

STATEMENT OF ALICE M. RIVLIN  
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BEFORE THE

TASK FORCE ON DISTRIBUTIVE IMPACTS OF  
BUDGET AND ECONOMIC POLICIES

COMMITTEE ON THE BUDGET  
U.S. HOUSE OF REPRESENTATIVES

MARCH 22, 1978



Mr. Chairman,

As I noted in earlier testimony before this task force, in spite of significant increases in overall employment levels and declines in the aggregate unemployment rate during the 1975-1978 economic recovery, unemployment rates remain high for some groups of workers, particularly nonwhite adults and both white and nonwhite younger workers. Nonwhite teenagers continued to have the highest unemployment rates of all major demographic groups.

The major reasons for these unemployment inequalities are a continuing general slack in the labor market (6.1 million workers were unemployed in February), structural factors such as inadequate levels of skill or educational attainment, and the unintended consequences of government policies that further diminish demand for already disadvantaged workers. If these inequalities are to be reduced in the future, both improved economic conditions and expanded use of targeted employment, training, and educational programs will be needed. These changes would probably increase both the number of workers employed and the number of individuals actively looking for work; therefore the improvements in employment conditions may be larger than the declines in unemployment.

#### IMPACT OF FUTURE ECONOMIC CONDITIONS ON EMPLOYMENT LEVELS

If the President's fiscal year 1979 budget or another budget with a similar level of fiscal stimulus--\$30 billion above current policy--is enacted, it is estimated that between 1977 and 1979 the civilian labor force will grow by about 4.5 million and employment will grow by about 5.3 million. This projected increase in employment--about 3 percent per year--is above long-term trend rates but below the



4.4 percent rate from the fourth quarter of 1976 to the fourth quarter of 1977. Projected increases in the labor force are also smaller than experienced in the first two and one half years of the recovery (see Table 1).

TABLE 1. PROJECTED ECONOMIC CONDITIONS IN 1978 AND 1979 GIVEN ENACTMENT OF \$30 BILLION FISCAL STIMULUS IN FISCAL YEAR 1979 a/

	Calendar Years	
	1978	1979
Economic Growth (percent change in constant dollar GNP)	4.2 to 5.2	3.8 to 5.2
Inflation (percent change in GNP implicit price deflator)	5.6 to 6.6	5.7 to 6.7
Total Civilian Labor Force (millions of persons)	99.3 to 100.3	100.3 to 103.1
Total Employment (millions of workers)	93.0 to 94.0	95.1 to 96.7
Aggregate Unemployment Rate (percent of Labor Force)	6.0 to 6.6	5.6 to 6.2

a/ CBO estimates based on enactment of approximately \$25 billion in tax cuts and \$6 billion in spending above current policy. The Administration's proposed energy program is not included in this forecast.

Recent labor market developments underscore the degree of uncertainty in even a short-term economic outlook. In the first two months of 1978, the overall unemployment rate has dropped below the level anticipated by most economists at the beginning of the year. Although the growth of employment has equaled or exceeded most forecasts, essentially no growth has occurred in the civilian labor force. As a result the aggregate unemployment rate for February was 6.1



percent, which is already below the levels many economists expected at the end of the year. The reasons for this turn of events are not yet evident and, indeed, it is possible that this improvement is only a temporary one. Furthermore, in considering the employment projections for small segments of the population, it is important to note that projections of large economic aggregates are generally subject to far less error than projections of smaller subcategories because the aggregate projections benefit from offsetting errors.

In the longer term, if the unemployment rate were to decline to 4.8 percent by 1981, total employment would likely grow to approximately 99.6 to 101.4 million workers. This outcome anticipates a slowing in the growth rate of employment from 1979 to 1981 to 2.4 percent. Labor force growth is also expected to slow slightly from 1979 to 1981, an outcome that now seems consistent with a maturing expansion but is by no means certain.

#### THE OUTLOOK FOR MAJOR DEMOGRAPHIC GROUPS IN 1979 AND 1981

##### Employment of White Adults

Since white adults constitute the bulk of the labor force, changes in aggregate employment and in adult white employment follow a generally similar pattern. In 1977 employment growth rates accelerated both for white adults and for overall employment. Female employment increased more rapidly than male employment, reflecting continued rises in female labor force participation rates and little change in the adult male participation rate. These differences between males and females are assumed to continue through 1981, with





both labor force participation and employment growing more rapidly for females than for males.

