATIONAL STRUCTURE ON FEMALE EMPLOYMENT

[Annual averages, in thousands]

Occupation	Total employment [1] 1974	Total employment [2] 1975	Female employment [3] 1974	Female employment [3] 1975	Hypothetical total employment [4] 1975	Hypothetical female employment 1975
	(1)	(2)	(3)	(4)	(5)	(6)
Professional, technical	12,338	12,748	4,997	5,264	12,172	5,027
Managers, administrators, except farm	8,941	8,891	1,654	1,725	8,821	1,632
Sales	5,417	5,460	2,264	2,321	5,344	2,234
Clerical	15,043	15,128	11,673	11,770	14,841	11,517
Craft	11,477	10,972	516	505	11,323	510
Operatives, except transport	10,627	9,637	4,166	3,701	10,485	4,110
Transport equipment operatives	3,292	3,219	168	183	3,248	166
Nonfarm laborers	4,380	4,134	355	355	4,321	350
Private household service	1,228	1,171	1,201	1,141	1,212	1,185
Cleaning service	2,136	2,210	748	765	2,107	738
Food service	3,538	3,640	2,484	2,533	3,491	2,450
Health service	1,612	1,718	1,436	1,527	1,590	1,417
Personal service	1,606	1,628	1,208	1,210	1,584	1,192
Protective service	1,254	1,290	80	81	1,237	79
Farm, farm managers	1,643	1,593	99	102	1,621	97
Farm laborers, supervisors	1,405	1,343	385	359	1,386	380
Total	85,936	84,783	33,434	33,542	84,783	33,084

[1] "Employment Data for Selected Occupations, 1974," "Employment and Earnings," vol. 21 (June 1975), pp. 7–8.
[2] G. P. Green, "Employment Data for Selected Occupations, 1975," "Employment and Earnings," vol. 22 (January 1976) pp. 11–12.
[3] From percentages supplied in same articles.
[4] See text for calculation method.

[15] The same analysis was made using the 1973 industrial structure of employment as the base. There was very litle difference in the industrial mix between 1973 and 1974. With the 1973 structure, female employment would have been 50,000 smaller in 1974 and 525,000 smaller in 1975.

most severely affected by the recession—craft and kindred workers and operatives—provide very few jobs for women. Professional and technical, sales, and clerical occupations, on the other hand, were less affected.

The assumptions behind these calculations are too restrictive to permit a precise estimate of the impact of the shift in composition of demand. Much more detailed industrial and occupational data should be used; this would probably increase the estimated impact. Simultaneous standardization for industry and occupation also might increase these estimates. It would also be useful to examine the extent to which these patterns are similar to those of previous recessions.

Employers' Behavior

A second way in which women's relative position could have been altered is through a change in employer behavior. In their layoff policies, employers may have treated men and women more even-handedly than in the past. Whether this was due to legal action, the threat of legal action, or a change in employer attitudes, this would be an encouraging development for the cause of women's rights. As employers recall their laid-off workforce, women's employment share would be likely to decline. But, in the longer run, a change in the behavior of employers would result in a permanent gain in women's employment share.

While there is certainly anecdotal evidence that some firms have responded to affirmative action responsibilities by hiring more women or laying off a smaller proportion of women than they otherwise would have, it is doubtful that the aggregate impact of these actions could have been very large. A very rough indication of this can be seen by examining changes in women's proportion of employment within each industry and occupation over the past year, shown in Tables 4 and 5.

TABLE 4.—IMPACT OF A CHANGE IN THE PROPORTION OF WOMEN WITHIN EACH INDUSTRY

[Annual averages, in thousands]

Industry	Female share of industry employment [1]		Female employment,[1] 1975	Hypothetical female employment,[2] 1975	Impact of change in female share,[3] 1975
	1974	1975			
	(1)	(2)	(3)	(4)	(5)
Agriculture	0.1695	0.1713	579	573	4
Mining	.0931	.0956	70	68	2
Construction	.0592	.0620	311	297	14
Manufacturing, durables	.2236	.2167	2,479	2,558	−79
Manufacturing, nondurables	.3860	.3869	3,031	3,024	7
Transportation, public utilities	.2105	.2189	1,231	1,184	47
Wholesale trade	.2266	.2280	760	755	5
Retail trade	.4828	.4841	6,844	6,826	18
Finance, insurance, real estate	.5176	.5136	2,396	2,415	−19
Private household services	.8818	.8803	1,213	1,215	−2
Other services	.5834	.5856	13,162	13,113	49
Public administration	.2963	.3096	1,477	1,413	64
Total	.3889	.3957	33,553	33,441	112

[1] From table 2.
[2] Calculated by multiplying the 1974 female share of industry employment by the total employment in that industry in 1975.
[3] Col. (3) munus col. (4).

TABLE 5.—IMPACT OF A CHANGE IN THE PROPORTION OF WOMEN WITHIN EACH OCCUPATION

[Annual averages, in thousands]

Occupation	Female share of occupation employment		Female employment, 1975	Hypothetical female employment,[2] 1975	Impact of change in female share,[3] 1975
	1974	1975			
	(1)	(2)	(3)	(4)	(5)
Professional, technical	0.4050	0.4129	5,264	5,163	101
Managers, administrators, except farm	.1850	.1940	1,725	1,645	80
Sales	.4179	.4251	2,321	2,282	39
Clerical	.7760	.7780	11,770	11,739	31
Craft	.0450	.0460	505	493	12
Operatives, except transport	.3920	.3840	3,701	3,778	−77
Transport equipment operatives	.0510	.0568	183	164	19
Nonfarm laborers	.0811	.0859	355	335	20
Private household service	.9780	.9744	1,141	1,145	−4
Cleaning service	.3502	.3462	765	774	−9
Food service	.7021	.6959	2,533	2,556	−23
Health service	.8908	.8888	1,527	1,530	−3
Personal service	.7522	.7432	1,210	1,225	−15
Protective service	.0638	.0628	81	82	−1
Farm, farm managers	.0603	.0640	102	96	6
Farm laborers, supervisors	.2740	.2673	359	368	−9
Total	.3890	.3956	33,542	33,375	167

[1] From table 3.
[2] Calculated by multiplying the 1974 female share of occupation employment by the total employment in that occupation in 1975.
[3] Col. (3) minus col. (4).

Changes in women's employment share within most industries were small. The only major industry in which women's share fell in 1975 was durable goods manufacturing, where massive layoffs occurred and where seniority rules prevailed; had their share of durable good jobs remained in the 1974 proportion, female employment would have been 80,000 higher. Minor gains were recorded in most of the other industries. The net impact of changes in the female share of jobs within each industry only accounted for about 110,000 additional jobs.[16] The corresponding occupational analysis yielded similar results. Women increased their employment share in all major occupations except operatives and service workers. Changes in the proportion of females in each occupation increased female employment by 170,000 over what it would have been had the proportion of women in each occupation remained at its 1974 value. Further disaggregation by industry and occupation might change the estimated impacts. Nonetheless, our estimates do not provide much basis for optimism.