Employment gains for all adults are expected to slow, however, reflecting a reduced rate of economic growth as the recovery matures. Employment of adult white males will probably rise from 44.8 million jobs in 1977 to between 46.3 and 46.7 million in 1979, given enactment of the proposed stimulus program (see Table 2). Under the assumption that the overall unemployment rate declines to 4.8 percent in 1981, employment for white males is expected to rise to between 47.6 and 48.0 million. Employment of adult white women would rise from 28.9 million in 1977 to between 31.4 and 31.6 million in 1979.

TABLE 2. ESTIMATES OF EMPLOYMENT, BY AGE, SEX, AND RACE IN 1979 AND 1981  
(BASED ON OVERALL UNEMPLOYMENT RATE)

	1977 (Actual)	1979 (Projected)	1981 (Projected)
Unemployment rate (percent)			
All workers	7.0	5.6 to 6.2	4.8
Total Employment (millions of workers)			
All workers	90.6	95.1 to 96.7	99.6 to 101.4
White workers			
Men 20 and older	44.8	46.3 to 46.7	47.6 to 48.0
Women 20 and older	28.9	31.4 to 31.6	33.9 to 34.1
Both sexes, 16-19	7.0	7.0 to 7.4	6.9 to 7.5
Black and other workers			
Men 20 and older	5.0	5.2 to 5.4	5.5 to 5.7
Women 20 and older	4.3	4.6 to 4.8	5.1 to 5.3
Both sexes, 16-19	0.6	0.6 to 0.8	0.6 to 0.8

SOURCE: CBO estimates.



The estimates for white adults are somewhat more firmly based than the estimates for other smaller subcategories. Nevertheless, they are subject to considerable error even if the economic assumptions are correct, because the forces determining labor market participation and employment shares are not well understood. 1/

#### Employment of White Teenagers

As the recovery proceeded, white teenagers accounted for an increasing share of total gains in employment. In the first six quarters, white teenage employment increased at a 2.9 percent rate, which was significantly below the 3.7 percent rate for overall employment. In the following year, however, employment increased significantly faster for white teenagers than for all workers--7.8 percent for white teenagers compared with 4.4 percent for all workers.

White teenage employment is highly responsive to the business cycle. Under the assumed economic conditions, the overall improvement in the economy will probably have a positive effect on white teenage employment. But, population trends are expected to reduce the size of the white teenage labor force, thereby tending to reduce both unemployment and employment. 2/ As a result, whatever the projected employment level for the group, the jobs would be available to a smaller number of individuals.

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1/ For a further discussion of these uncertainties see attached Appendix A, which includes discussion of estimates provided to CBO by The Urban Institute.

2/ The white teenage population (ages 16 to 19) is projected to decline by approximately 190,000 between 1977 and 1979 and by another 520,000 by 1981.



As I pointed out in my earlier statement, some government policies have adverse effects on the employment of teenagers. Increases in the minimum wage and increases in payroll taxes make it more difficult for unskilled workers to find jobs, and teenagers are disproportionately represented in that group. On the other hand, the expansion in manpower services that is called for under current policy in 1978 and under the Administration's budget for 1979 is a positive factor in the outlook for teenage employment.

Because of the role that all of these factors play in determining white teenage employment levels, there is considerable variance in estimates of white teenage employment and the possibility of substantial error in the estimate is significant. CBO estimates that employment of white teenagers will grow from 7 million in 1977 to between 7.0 to 7.4 million in 1979 and to 6.9 to 7.5 million in 1981 if the overall unemployment rate declines to 4.8 percent.

#### Employment of Nonwhite Adults

Employment growth for nonwhite adults is also highly responsive to the business cycle. Black adult male employment gained substantially throughout the recovery at a 3.7 percent annual rate. Adult black female employment increased even faster, reflecting the continued rise in female participation rates. Black female participation rates remain higher and have grown a little more rapidly than white female participation rates in this recovery.



If the economy grows at the rates necessary to achieve a 4.8 percent unemployment rate in 1981 and present demographic trends continue, we expect adult black male employment to continue to rise steadily from about 5 million in 1977 to approximately 5.6 million in 1981. Employment for black women is expected to increase by somewhat larger amounts, from 4.3 million in 1977 to more than 5 million in 1981.

#### Employment of Nonwhite Teenagers

In the first six quarters of the recovery, black teenagers did not share in the employment advance; employment for the group even fell slightly. During the next four quarters, however, black teenage employment increased by 6.6 percent which was slightly slower than the 7.8 percent increase for white teenagers.

The possibility of erratic growth in the labor force is one of the key contributors to uncertainty about the behavior of the unemployment rate for black teenagers. Labor force participation rates for this group have fallen so low that it is extremely difficult to anticipate the amount of increase in the labor force that might result from an increase in employment. The period of rapid growth in the number of black teenagers is now coming to an end; the population of this group will increase, but only by about 50,000 from 1977 to 1979 and by even less--10,000--by 1981.