Women's Behavior

Finally, the attitudes and behavior of women, themselves, may have changed more rapidly than past patterns would have predicted. Our potential labor force estimates reflect participation behavior that could be inferred from the 1967–1973 period. If women are increasing their participation at an even greater rate, this could affect their employment levels as well. The implications of such changes are not as straight-forward as of the first two explanations. If the growth rate in women's labor supply is increasing, but nothing else changes, then more employment *and* unemployment of women is a likely outcome.

[16] Estimated from data in Table 2 by multiplying each industry's actual employment in 1975 by the female proportion of that industry's employment in 1974 and comparing the result with women's actual employment in that industry in 1975.

More women will be competing with men and other women for the same number of jobs. In the extreme case of a completely compartmentalized labor market, these women would be competing only against other women, in which case the cost of any employment gains may be a lower growth in wages. It also is important to determine why women's behavior has changed. If the changes were a response to unique characteristics of the recent period—for example, the phenomenon of high unemployment and high inflation rates or the temporary liberalization of unemployment insurance—then the recent improvement in their relative position might be transitory.

The evidence that changes in women's behavior did occur is strong. Past cyclical patterns suggest that after a recession as long and severe as this one, the labor force participation rate of females should be below its current magnitude. The difference between the unemployment rates of women and men is much larger than expected; in previous recessions, the difference narrowed, reflecting, in part, women leaving the labor force. In this recession, the difference narrowed but not by as much as in the past because women's participation rate continued to rise. This certainly resulted in a higher unemployment rate. It may also have resulted in more women actually finding jobs. It may also indicate that the long-term growth rate in the potential labor force of women is higher than we estimated; if so, then their joblessness is higher as well.

Conclusion

All major demographic groups have suffered a decline in jobs as a consequence of this recession. These losses are larger than measured by before-and-after comparisons because such comparisons do not reflect the employment needs of a growing potential labor force.

The employment losses of women have been smaller than their share of employment. The major reason that women did not do worse appears to be that the recession struck hardest at industries and occupations in which women are most underrepresented. Hence, during the initial stages of the recovery, the relative employment of women may decline or at least not continue its past rate of increase.

Whether any of the relative gains made by women in this recession will lead to a permanent improvement will depend on the extent to which the gains also reflect changes in behavior patterns. Women have survived the recession relatively well. The next question—discussed in the following chapter—is whether they will survive the recovery.

II. THE OUTLOOK FOR WOMEN IN THE LABOR MARKET

The major concern of this report is the effect of macroeconomic conditions on the employment opportunities for women. However, the impact of one level of aggregate demand versus another will be influenced by other factors. As seen in the previous chapter, for example, the demographic incidence of the recent recession would have been quite different had the industrial mix of the job losses been less concentrated in the manufacturing and construction sectors. The number of women who will find jobs through the remainder of the decade will be determined largely by (1) the overall state of the economy, (2) the degree to which the proportion of women seeking work in the paid labor force continues to rise, and (3) the structure of the labor market within which women will be seeking work. These three sets of conditions cannot be predicted accurately and their effects on women's employment interact with one another.

The purpose of this chapter is to provide estimates of the most likely outlook for women under a variety of assumptions about labor market conditions through the remainder of the decade. Two sets of estimates are presented. The first set projects the number of men and women who would be employed and the number who would be jobless under two alternative macroeconomic recovery paths through 1980. These estimates are based on the same labor market simulation model used in the preceding chapter and implicitly assume that the underlying labor market trends and cyclical patterns of each demographic group are unchanged from the original 1967–1973 estimation period. Women's share of the difference in aggregate employment levels generated by the two recovery paths provides our main estimate of women's labor market stake in achieving a high-growth economy.

Projecting the growth in the female labor force, however, is a particularly hazardous activity. Forecasters consistently underestimate their participation rate. Our second set of estimates is based on simulations in which a more rapid growth in their labor force is assumed. These estimates indicate both the sensitivity of women's future employment share to their own labor force behavior and the extent to which our estimates of the implications of macroeconomic conditions are tied to the accuracy of our labor force projections.

It was not possible at this time to examine the implications of specific equal opportunity policies or of changes in the industrial and occupational structure of labor demand (other than as already reflected in our model). Both topics are of critical importance for understanding the future that women will face and for affecting that outlook through policies and programs. We hope to address these issues in future research.

The organization of this chapter follows the two sets of estimates. For each, the premises on which the simulations were based and the results for the total population and by sex are presented. The labor market model used is the same as was used in the preceding chapter

and is described in the Appendix. Estimates by race and age are also included in the Appendix.

Macroeconomic Setting

Considerable uncertainty surrounds any forecast of the state of the economy for even next year, let alone to the end of the decade. Rather than linking our estimates to any specific forecast, we shall instead focus on the implications of two sets of macroeconomic assumptions used by the Congressional Budget Office (CBO) to make budget estimates through fiscal year 1981. These are reprinted in Table 6. As stressed by CBO, these are not predictions of future economic conditions, but rather are two benchmarks that are useful for illustrating the impact of alternative economic assumptions on budget projections. Similarly, we are using them as benchmarks for illustrating the impact of the macroeconomic setting on the labor market conditions of men and women.

TABLE 6.—ALTERNATIVE ECONOMIC ASSUMPTIONS, 1975–81

[Calendar years]

Selected economic variables	1975	1976	1977	1978	1979	1980	1981	Average annual increase, 1975–81 (percent)
Path A—6 percent real GNP growth:								
Current dollar GNP (in billions)	1,476	1,695	1,933	2,205	2,485	2,780	3,075	13.0
Real GNP (1958 dollars in billions)	796	856	916	980	1,036	1,085	1,126	6.0
Unemployment rate (percent)	8.5	7.4	6.4	5.4	4.8	4.5	4.5	
Rates of change (percent):								
Real GNP	−3.1	7.5	7.0	7.0	5.7	4.7	3.8	6.0
GNP deflator	8.9	6.7	6.6	6.6	6.6	6.6	6.6	6.7
Consumer price index	9.2	7.2	7.1	7.0	6.8	6.6	6.6	7.0
Path B—5 percent real GNP growth:								
Current dollar GNP (in billions)	1,476	1,675	1,845	2,050	2,270	2,500	2,755	11.0
Real GNP (1958 dollars in billions)	796	847	880	922	968	1,015	1,065	5.0
Unemployment rate (percent)	8.5	7.7	7.5	7.1	6.7	6.3	5.9	
Rates of change (percent):								
Real GNP	−3.1	6.4	3.9	4.8	5.0	4.9	4.9	5.0
GNP deflator	8.9	6.7	6.1	6.0	5.5	5.0	5.0	5.8
Consumer price index	9.2	7.2	6.9	5.9	5.6	4.8	5.0	6.0

Source: Reproduced from "Five-Year Budget Projections, Fiscal Years 1977–81," CBO, Jan. 26, 1976, p. 4.

Path A assumes a strong growth in real GNP over the 5-year period, averaging 6 percent per year; the aggregate unemployment rate declines to 4.5 percent by 1980. Path B provides a slower recovery from the recession, with an annual average growth rate in real GNP of 5 percent; the unemployment rate would remain above 6 percent until 1981. Both sets of GNP growth rates are quite high by historical standards.