Projections of nonwhite teenage employment are much more uncertain than those for other groups. Black teenage employment has been very erratic in the past and appears to be even more affected by the business cycle than white teenage employment. A number of other factors--which are difficult both to measure and to forecast--also affect nonwhite teenage employment and unemployment. These factors include:

- o The strength of the economies of central cities;
- o The degree of reductions in educational disadvantages;
- o The pace of progress in overcoming discrimination;
- o The impact of increases in the minimum wage and in payroll taxes on job availability;
- o The impact of manpower policies and programs, some of which are only now being implemented; and
- o Labor force growth in response to improved labor market conditions.

Nevertheless, some qualitative generalizations can probably be made. If aggregate unemployment drops to 4.8 percent in 1981, employment of black teenagers is unlikely to fall and may increase significantly as labor markets begin to tighten. However, because so many black teenagers have become too discouraged to hunt for jobs, the black teenage labor force is likely to expand strongly in response to employment growth. This will slow, if not prevent, any decline in the nonwhite teenage unemployment rate. Hence, policies that successfully improve the employment situation for nonwhite teenagers may have little, if any, effect on their unemployment rate.



## POTENTIAL FOR EXPANDING EMPLOYMENT AND TRAINING PROGRAMS

In response to the expected continuation of high levels of unemployment among major demographic groups in spite of major improvements in overall economic conditions, proposals have been made to expand various employment and training programs. Several factors will determine the desirability of these proposed expansions:

- o Are these programs effective in increasing employment and earnings?
- o Are these programs too costly in comparison to the benefits they provide?
- o Are these programs well-targeted so that participants are those most in need of assistance?
- o Can these programs be expanded while maintaining their current mixes of activities and participants?

## Difficulties of Estimating Feasible Program Expansions

The feasibility and the effects of expanding various employment and training programs are highly uncertain and depend on the desires, capacities, and plans of the Executive Branch agency and the Comprehensive Employment and Training Act (CETA) prime sponsors. In general, the looser the program's regulations--in terms of eligible participants and allowed activities--the easier program expansion would be to accomplish. But programs with loose regulations are unlikely to be well targeted. More rapid buildups of targeted programs will probably result in or require relaxations of eligibility restrictions. It is also probably easier to expand existing programs



than it is to create similar levels of service in new programs for which operating structures and rules do not yet exist. Smaller proportional increases in program size are also likely to be easier to accomplish than major changes. Expansions are also more feasible if subsequent operations are projected to continue the expanded operating levels.

For existing programs, past buildup rates can be the basis for predicting the feasibility of future increases, but historical rates of expansion are not necessarily good predictors of future capacities. Low rates of growth may be the result of prior budget constraints or low interest on the part of the Administration and these may not exist in the future. On the other hand, high rates of growth may have resulted from special needs of the recipients (for example, during the rapid expansion of public service employment programs, state and local governments were having difficulty meeting payroll expenses) or high levels of Administration interest that may not be duplicated.

#### Past and Proposed CETA Expansions

Historically, the rates of growth of CETA programs have varied widely (see Table 3). Under CETA, the annual growth in public service employment (PSE) slots has ranged from 39,600 between fiscal years 1976 and 1977 to 343,600 between fiscal years 1977 and 1978. During the fiscal year 1977-1978 buildup of the public service employment program, the monthly buildup rate has averaged 47,000 slots, with individual monthly rates ranging from 28,000 to 79,000 slots. The buildup rates in other CETA programs have also varied over time.



TABLE 3. BUILDUP RATES IN CETA PROGRAMS: CHANGES IN AVERAGE ANNUAL PARTICIPATION LEVELS <sup>a/</sup>

Program	Fiscal Year 1976 to Fiscal Year 1977		Fiscal Year 1977 to Fiscal Year 1978 (estimated)		Fiscal Year 1978 to Fiscal Year 1979 (estimated)	
	Participation (thousands)	Percent Change	Participation (thousands)	Percent Change	Participation (thousands)	Percent Change
Public Service Employment (CETA Titles II and VI)	39	13	344	102	45	7
Training (CETA Title I)	- 18	-4	0	0	0	0
Job Corps (CETA Title IV) Summer Youth Employment	1	4	8		13	
Summer Youth (CETA Title III)	25	11	5	2	- 5	-2
Community Service Employ- ment for Older Americans	5	37	20	116	10	26

<sup>a/</sup> CBO estimates derived from unpublished Department of Labor data; fiscal year 1978-1979 buildup rates assume President's budget recommendations are enacted.

In addition to his proposals for expansions in current CETA operations, the President has proposed funding three CETA activities for which no historical buildup experience is available: youth employment activities conducted under the Youth Employment and Demonstration Projects Act (YEDPA), demonstration projects of welfare jobs, and a program of private sector employment initiatives. The President has proposed expanding YEDPA slots from 158,000 in fiscal year 1978 to 167,000 in fiscal year 1979. Although no funds are available for either the welfare demonstrations or the private sector initiatives in





fiscal year 1978, the Department of Labor projects that they will increase to 50,000 and 40,000 slots, respectively, in fiscal year 1979. Whether or not these expansions will occur, even if the President's budget is adopted, is very uncertain.

The Feasibility of Further Increases in CETA  
Activities in Fiscal Year 1979

The capacity to expand the CETA activities beyond the levels proposed by the President, while maintaining the present mix of participants and activities, is limited (see Table 4). A further expansion of PSE from 725,000 to between 1,200,000 and 1,325,000 slots at the end of fiscal year 1979 (requiring a buildup rate of 40,000 to 50,000 slots a month) appears feasible, if fiscal year 1980 operations are anticipated to continue at these expanded levels. This expansion would require that federal outlays increase by \$2.2 billion to \$2.8 billion in fiscal year 1979. The feasible levels of expansion of other CETA programs are more limited. Expanding Title I by more than 120,000 participants or the Job Corps by more than 20,000 participants by the end of fiscal year 1979 would be difficult. Simultaneous expansions of several CETA programs would probably compete for scarce administrative capacities of the prime sponsors causing the total expansion capacity to be less than the sum of the individually feasible expansions. Simultaneous expansions will also require more Department of Labor personnel.



TABLE 4. LEVELS AND COSTS OF FEASIBLE EXPANSIONS OF EMPLOYMENT AND TRAINING PROGRAMS IN FISCAL YEAR 1979:  
PARTICIPATION LEVELS IN THOUSANDS; OUTLAYS IN MILLIONS OF DOLLARS

Program (cost per service year in fiscal year 1979)	Average Fiscal Year 1978 Participation (estimated)	President's Budget Plan		Feasible Expansions in Fiscal Year 1979 <sup>b/</sup>		
		Average Participation in Fiscal Year 1979	1979 Outlays Required <u>a/</u>	End-of-Year Annualized Participation Level	Average Participation Level	Outlays Required
Public Service Employment (\$9,200)	680	725	6,200 <u>c/</u>	1,200-1,325	983-1,025	7,990-8,770 <u>c/</u>
Training (Title I) (\$4,600)	430	430	1,980	550	490	2,250
Job Corps (\$10,900)	29 <u>d/</u>	42	460	56	46	500
Summer Youth Jobs (\$2,700)	255	250	680	300	300	810
Older Americans Employed (\$9,800)	38 <u>e/</u>	48	470	66	56	550
YEDPA (\$6,900)	158	167	1,150	?	?	?
Welfare Demonstrations (N/A)	-	50	?	?	?	?
Private Sector Initiatives (N/A)	-	40	?	?	?	?

N/A = Not applicable.

a/ Outlays estimated using CBO inflation rates and costs reported in unpublished Department of Labor data; constant buildup of slots during fiscal year 1979 assumed, except for summer youth jobs.

b/ Estimates derived from historical patterns and discussions with informed observers; feasible within current program operating rules and procedures.

c/ Assuming that on average 7 percent of the public service employment slots are vacant.

d/ At the end of fiscal year 1978, the Job Corps is expected to be operating at a level of 36,000 participants.

e/ At the end of fiscal year 1978, this program is expected to be operating at a level of 46,000 participants.



PROGRAM AND BUDGET REQUIREMENTS TO ACHIEVE A NONWHITE TEENAGE  
EMPLOYMENT TO POPULATION RATIO OF 0.40

In 1981, there will be 2.6 million nonwhite teenagers between the ages of 16 and 19. In order to achieve the target employment ratio of 40 percent suggested in your letter, total nonwhite teenage employment must reach approximately 1 million. If general fiscal policies result in reduction of the aggregate unemployment rate to 4.8 percent, CBO estimates that between 240,000 to 440,000 additional jobs for nonwhite teenagers will be needed to reach the target 40 percent employment ratio.

Several program alternatives, if expanded, could create these additional jobs: public service employment programs, summer youth jobs, private sector placements, or YEDPA projects. The cost per created job of these alternatives varies widely, and the share of program jobs held by nonwhite teenagers also differs among the programs (see Table 5). Nonprogrammatic policies, for example reducing the minimum wage for younger workers, could also increase nonwhite youth employment.