We are actually using one part of the CBO assumptions, the projected aggregate unemployment rates for 1976 through 1980. Our labor market model does not yet have links to the rest of the economy. The key exogenous variable is the total demand for labor, as represented by the sum of aggregate employment and job vacancies. To depict the CBO scenarios, we provide our model with job stock series that generate their projected annual average unemployment rates. Population assumptions are based on group-specific Census Bureau projections.[1]

Our estimates of the aggregate labor market implications of the two paths are shown in Table 7.[2] The unemployment statistics indicate the number of people projected to be in the active labor force without jobs. As discussed in the preceding chapter, it is also useful to compare the number of people who would be in the labor force if

[1] The simulation period began in January 1976. Initial levels of employment and unemployment for each group were based on the December 1975 seasonally adjusted levels, as revised by the Bureau of Labor Statistics in early 1976.

[2] Our Path A unemployment rates in 1977 and 1978 are each 0.1 percentage point above the corresponding CBO projections. These discrepancies were too small to warrant further simulation runs.

the economy were operating at full capacity with the number employed. The potential labor force series in Table 7 provides our projection of the aggregate labor force growth if the unemployment rate had already been at four percent and sufficient jobs were provided to maintain that rate throughout the remainder of the decade. It is a continuation of the potential labor force series used in the preceding chapter to estimate the magnitude of the recession. Subtracting our projection of aggregate employment from the potential labor force provides a jobless projection that is unaffected by cyclical variation in labor participation. Therefore, the difference between Path A and Path B employment always equals the difference in joblessness in the same period.

TABLE 7.—AGGREGATE LABOR MARKET IMPLICATIONS OF ALTERNATIVE RECOVERY RATES

[Annual average, in thousands, except as indicated]

Aggregate	1975 (actual)	1976	1977	1978	1979	1980
6 percent annual average real GNP growth (Path A):						
Labor force	92,613	94,413	96,845	99,230	101,559	103,700
Employment	84,783	87,394	90,576	93,802	96,634	99,027
Unemployment	7,830	7,019	6,269	5,428	4,925	4,673
Unemployment rate (percent)	8.5	7.4	6.5	5.5	4.8	4.5
Participation rate (percent)	61.2	61.4	62.0	62.6	63.1	63.6
Potential labor force	94,206	96,323	98,477	100,512	102,436	104,255
Jobless	9,423	8,929	7,901	6,710	5,802	5,228
Jobless rate (percent)	10.0	9.3	8.0	6.7	5.7	5.0
5 percent annual average real GNP growth (Path B):						
Labor force	92,613	94,363	96,511	98,644	100,751	102,649
Employment	84,783	87,050	89,273	91,687	94,039	96,214
Unemployment	7,830	7,313	7,278	6,977	6,711	6,435
Unemployment rate (percent)	8.5	7.7	7.5	7.1	6.7	6.3
Participation rate (percent)	61.2	61.4	61.8	62.2	62.6	62.9
Potential labor force	94,206	96,323	98,477	100,512	102,436	104,255
Jobless	9,423	9,273	9,204	8,825	8,397	8,040
Jobless rate (percent)	10.0	9.6	9.3	8.8	8.2	7.7

Before examining the implications of these growth paths for women, several observations may be made about the aggregate labor market impacts. Under both growth scenarios, aggregate unemployment would decline throughout the remainder of the decade. However, the difference in unemployment implied by the difference in GNP growth rates is quite large: under Path A, 3.2 million fewer people would be unemployed in 1980 than were unemployed in 1975; under Path B, the number of unemployed would decrease by 1.4 million.

The extent of the recovery and the labor market impacts of one growth path versus another are even greater than indicated by the unemployment estimates alone. We estimate that the potential labor force will grow by about 10 million workers during the last half of the decade and, if the Path A recovery occurs, the active labor force would grow by over 11 million. Under either path, the employment gains are substantially larger: 14.2 million with Path A and 11.4 million with Path B.

In 1975, 10.0 percent of the potential labor force was jobless. We estimate that, if the number of jobs in the economy increases by the amount implied by Path A, the jobless rate would decline 5.0 percentage points—one point more than the corresponding unemployment decline. The reason for the larger impact on joblessness is that a rapid recovery would generate a larger labor force growth than associated with sustained full employment. In 1975, the labor force was 1.6

million smaller than its estimated potential size; within the high-growth environment of Path A, the labor force gap would shrink to 0.6 million. On the other hand, within the slower growth Path B setting, the labor force gap would not appreciably narrow; hence, the jobless rate and the unemployment rate would decline by similar amounts.

Over the entire 1976–1980 period, it is also clear that associated with either growth scenario is a substantial amount of joblessness, much of which is not reflected in the unemployment statistics. Even with the rapid recovery depicted in Path A, during the latter half of this decade the average level of unemployment would be 5.7 million and another 1.2 million people would be outside of the labor force because of inadequate job opportunities. Associated with the slower growth path are 6.9 million people unemployed and 1.8 million jobless people not looking for work. The remainder of this chapter reports our estimates of how women would fare within each labor market environment.

Demographic Composition of the Recovery

As discussed in the preceding chapter, the recession struck men and women in the labor market with similar force. Women entered the recession with a disproportionate share of the joblessness associated with a slack labor market and, during the 2-year period of job losses, maintained that share. In 1975, women held 40 percent of all jobs, but accounted for 44 percent of the unemployed and 48 percent of the total jobless.

Our estimates in this section are based on the assumption that the underlying labor market behavior of each demographic group will exhibit trend and cyclical patterns akin to patterns estimated prior to the recession. Thus, in the absence of cyclical fluctuations, we anticipate a continuation of the increase in the labor force participation rate of women and their share of aggregate employment and a slight reduction in the male labor participation rate.

Our major expectations about women's stake in a rapid recovery are illustrated in Figure 2. The model estimates on which this figure is based are provided in Table 8. The steady growth in aggregate employment under both recovery scenarios is depicted in the upper part of the figure. About 6 out of every 10 net new workers through the remainder of the decade will be female. The employment impact of one growth path versus another is shown by the widening gap between Path A and Path B aggregate employment, reaching 2.8 million in 1980.

Women's stake in the achievement of a higher growth rate is relatively larger than that of men. One-half of the 2.8 million people who would have jobs in 1980 under Path A, but not under Path B, are women. Equivalently, half of the difference in the number of potential workers who would be jobless are women, which is somewhat larger than their (43 percent) share of the potential labor force.

Figure 2

Labor Market Conditions Under Alternative Growth Rates, by Sex, 1975-1980

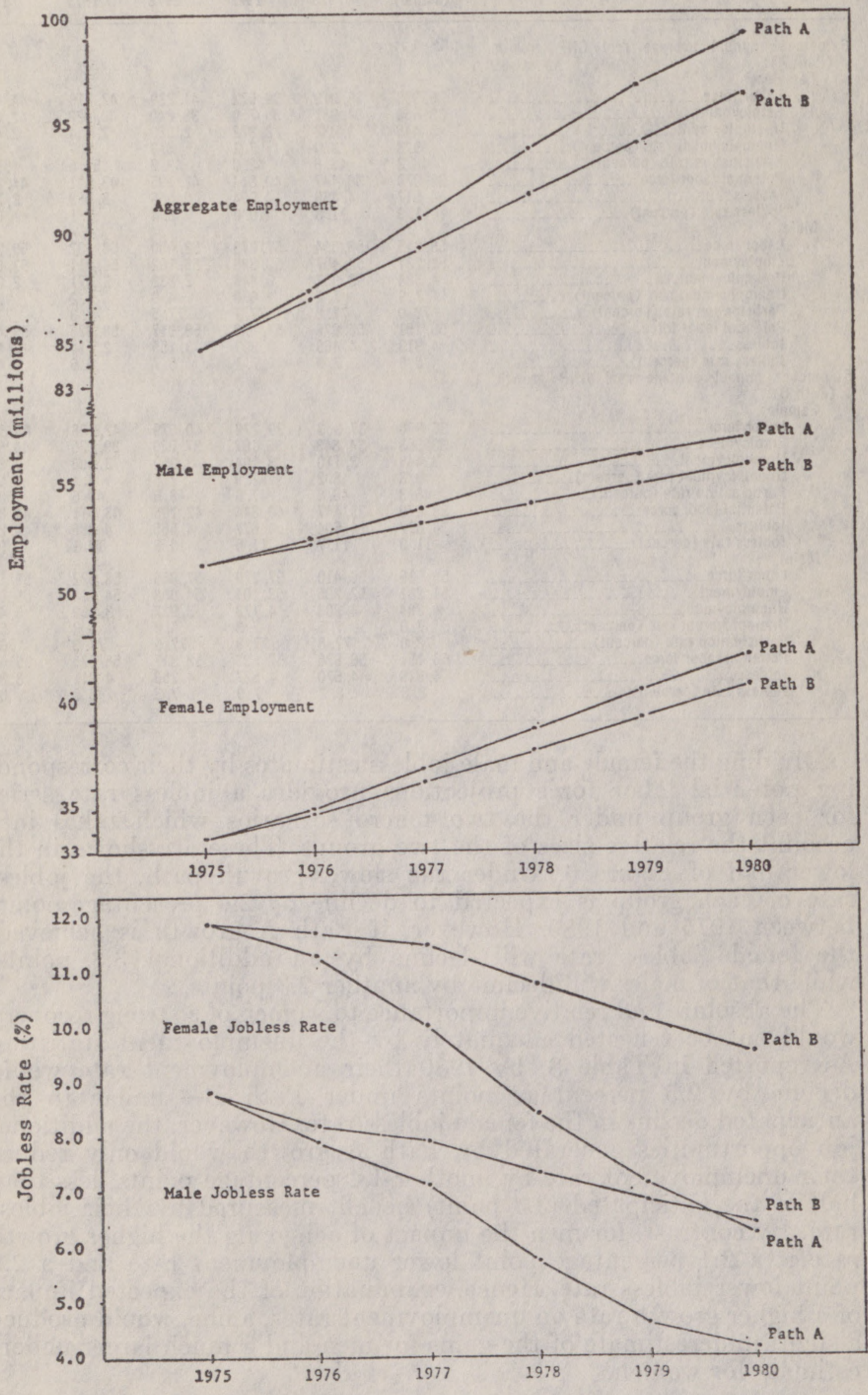

TABLE 8.—LABOR MARKET IMPLICATIONS OF ALTERNATIVE RECOVERY RATES BY SEX

[Annual average, in thousands, except as indicated]

	1975 (actual)	1976	1977	1978	1979	1980
6 percent annual average real GNP growth (Path A):						
Female:						
Labor force	36,998	38,019	39,572	41,229	42,876	44,408
Employment	33,553	34,987	36,750	38,640	40,422	42,007
Unemployment	3,445	3,032	2,822	2,589	2,454	2,401
Unemployment rate (percent)	9.3	8.0	7.1	6.3	5.7	5.4
Participation rate (percent)	46.3	46.8	48.0	49.2	50.5	51.5
Potential labor force	38,070	39,447	40,844	42,195	43,511	44,800
Jobless	4,517	4,460	4,094	3,555	3,089	2,793
Jobless rate (percent)	11.9	11.3	10.0	8.4	7.1	6.2
Male:						
Labor force	55,615	56,394	57,273	58,000	58,682	59,291
Employment	51,231	52,407	53,826	55,162	56,211	57,020
Unemployment	4,384	3,987	3,446	2,838	2,471	2,273
Unemployment rate (percent)	7.9	7.1	6.0	4.9	4.2	3.8
Participation rate (percent)	78.0	77.8	77.7	77.5	77.3	77.1
Potential labor force	56,151	56,876	57,633	58,317	58,925	59,455
Jobless	4,919	4,469	3,807	3,155	2,714	2,435
Jobless rate (percent)	8.8	7.9	7.1	5.7	4.6	4.1
5 percent annaul average real GNP growth (Path B):						
Female:						
Labor force	36,998	37,953	39,272	40,679	42,128	43,517
Employment	33,553	34,843	36,167	37,629	39,125	40,565
Unemployment	3,445	3,110	3,104	3,050	3,003	2,952
Unemployment rate (percent)	9.3	8.2	7.9	7.5	7.1	6.8
Participation rate (percent)	46.3	46.8	47.6	48.6	49.6	50.5
Potential labor force	38,070	39,447	40,844	42,195	43,511	44,800
Jobless	4,517	4,604	4,677	4,566	4,386	4,235
Jobless rate (percent)	11.9	11.7	11.5	10.8	10.1	9.5
Male:						
Labor force	55,615	56,410	57,279	57,985	58,622	59,133
Employment	51,231	52,206	53,106	54,058	54,914	55,650
Unemployment	4,384	4,203	4,173	3,927	3,709	3,483
Unemployment rate (percent)	7.9	7.5	7.3	6.8	6.3	5.9
Participation rate (percent)	78.0	77.8	77.8	77.5	77.3	76.9
Potential labor force	56,151	56,876	57,633	58,317	58,925	59,455
Jobless	4,919	4,670	4,527	4,259	4 011	3,805
Jobless rate (percent)	8.8	8.2	7.9	7.3	6.8	6.4

Dividing the female and male jobless estimates by their corresponding potential labor force projections provides a jobless rate series for each group under the two macro scenarios which takes into account the relative sizes of the two groups. These are shown in the lower half of Figure 6. Under the slower-growth path, the jobless rate of each group is expected to decline by 2.4 percentage points between 1975 and 1980. However, if Path A growth is achieved, the female jobless rate will decline by an additional 3.3 points, while that of males will decline by another 2.3 points.

The absolute and relative importance to women of a strong recovery would not be reflected adequately by the unemployment statistics. As reported in Table 8, by 1980 their unemployment rate would decline by 2.5 percentage points under Path B—similar to the anticipated decline in the female jobless rate. However, the additional job opportunities generated by Path A growth would only reduce their unemployment rate by another 1.4 percentage points, less than half of the anticipated (3.3 point) benefit measured by their jobless rate. By contrast, for men the impact of achieving the higher growth rate is a 2.1 percentage point lower unemployment rate and a 2.3 point lower jobless rate. Hence, examination of the expected impact of a higher growth rate on unemployment rates, alone, would produce a slight underestimate of the gains for men and a much larger underestimate for women.