TABLE 5. YOUTH JOB PROGRAM ALTERNATIVES

Program	Estimated Fiscal Year 1979 Cost per Service Year <u>a/</u>	Percent of Jobs Going to Non- white Teenagers <u>b/</u>
Public Service Employment	\$9,200	3
Summer Youth Jobs <u>c/</u>	2,700	55
YEDPA	6,900	N/A
Private Sector Initiatives	N/A	N/A

N/A = Not available.

a/ CBO estimates derived from unpublished Department of Labor (DoL) data.

b/ Estimates derived from unpublished DoL data assuming independence of racial and age distributions.

c/ The distribution of these jobs among demographic groups would also occur for a program of minimum wage year round jobs targeted toward disadvantaged youth.

In order to create 240,000 to 440,000 jobs for nonwhite teenagers by 1981, a very large number of traditional public service employment slots (perhaps over 15 million) would have to be funded. As an alternative, a youth jobs program targeted toward nonwhite teenagers in proportion to their representation among unemployed teenagers (25 percent) could be implemented. This effort would require 1 to 1.8 million jobs to achieve the target employment ratio. Using an even more targeted youth-oriented approach, such as a year-round minimum wage job program with participation restricted to disadvantaged teenagers, would require many fewer jobs to achieve the target employment ratio; only 440 thousand to 800 thousand job slots would be required (see Table 6). If such a program were expanded





evenly in fiscal years 1979 and 1980, and maintained in fiscal year 1981, total required outlays over the three-year period would be between \$6.1 and \$11.0 billion. Although such a program would increase employment levels, its impact on future employment problems of nonwhites is uncertain, especially if the jobs had no training components and if the increased job availability resulted in more school dropouts.

TABLE 6. COSTS OF A YOUTH-TARGETED MINIMUM WAGE JOB PROGRAM TO ACHIEVE A 40 PERCENT EMPLOYMENT RATIO FOR NONWHITE TEENAGERS IN FISCAL YEAR 1981 a/

Fiscal Year	End of Fiscal Year Slots (thousands)	Number of Service Years Funded (thousands)	Wage Level <u>b/</u> (dollars)	Outlays Required <u>c/</u> (billions of dollars)
1979	220 - 400	110 - 200	5,680	0.7 - 1.2
1980	440 - 800	330 - 600	6,120	2.2 - 4.0
1981	440 - 800	440 - 800	6,580	3.2 - 5.8
Total	----	----	----	6.1 -11.0

a/ Assuming that 55 percent of jobs are held by nonwhite teenagers (a share equal to that within the Summer Youth Employment Program). Assuming only direct employment effects, rather than indirect or induced effects, result in employment of nonwhite teenagers.

b/ Assuming minimum wage for 2,000 hours worked.

c/ Assumed 10 percent administrative costs required.

#### INFLATIONARY IMPACTS OF FISCAL YEAR 1979 OUTLAY INCREASES

In addition to the direct costs and benefits associated with alternative budget expansions, their effect on inflation must also be considered (see Table 7). There is no unique relationship between



the level of federal outlays and the rate of inflation. The type of expenditure under consideration, the actual timing of outlays, and the degree to which federal spending merely substitutes for expenditures in other sectors will all influence the impact of spending on prices. In general, the more stimulative the policy, the greater are its inflationary effects.

Table 7 presents CBO estimates of the employment and inflation effects of two kinds of spending: purchases of goods and services and transfer payments. In both cases, inflationary effects are small at first and grow over time as prices adjust to wages and wages respond, in turn, to prices. Purchases are estimated to have a greater impact on output, employment, and inflation than transfer payments.

TABLE 7. INFLATION AND EMPLOYMENT EFFECTS OF A \$10 BILLION INCREASE IN SPENDING: CHANGE FROM FOURTH QUARTER TO FOURTH QUARTER

	1979:4	1980:4	1981:4
Change in the Rate of Inflation (percent)			
Purchases	0.1	0.2	0.3
Transfers	<u>a/</u>	0.1	0.2
Change in Employment (thousands)			
Purchases	470	540	310
Transfers	260	370	220

NOTE: Simulations were for a \$10 billion step increase in spending beginning at the start of fiscal year 1979 and continuing through future budgets.

a/ Less than 0.05.



The inflationary impact of increased spending also depends on a number of factors which are difficult to anticipate. One of these is the response of monetary authorities. Action by the Federal Reserve to neutralize the impact of added expenditures on interest rates (known as full accommodation) would lead to higher levels of inflation as well as larger real effects on the economy than are estimated here. Should the Federal Reserve hold to its money supply targets, both real and price effects would be smaller. Another major determinant of the economic impact of increased spending is the degree of utilization of resources in the economy. If the economy performs better than CBO expects, the inflationary consequences of additional spending would be larger.