The reason that the jobless and unemployment estimates diverge is, of course, that a more rapid economic recovery is expected to induce more people, mostly women, into the labor force. Under Path B, the participation rates of each group would follow a course similar to that of the group's long run trend—large increases for women and small reductions for men.

A result of achieving the higher growth rate would be a 0.2 percentage point larger male participation rate by 1980 than under Path B and a 1.0 point larger female participation rate. Eighty-five percent of the people who are expected to be attracted into the labor force by the better job opportunities are women.

To summarize, our estimates indicate that: Under either economic recovery path, the female shares of the total labor force and employment will continue to increase for the remainder of the decade; female unemployment and joblessness will decrease; women's employment stake in achieving the higher growth rate is larger than men's; the absolute and relative importance to women of achieving more rapid recovery is understated by focussing on the expected unemployment impacts, since the majority of their employment gains are reflected in a larger female labor force; and, even with rapid economic recovery, the female jobless rate will remain well above that of men.

Implications of More Rapid Growth in the Female Labor Force

The preceding estimates are essentially extrapolations from past trends and cyclical patterns. The most fundamental trend reflected in these estimates is the sharp increase in the proportion of women participating in the labor force. After adjusting for changes in the state of the economy, we estimate that in the late-1960's and early-1970's the female participation rate rose by 0.9 percentage points per year. During the recession it continued to increase, but by a smaller amount (0.7 points per year). As the economy recovers, their participation rate may rise at an even faster rate, reflecting the cyclical responsiveness of the female labor force. Under the high-growth scenario, we projected an annual average increase in their participation rate of one point per year for the remainder of the decade.

The growth in the female labor force through the remainder of the decade will be generated by the growth in their working-age population and in their participation rate. The former is easy to predict; the latter is quite difficult. The commonly-used source of participation projections is the Bureau of Labor Statistics (BLS). However, their projections have consistently underestimated the growth in the female labor force and have been frequently revised. The most recent BLS labor force projections, by sex, were published in 1973.[3] It included 39.2 million women in the labor force in 1980, a 2.1 million upward revision from their previous projection (in 1970), which in turn, was 1.2 million above an earlier one (in 1965). The female participation rate projected for 1980 was reached in 1974 and the projected rate for

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[3] D. F. Johnston, "The U.S. Labor Force: Projections to 1990," *Special Labor Force Report 156*, 1973.

1985 was exceeded in 1975. A major revision of their projections is in progress.[4]

All of the BLS projections assume, to one degree or another, that the sharp increases during the past two decades in the proportion of working-age women choosing to participate in the paid labor force will not continue. The projections used in this paper assume they will. The surprisingly large increases during the recession and in the early stages of the recovery suggest that both assumptions may understate future increases.

The growth in the female labor participation rate through the remainder of the decade will depend on the availability of job opportunities, the quality of those jobs, and the availability of other income from husband's earnings or transfer payments. It will also depend on the extent to which recent trends in marriage, divorce, number and ages of children, and sex role attitudes and expectations continue. Each of these determinants is difficult to predict and the precise magnitude of their influence on labor force growth is not known. Therefore, it is prudent, at this point, to assess what difference it may make if our projections are wrong.

Suppose an even larger proportion of women choose to participate in the labor force. The rapid growth in their labor force during the recession could reflect a change in the underlying participation trend observed in previous years. To examine some of the implications of such a change, we reran the labor market model with a steeper trend in their labor force growth to generate a female labor force in 1980 about 1 million larger than previously projected.[5]

With no change in the total number of jobs in the economy, the effects of more women participating in the labor force are largely redistributive. Table 9 presents our estimates under each growth path and Table 10 shows the differences between these estimates and the previous Path A and Path B scenarios.[6]

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[4] In September 1976 BLS issued a press release containing a new set of labor force projections, estimating that 41.7 million women would participate in 1980. This is 2.5 million above their previous projection, but still below ours. See "The U.S. Labor Force in 1990: New Projections," USDL 76–1222 (September 15, 1976).

[5] For each female race-age group, the trend in the monthly probability of entering the labor force was increased by 0.06 percent and the model was rerun using the same aggregate job paths that had generated our Path A and Path B estimates.

[6] Jobless estimates are not provided because the size of the potential labor force also would increase; the job path that was previously used to generate a constant four percent unemployment rate produces a 4.4 percent unemployment rate in 1980 with the larger female labor force.

TABLE 9.—LABOR MARKET IMPLICATIONS OF ALTERNATIVE RECOVERY RATES, WITH LARGER FEMALE LABOR FORCE

[Annual average, in thousands, except as indicated]

	1976	1977	1978	1979	1980
6 percent annual average real GNP growth:					
Aggregate:					
Labor force	94,877	97,592	100,070	102,419	104,595
Employment	87,526	90,789	94,090	96,972	99,424
Unemployment	7,351	6,803	5,980	5,447	5,171
Unemployment rate (percent)	7.7	7.0	6.0	5.3	4.9
Participation rate (percent)	61.7	62.5	63.1	63.7	64.1
Female:					
Labor force	38,477	40,329	42,090	43,781	45,368
Employment	35,271	37,266	39,254	41,087	42,733
Unemployment	3,206	3,063	2,837	2,694	2,635
Unemployment rate (percent)	8.3	7.6	6.7	6.2	5.8
Participation rate (percent)	47.4	48.9	50.3	51.5	52.7
5 percent annual average real GNP growth:					
Aggregate:					
Labor force	94,825	97,334	99,632	101,806	103,769
Employment	87,167	89,449	91,933	94,320	96,536
Unemployment	7,658	7,885	7,699	7,486	7,233
Unemployment rate (percent)	8.1	8.1	7.7	7.4	7.0
Participation rate (percent)	61.7	62.3	62.8	63.3	63.6
Female:					
Labor force	38,410	40,065	41,648	43,162	44,597
Employment	35,122	36,695	38,297	39,849	41,328
Unemployment	3,288	3,370	3,350	3,313	3,269
Unemployment rate (percent)	8.6	8.4	8.0	7.7	7.3
Participation rate (percent)	47.3	48.6	49.7	50.8	51.8

TABLE 10.—IMPACT OF LARGER FEMALE LABOR FORCE

[Annual average, in thousands, except as indicated]

	1976	1977	1978	1979	1980
6 percent annual average real GNP growth:					
Aggregate:					
Labor force	464	747	840	860	895
Employment	132	213	288	338	397
Unemployment	332	534	552	522	498
Unemployment rate (percent)	0.3	0.5	0.5	0.5	0.4
Participation rate (percent)	0.3	0.5	0.5	0.6	0.5
Female:					
Labor force	458	757	861	905	960
Employment	284	516	614	665	726
Unemployment	174	241	248	240	234
Unemployment rate (percent)	0.3	0.5	0.4	0.5	0.4
Participation rate (percent)	0.6	0.9	1.1	1.0	1.2
5 percent annual average real GNP growth:					
Aggregate:					
Labor force	462	783	988	1,055	1,120
Employment	117	176	246	281	322
Unemployment	345	607	722	775	798
Unemployment rate (percent)	0.4	0.6	0.6	0.7	0.7
Participation rate (percent)	0.3	0.5	0.6	0.7	0.7
Female:					
Labor force	457	793	969	1,034	1,080
Employment	279	528	668	724	763
Unemployment	178	266	300	310	317
Unemployment rate (percent)	0.4	0.5	0.5	0.6	0.5
Participation rate (percent)	0.5	1.0	1.1	1.2	1.3

A more rapidly growing female labor force would make it more difficult to achieve the aggregate unemployment rate reduction to 4.5 percent associated with Path A. By 1980, with the same growth in job opportunities, the Path A unemployment rate would be 4.9 percent. Similarly the growth in jobs that would have reduced the unemployment rate to 6.3 percent under Path B would, instead, leave the unemployment rate at 7.0 percent. If more women choose to participate in the labor force, more jobs will be needed to achieve specified unemployment goals.