Mr. Chairman, as I noted in my earlier testimony, this recovery has not affected all population groups equally. Unemployment inequalities have not narrowed substantially in spite of large declines in the aggregate unemployment rate. Future declines in either unemployment rates or unemployment inequalities are most uncertain for nonwhites, particularly nonwhite teenagers. In spite of projected declines in aggregate unemployment (from 7.0 to 4.8 percent) and projected growth in aggregate employment (11 percent) between 1977 and 1981, the employment level and the employment-to-population ratio for nonwhite teenagers may remain constant over the next few years.

I hope that today's testimony and the testimony I delivered last month can help you and your colleagues on the Budget Committee deal more effectively and knowledgeably with this important issue of public concern.

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APPENDIX A. FURTHER DISCUSSION OF UNCERTAINTIES INVOLVED IN ESTIMATING  
FUTURE DISAGGREGATED EMPLOYMENT PATTERNS

In order to get more information about projecting disaggregated employment patterns, CBO contracted with The Urban Institute to make a comprehensive set of projections with its employment model (those projections are attached). Dr. Ralph Smith of the Urban Institute made these projections based on the assumption (provided by CBO) that the overall unemployment rate would average 5.8 percent in 1979 and 4.8 percent in 1981.

There are substantial differences among models concerning the growth in total employment required to achieve particular unemployment targets. Thus, using the same overall unemployment rates in 1979 and 1981, Dr. Smith's projection shows employment about one million above the midpoint of the CBO projection in 1979 and nearly two million above in 1981. A principal reason for this difference is the more rapid increase in labor force participation rates implicit in the Urban Institute model. Particular differences between the CBO and Urban Institute projections can be traced to the more rapid growth in the labor force of white teenagers and adult white females in the Urban Institute model. Dr. Smith has indicated that his projections of the white teenage labor force and employment might be too high.

Dr. Smith projects employment gains for blacks of about 860,000 from 1977 to 1979 and another 750,000 by 1981. Black teenage employment is projected to increase during the projection period, but not dramatically--67,000 between 1977 and 1979, and only another 9,000





by 1981. On the other hand, white teenage employment, according to Dr. Smith's projections will increase substantially, by more than 900,000 from 1977 to 1979 and another 450,000 by 1981.

These comparisons emphasize the uncertainty underlying projections of these employment patterns. The Smith-Vanski model, like the CBO and other efforts to project employment and unemployment for particular groups, is heavily based on trend extrapolation. If the factors causing the trend change significantly, the projections will be in error. Hence, projections of labor force status for particular groups are subject to very large margins of error, and the band of uncertainty tends to be proportionately greater the smaller the group.



March 15, 1978

APPENDIX B

Projections of Changes in Employment Status By Race, Sex, and Age, 1977-1981

by

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In response to a request from the staff of the Congressional Budget Office (CBO), we have estimated the labor market implications for six race-sex-age groups of reducing the national unemployment rate to 5.8 percent in 1979 and 4.8 percent in 1981. Our estimates are based on the Urban Institute's monthly model of the labor market.<sup>1</sup> Through simulation, the model provides conditional forecasts of employment, unemployment, and not-in-labor-force levels for sixteen demographic groups, as well as the 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 group's labor market transition probabilities to cyclical and trend variables. These were estimated with monthly data for the period, July 1967 through September 1977.

The estimates reported here are from a simulation in which the exogenous job stock was selected so as to generate the specified aggregate unemployment rates in 1979 and 1981; unemployment was assumed to linearly decline in the intervening years. Projections are made for six major demographic groups: white teens, adult males, and adult females, and black<sup>2</sup> teens, adult males, and adult females.

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\*This study was conducted with funds from the U. S. Congressional Budget Office, under Contract No. CBO-0033. Opinions expressed are those of the authors and do not necessarily represent the views of the Urban Institute or its sponsors.



### Projections

Table 1 contains our projections for the aggregate economy and for the six major demographic groups. The numbers for 1975 and 1977 are actual labor market data and serve as a basis for comparing the model projections. The upper portion of the first four columns reports the assumed unemployment rate path, the increase in the size of the civilian noninstitutional population, and the projected labor force, employment, unemployment, and nonparticipant levels associated with the unemployment decrease. The remainder of the table provides the projections for each group.

The major economic assumption underlying our projections is that the economy will grow steadily, bringing the national unemployment rate down from 7.0 percent of the civilian labor force in 1977 to 5.8 percent in 1979 and 4.8 percent in 1981. An additional assumption is that the trend and cyclical patterns in the labor market activities of every demographic group included in our model will be similar to those estimated from the 1967-1977 period. The most important of these patterns is the increase in the participation rates of adult women and white teenagers.

As the economy continues to expand, the number of people in the labor force is likely to continue to sharply increase. We are projecting that from 1977 to 1981 about ten million people will be added to the civilian labor force. Six million of the projected increase is associated with growth in the civilian noninstitutional population, ages 16 and over. The rest is due to projected growth in participation rates, reflecting the continuation of long-term trends and the positive labor force reaction to economic recovery. In 1977, 62.3 percent of the working-age population were in the labor force. We project that, under the assumed economic conditions, 63.8 percent will be in the labor force in 1979 and 64.9 percent in 1981.

The aggregate labor force participation rate increase is mostly due to the strong positive trends in the participation rates of adult white women and



of white teenagers. The rate for adult women is projected to increase by 5.1 percentage points -- about 1.3 points per year. This is associated with an underlying trend in recent years of about one point per year plus the pro-cyclical responsiveness of this group's labor force. The projected increase in participation rates of white teenagers is much larger (10.9 points) and is also due to both trend and cycle; we estimate an underlying trend of 1.7 points per year plus strong cyclical sensitivity. Since the estimation period (1967-1977) encompasses the end of the Vietnam War and of the draft, this trend may be larger than should be anticipated over a longer period. Black female participation is also expected to increase, but at a much less rapid rate than for white women. This is consistent with patterns over the past several decades, during which the gap between the two groups' participation rates has been narrowing; by 1981 we anticipate that the participation rate of black women will be less than three points above that of white women. We project small declines in the participation rates of white men and black teenagers, again reflecting long-run patterns. The participation rate of black teenagers declined substantially in recent years; the projected decline is much smaller because we expect positive labor force reaction to improved job market conditions.

We anticipate that all major groups will benefit by the improved state of the labor market. Between 1977 and 1981, we project the unemployment rates of adult men and women to decline by about two points and that of teenagers by nearly five points. Among blacks the reductions may be somewhat larger. However, at the end of the projection period each black age-sex group would still have an unemployment rate at least double that of the corresponding white group.

The employment levels of every group are also projected to increase,





reflecting both the labor force growth and unemployment rate declines. Between 1977 and 1981, the total number of job-holders would increase by almost 12 million people. Table 2 reports the projected demographic composition of this increment. Adult women, especially whites, are expected to get the largest share of the total employment additions. This is due to the expected continuation of their participation rate trends, rather than any narrowing in the unemployment rate difference between men and women. The white teenage share of total employment would also increase if their recent participation trends continue, even though their share of the total population will begin to decline. The black teenage share of employment is not expected to change.

The basic labor market patterns that we are projecting are similar to ones that are observed since the end of the recession. Between 1975 and 1977, aggregate employment increased by 5.8 million, bringing the unemployment rate down by 1.5 percentage points and helping to induce 4.8 million net additions to the labor force. During that two-year period, employment increased and unemployment decreased among every major group except black teenagers and adult females. The relative positions of the groups, as measured by their unemployment rates, hardly changed. White men continued to have the lowest unemployment rate, followed by white women. Black adults came next, with women having a slightly lower rate than men in 1975 and a higher rate in 1977. Next came white teenagers with unemployment rates almost three times those of adults. The highest rates in both years were for black teenagers, whose rates were more than double those of white teenagers. We expect these patterns to continue in 1979 and 1981.



### Limitations

All of the projections reported here are subject to errors associated with limitations in our labor market model, the data used to estimate the model, and the assumption that future events will follow patterns akin to those of the decade from which the model was estimated. From past analyses, we expect that the prediction errors will vary inversely with the sizes of the groups.<sup>3</sup> Thus, our projections for whites and adults are likely to be more accurate than the corresponding projections for blacks and teenagers. Percentage errors in our employment projections tend to be smaller than those in unemployment.

The labor force projections for white teenagers are particularly error-prone because of changes that occurred during the estimation period. White male teenage participation rates increased from 55.9 percent in 1968 to 62.0 percent in 1973, at the beginning of the recession; white female rates increased from 43.0 percent to 50.1 percent during this five-year period. Our estimated trends reflect these large increases, which may not continue. Indeed, if they did, the participation rate of white teenagers would be within nine percentage points of that of white adult men. To the extent that these increases were associated with demilitarization, the end of the draft, or other influences which have levelled off, our trend estimates may be too steep.