If more women participate in the labor force, it is expected that more women would, in fact, find jobs. Many, but not all, of these jobs would be jobs that otherwise would have gone to men. It is not a zero-sum game because some of the jobs would otherwise have remained unfilled, especially in a rapidly growing economy. Under Path A, by 1980, 1 million additional female participants would result in over 700,000 more working women and 300,000 fewer men with jobs. The losses for men would be larger under Path B because there would be fewer vacant positions available.

Under the assumptions used here to generate the larger female labor force—a steeper trend in their probability of entering the labor force—the increased participation would have very little effect on the size of women's employment gains associated with more rapid economic recovery. The aggregate employment impact of achieving Path A over Path B growth is slightly larger with more women in the labor force, but women's share of the impact is smaller. That is, more women participating in the labor force will result in more women being employed under either macroeconomic scenario.

Conclusion

In this chapter we have reported estimates of the labor market outlook through the remainder of the decade for women under several alternative sets of conditions. From these estimates we conclude that—barring dramatic departures from past patterns—working women have a very large stake in the achievement of a strong economic recovery.[7]

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[7] The experience of women since the completion of this analysis in early 1976 confirms this assessment. Fifty-seven percent of the total job gains since 1975 went to women. The average level of employment in 1976 (through November) was 87.4 million, the employment level we associated with Path A. Women held 35.1 million of these jobs, approximately the number predicted in Table 8. However, since the female labor force grew by 350,000 more than expected, their unemployment rate fell by less. The male labor force growth and unemployment decline were as anticipated.

APPENDIX

Labor Market Model[1]

This paper uses a job search-turnover model of the labor market to estimate the impact of alternative macroeconomic conditions on sixteen demographic groups, delineated by age, race, and sex.[2] Through simulation, the model provides conditional forecasts of the incidence of employment losses by demographic groups.[3] This section describes the model.

Although "unemployment" and "labor force participation" have been commonly associated with particular groups of people, the job search-turnover theory of the labor market associates these terms more accurately with states through which people pass dynamically. For example, the number of people unemployed at any one time depends on the flow of people into that state and the rapidity with which they find jobs or leave the labor force. Thus, a structural explanation of the determinants of the number of persons employed, unemployed, and in the labor force requires structural descriptions of the processes that regulate the flows.

The numbers of people and jobs in various states influence the probabilities that transitions will occur between those states. These probabilities govern the flows that, in turn, change the sizes of the stocks. Our model of the labor market attempts to reflect this microdynamic structure for each of 16 demographic groups. Demographic segmentation has been stressed because the variations among such groups have been found empirically to be important. Of course, age, race, and sex serve as proxies for a wide variety of differences in human capital and behavior that may not be inherently demographic in character.

Model Structure

The model structure is shown in Table A–1. The exogenous variables are the aggregate job stock (employment plus job vacancies), the population of each group, and time. Total demand for labor is reflected in the aggregate job stock because measures of the job vacancies available to each demographic group do not exist. Within the model each group responds differently to variations in the aggregate stocks. Trend terms serve as proxies for long-term influences on labor market behavior not explicitly included in the model.

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[1] The model was used in late-1974 to estimate the potential impact of the recession in 1975 on 16 age, race, and sex groups. These estimates were reported in R. E. Smith, J. E. Vanski, and C. C. Holt, "Recession and the Employment of Demographic Groups," *Brookings Papers on Economic Activity* (3:1974), pp. 737–758. The description of the model, its structure, and estimates presented here is reprinted, with some modifications, from that article (pp. 738–742) ; copyright, Brookings Institution, Washington, D.C., 1975.

[2] Ages 16–19, 20–24, 25–59, and 60 and over for white and nonwhite males and females.

[3] The model is described in more detail in R. E. Smith, "A Simulation Model of the Demographic Composition of Employment, Unemployment, and Labor Force Participation," *Research in Labor Economics,* Vol. I, Forthcoming.

TABLE A–1.—Model structure

Equation number, type, and description	*Equation*[a]
For age-race-sex group[b]	
(1) Flow from unemployment to employment	$UE_i = [\alpha_{1i}(V/U)_{-1}^{\beta_{1i}} e^{\gamma_{1i}T}]U_{i,-1}$
(2) Flow from employment to unemployment	$EU_i = [\alpha_{2i}(V/U)_{-1}^{\beta_{2i}} e^{\gamma_{2i}T}]E_{i,-1}$
(3) Flow from employment to not in the labor force	$EN_i = [\alpha_{3i}(V/U)_{-1}^{\beta_{3i}} e^{\gamma_{3i}T}]E_{i,-1}$
(4) Flow from unemployment to not in the labor force	$UN_i = [\alpha_{4i}(V/U)_{-1}^{\beta_{4i}} e^{\gamma_{4i}T}]U_{i,-1}$
(5) Flow from not in the labor force to labor force	$NL_i = [\alpha_{5i}(V/U)_{-1}^{\beta_{5i}} e^{\gamma_{5i}T}]N_{i,-1}$
(6) Probability of successful labor force entry	$(NE/NL)_i = [\alpha_{6i}(V/U)_{-1}^{\beta_{6i}} e^{\gamma_{6i}T}]$
(7) Flow from not in the labor force to employment	$NE_i = (NE/NL)_i NL_i$
(8) Flow from not in the labor force to unemployment	$NU_i = NL_i - NE_i$
(9) Employment	$E_i = (E_{i,-1} + NE_i + UE_i - EN_i - EU_i)(\bar{P}_i/\bar{P}_{i,-1})$
(10) Unemployment	$U_i = (U_{i,-1} + NU_i + EU_i - UN_i - UE_i)(\bar{P}_i/\bar{P}_{i,-1})$
(11) Not in the labor force	$N_i = (N_{i,-1} + UN_i + EN_i - NU_i - NE_i)(\bar{P}_i/\bar{P}_{i,-1})$
For aggregate economic conditions	
(177) Employment	$E = \sum E_i$
(178) Unemployment	$U = \sum_i U_i$
(179) Vacancies	$V = \bar{J} - E$

a. In equations (1)–(6), α, β, and γ are parameters from estimated behavioral relationships. The variable T is the time trend. The subscript i designates the respective age-race-sex groups. The term within the brackets depicts a transition probability. In equations (9)–(11) the $\bar{P}_i$ represent exogenous cohort population. In equation (179) $\bar{J}$ represents exogenous job stock, which is the sum of aggregate employment and vacancies.

b. Equations (1)–(11) are constructed for each of sixteen age-race-sex groups: ages 16–19, 20–24, 25–59, 60 and over; white and nonwhite; males and females.

For each age-race-sex group, the expected monthly flow from one labor force stock to another is the product of a transition probability, depicted in brackets, and the size of the stock from which the flow originates. Equations (1) through (5) are of this type. In each equation the transition probability is expressed as a multiplicative function of the aggregate vacancy-unemployment ratio, lagged one month, and an exponential time trend.

Our index of labor market tightness is the aggregate vacancy-unemployment ratio, whose size is an indicator of the availability of jobs in relation to the availability of people to fill them. For some of the flows the influence of this ratio is strong. For example, the flow from unemployment to employment, shown in equation (1), is positively related to the vacancy-unemployment ratio for all groups. The impacts of job availability on other transitions, such as the flow of people into the labor force, shown in equation (5), are mixed. Market tightness encourages some potential new entrants and reentrants and may allow others to stay out of the labor force because members of their families are able to find work.

The model does not include wages or prices as independent influences on labor market behavior, although they are, to some extent, reflected in the vacancy-unemployment ratio. The structure of relative wages changes slowly, so their omission may not seriously affect the prediction of short-term variations in labor force behavior. Instead, we assume that the cyclical ability of firms to fill vacancies is largely influenced by the availability of people and the competition of other employers. The success of job seekers is determined similarly. The duration of market search will influence workers' aspirations and participation decisions and employers' hiring standards.

A slightly different approach is taken in the model for estimating the flows from outside the labor force. First, each month individuals decide whether to enter the labor force, influenced by their own needs but also by market conditions. Equation (5) depicts this process. However, whether new entrants are successful in finding jobs is a joint decision of the entrants and potential employers. The tighter the labor market, the higher is the proportion of entrants who will have found jobs before the monthly survey, and, hence, who will not be observed as unemployed. Equation (6) represents the probability of successful entry, and equations (7) and (8) generate the expected flows into employment and unemployment from the flow into the labor force and the probability of being employed.

Model Estimates

A least-squares regression of the log form of each probability relation was estimated, using monthly data from July 1967 through December 1973.[4] The results generally have the theoretically expected signs, reasonable consistency across demographic groups, and, for the larger groups, high statistical significance. For most groups the probability of unemployed members finding jobs each month—equation (1)—is directly related to labor market tightness, as reflected in the lagged vacancy-unemployment ratio; the probability of becoming unemployed—equation (2)—is inversely related to market tightness.

For most demographic groups, the probability of leaving the labor force—equations (3) and (4)—is lower when unemployment is widespread and vacancies are fewer than in a tight labor market. Elsewhere we have presented possible explanations of this behavior.[5] In spite of the fluctuations in these exit rates, the average probability of leaving the labor force is higher in periods of high unemployment, because unemployed people are so much more likely to drop out of the labor force than employed people are.[6] This is sufficient to generate the cyclical fluctuations in labor force participation known as the discouraged-worker effect.

Estimates of equations (5) and (6) indicate that, for most groups, the probability of entering the labor force each month is not significantly affected by market conditions. However, the chances of a new entrant finding a job in his or her first month bear a strong, direct relation to the vacancy-unemployment ratio.

Equations (9) through (11) update the numbers in each group who are employed, unemployed, and out of the labor force by adding to the preceding month's level the predicted gross flows into the stock and subtracting the outflows. For each demographic group these stocks are then adjusted for the monthly changes in population.

The first 11 equations are estimated for each of the 16 demographic groups, resulting in 176 equations. The model is then closed with three equations that aggregate the predicted employment and unemployment levels for the current period and generate the vacancy level by subtracting endogenous employment from the exogenous job stock.

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[4] Three sets of data are used. Data on labor force status, by demographic group, are from tabulations from the Current Population Survey, provided by the U.S. Bureau of Labor Statistics. Flows between labor force categories are from unpublished tabulations of gross change from the CPS. The flows depict reported changes in classification between the reference weeks of one month and the next. Sampling and response problems with these data make them less reliable than the data on stocks and we have had to adjust the flow data to assure consistency. The transition probabilities reported in this paper are based on data that were adjusted prior to estimation of the transition relations. Our vacancy data are from the Conference Board's help-wanted index, published regularly in the Board's Statistical Bulletin, which we have scaled up to a level of vacancies consistent with some survey data. All transition equations were estimated using seasonally unadjusted data with seasonal dummies.

[5] R. E. Smith, "The Discouraged Worker in a Full Employment Economy," in American Statistical Association, *1973 Proceedings of the Business and Economic Statistics Section* (1974), pp. 210–25.

[6] Within each demographic group the average dropout rate among unemployed participants in the period July 1967 through June 1972 was at least double that of employed participants; for prime-age white males it was fourteen times as high and for prime-age white females it was six times as high. See *ibid.*, p. 211.

Simulations

The results presented in the text are based, in part, on five separate simulations of our labor market model. The only variables that are needed to operate the model are the values of all variables at the start of the simulation period and the group population sizes and aggregate job stock values for each month of the simulation. The model then runs as a self-contained recursive system.

The first simulation provided estimates of the potential labor force of each group, which were used in both chapters as a basis for calculating jobless rates. The simulation began in early 1970, the last period in which the aggregate unemployment rate was near 4 percent. Census Bureau estimates and projections of the civilian non-institutional population size of each group were used to generate the population series through 1980. An aggregate job stock path was then selected which maintained a reasonably constant 4 percent unemployment rate throughout the decade. The labor force time series from this run were aggregated to provide the needed potential labor force series.

The next two simulations provided our forecasts of each group's labor market activities under the two CBO scenarios. Initial conditions were set to correspond to the actual December 1975 employment and unemployment levels of each major demographic group. Then job stock series were selected that generated annual average unemployment rates approximately equal to the Path A and Path B assumptions.

The final two simulations required changing the assumed structure of the labor market itself. The previous simulations used the parameters estimated for the 1967–73 period, implicitly assuming that cyclical and trend patterns of that period would continue through the remainder of the decade. For these runs, we first changed the time trend on the probability of entering the labor force (equation (3)) for each female group. For most of the female groups this trend was already positive. The effect of the change was to raise the probability of a nonparticipant's entry by 0.06 percent each month over the entire 60-month simulation period. The specific size of the change was selected so as to generate about 1 million more women in the labor force in 1980 than previously projected. With this change, the two job stock series that generated the Path A and Path B unemployment rates were again used.

Impacts by Race and Age

The estimates and analysis presented in the text focused on the impact of macroeconomic conditions on female employment and joblessness. It was reported in Chapter I that women's job losses in the recent recession were similar to those of men: They accounted for about 40 percent of the potential labor force and incurred about 40 percent of the job losses resulting from the recession. In Chapter II it was reported that women's employment stake in achieving a strong recovery is somewhat larger than men's, relative to their share of the labor force: About half of the aggregate employment gains that would be associated with achieving the higher projected growth rate would go to women.

The tables in this appendix provide analogous estimates by race and by age. Nonwhites and teenagers confront serious problems in the labor market, partly reflected in their chronic high jobless rates, compared with whites and adults. These tables provide some indication of the extent to which these problems were exacerbated by the recession and the labor market stake that these groups have in the recovery.

The estimates reported here are based on the same model, data, and methods used in the text and are subject to the same type of errors. The sizes of these errors vary inversely with the sizes of the groups being analyzed. Hence, predictions about nonwhites and teenagers (each accounting for about 10 percent of the labor force) are set forth with less confidence than corresponding statements about women.[7]

Recession's Impacts

Table A–2 provides our estimates of the impact of the recession on nonwhites and on teenagers. Both experienced substantial losses. Nonwhites began the recession with 11 percent of the jobs, yet bore 17 percent of the total jobless increases; between 1973–IV and 1975–IV, their jobless rate rose 6.5 percentage

[7] Cross-tabulations by sex-race-age are not reported here for this reason and to save space.

points, compared with 4.5 points for the aggregate population.[8] Teenagers accounted for nearly a quarter of all job losses, almost triple their pre-recession employment share; their jobless rate rose 10.3 percentage points. For nonwhites and teenagers the recession was *not* an equal opportunity dis-employer.[9]

TABLE A-2.—IMPACTS OF THE RECESSION, BY RACE AND AGE, SELECTED QUARTERS

[In thousands, except as indicated]

	1973 IV	1974 III	1975 I	1975 IV	Change 1974 III–1975 I	Change 1973 IV–1975 IV
Nonwhite:						
Labor force	10,211	10,354	10,377	10,669	23	458
Employment	9,330	9,346	8,987	9,179	−359	−151
Unemployment	881	1,008	1,390	1,490	382	609
Unemployment rate (percent)	8.63	9.7	13.4	14.0	3.7	5.4
Potential labor force	10,392	10,626	10,782	11,016	156	624
Jobless	1,062	1,280	1,795	1,838	515	776
Jobless rate (percent)	10.2	12.0	16.6	16.7	4.6	6.5
Nonwhite share (percent):						
Labor force	11.4	11.3	11.3	11.5	5.2	13.4
Employment	10.9	10.8	10.7	10.8	19.0	80.7
Unemployment	20.4	19.6	18.6	18.8	16.3	16.9
Potential labor force	11.5	11.5	11.5	11.6	14.5	14.5
Jobless	20.1	20.9	19.8	18.8	17.4	17.3
Teen:						
Labor force	8,729	8,793	8,797	8,738	4	9
Employment	7,456	7,362	7,056	7,036	−306	−420
Unemployment	1,273	1,431	1,741	1,702	310	429
Unemployment rate (percent)	14.6	16.3	19.8	19.5	3.5	4.9
Potential labor force	8,889	9,141	9,309	9,561	168	672
Jobless	1,433	1,779	2,253	2,525	474	1,092
Jobless rate (percent)	16.1	19.5	24.2	26.4	4.7	10.3
Teen share (percent):						
Labor force	9.7	9.6	9.6	9.4	0.9	0.3
Employment	8.7	8.5	8.4	8.3	16.2	224.6
Unemployment	29.5	27.9	23.3	21.5	13.3	11.9
Potential labor force	9.8	9.9	10.0	10.1	15.6	15.6
Jobless	27.1	29.1	24.8	25.8	16.0	24.4

Outlook

The job market for nonwhites and teenagers is expected to significantly improve through the remainder of the decade, if the aggregate economic recovery is a strong one. Table A–3 provides conditional forecasts for each group from our simulations of the Congressional Budget Office's two 5-year projections.

[8] Chapter I, Table 1.

[9] For further discussion of the impact of the recession on teenagers and their job outlook, see R. E. Smith, "The Teenage Unemployment Problem—How Much Will Marco Policies Matter?" Report of Congressional Budget Office Conference on the Teenage Unemployment Problem: What Are the Options?, 1976, pp. 7–17.

TABLE A-3.—IMPLICATIONS OF ALTERNATIVE RECOVERY RATES, BY RACE AND AGE

[Annual average in thousands, except as indicated]

	1975 (actual)	1976	1977	1978	1979	1980
5 percent annual real GNP growth (Path B):						
Nonwhite:						
Labor force	10,529	10,733	11,064	11,414	11,781	12,122
Employment	9,071	9,381	9,708	10,078	10,456	10,810
Unemployment	1,459	1,354	1,355	1,336	1,324	1,312
Unemployment rate (percent)	13.8	12.6	12.2	11.7	11.2	10.8
Potential labor force	10,898	11,221	11,559	11,887	12,208	12,519
Jobless	1,827	1,840	1,851	1,809	1,752	1,709
Jobless rate (percent)	16.8	16.4	16.0	15.2	14.4	13.6
Teen:						
Labor force	8,798	9,251	9,580	9,808	10,001	10,149
Employment	7,046	7,537	7,870	8,150	8,385	8,585
Unemployment	1,752	1,714	1,710	1,658	1,616	1,564
Unemployment rate (percent)	19.9	18.5	17.8	16.9	16.2	15.4
Potential labor force	9,430	9,746	9,987	10,163	10,165	10,417
Jobless	2,384	2,209	2,117	2,015	1,921	1,832
Jobless rate (percent)	25.3	22.7	21.2	19.8	18.6	17.6
6 percent annual real GNP growth (Path A):						
Nonwhite:						
Labor force	10,529	10,750	11,153	11,594	12,019	12,399
Employment	9,071	9,433	9,924	10,451	10,920	11,307
Unemployment	1,459	1,317	1,228	1,142	1,099	1,091
Unemployment rate (percent)	13.8	12.2	11.0	9.8	9.1	8.8
Potential labor force	10,898	11,221	11,559	11,887	12,208	12,519
Jobless	1,827	1,788	1,635	1,436	1,288	1,212
Jobless rate (percent)	16.8	15.9	14.1	12.1	10.6	9.7
Teen:						
Labor force	8,798	9,273	9,680	9,974	10,196	10,351
Employment	7,046	7,607	8,126	8,554	8,859	9,061
Unemployment	1,752	1,666	1,554	1,420	1,337	1,290
Unemployment rate (percent)	19.9	18.0	16.1	14.2	13.1	12.5
Potential labor force	9,430	9,746	9,987	10,165	10,306	10,417
Jobless	2,384	2,139	1,861	1,611	1,447	1,356
Jobless rate (percent)	25.3	21.9	18.6	15.8	14.0	13.0

Under the slower growth scenario (Path B), the nonwhite jobless rate would decline from 16.8 percent of their potential labor force in 1975 to 13.6 percent in 1980, slightly larger than the 2.3 point decline projected for the aggregate population.[10] The teenage jobless rate would fall by 7.7 points, from 25.3 to 17.6 percent of their potential labor force.

The higher growth associated with Path A would disproportionately benefit both groups. While the aggregate jobless rate would fall by an additional 2.7 points, that of nonwhites and teenagers would decline by another 3.9 and 4.6 points, respectively. In this sense, each group has a substantial stake in the economy's recovery. It should be noted, however, that even the rapid recovery associated with Path A would still leave nearly 10 percent of the nonwhite potential labor force and 13 percent of the teenage potential labor force without jobs. To reduce their joblessness much further will require other measures.

[10] Chapter II, Table 7.

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