The projections for black teenagers, the smallest group being examined, must also be used with care. In particular, the projected six-point fall in their unemployment rate may be too large. This group's unemployment rate varies considerably from one month to the next.<sup>4</sup> Also, the Administration's proposed expansion of youth employment and training programs could have a substantial impact on the size of this group's labor force and the proportion



that would be unemployed.<sup>5</sup>

The projections for adult women, too, assume continued rapid growth in their participation rates. Whether this will occur will depend largely on whether the underlying demographic, economic, and attitudinal determinants of their past participation increases will continue. In the past decade these have included reduced birth rates, increased divorce and separation rates, growth of job opportunities in the service and retail sales industries, and changes in society's views toward women's role.<sup>6</sup> Continued growth appears likely, although possibly not at quite as rapid a rate as in recent years.



## FOOTNOTES

1. For a brief description of the model, see Ralph E. Smith, Jean E. Vanski, and Charles C. Holt, "Recession and the Employment of Demographic Groups," Brookings Papers on Economic Activity, (3:1974), pp. 737-760; for a more detailed description, see R. E. Smith, "A Simulation Model of the Demographic Composition of Employment, Unemployment, and Labor Force Participation," Research in Labor Economics, Vol. 1 (1977), pp. 259-303.
2. Throughout this paper the term "black" is used to include the Current Population Survey category, "black and others." About 89 percent of this group are black; the remainder are American Indians, Eskimos, Orientals, and other nonwhite groups.
3. Smith, "A Simulation Model...", op. cit., pp. 280-290.
4. Our model, run with the actual 7.0 percent national unemployment rate in 1977, generated 40,000 too few unemployed black teenagers. Since the group's labor force is very small, this small error translated into a 4.8 percentage point error in their unemployment rate. Some of the projected decline in their unemployment may be caused by the model error.
5. For a recent analysis of youth unemployment and of the Administration's youth employment and training budget, see George R. Iden, statement on youth unemployment, presented to the Task Force on Human Resources, Committee on the Budget, U. S. House of Representatives, February 13, 1978. It is estimated that 832,000 person-years of youth employment and training is budgeted for Fiscal 1979. In Fiscal 1976, 47 percent of new enrollees in youth-oriented programs were black.
6. Smith is currently conducting a study of the determinants of future female labor force growth for the U. S. Department of Labor. A final report will be issued in September 1978.





TABLE 1. EMPLOYMENT STATUS OF THE CIVILIAN NONINSTITUTIONAL POPULATION BY SEX, AGE, AND RACE  
(in thousands, except as indicated) a/

	TOTAL				MALES, 20 YRS. & OVER	
	1975	1977	1979	1981	1975	1977
Civilian Noninstitutional Population	151,269	156,426	161,182	165,633	63,358	65,796
Civilian Labor Force	92,613	97,401	102,906	107,478	50,855	52,464
Percent of Population	61.2	62.3	63.8	64.9	80.3	79.7
Employed	84,783	90,546	96,946	102,297	47,427	49,737
Unemployed	7,830	6,855	5,959	5,181	3,428	2,727
Percent of Labor Force	8.5	7.0	5.8	4.8	6.7	5.2
Not in Labor Force	58,655	59,025	58,280	58,158	12,502	13,332
<b>White</b>						
Civilian Noninstitutional Population	133,501	137,594	141,327	144,768	56,501	57,727
Civilian Labor Force	82,084	86,107	90,917	94,800	45,617	46,960
Percent of Population	61.5	62.6	64.3	65.5	80.7	81.3
Employed	75,713	80,734	86,279	90,879	42,801	44,784
Unemployed	6,371	5,373	4,638	3,921	2,816	2,176
Percent of Labor Force	7.8	6.2	5.1	4.1	6.2	4.6
Not in Labor Force	51,416	51,488	50,411	49,970	10,884	11,556
<b>Black and Other</b>						
Civilian Noninstitutional Population	17,768	18,831	19,856	20,864	6,856	7,280
Civilian Labor Force	10,529	11,294	11,989	12,679	5,238	5,504
Percent of Population	59.3	60.0	60.4	60.8	76.4	75.6
Employed	9,070	9,812	10,668	11,418	4,626	4,953
Unemployed	1,459	1,482	1,321	1,260	612	551
Percent of Labor Force	13.9	13.1	11.1	9.9	11.7	10.0
Not in Labor Force	7,239	7,537	7,869	8,188	1,618	1,776

a/ 1975 and 1977 data are from Employment and Earnings, Vol. 23 and 25 (January 1976 and January 1978).  
1979 and 1981 data are projections from our model.



TABLE 1 (Continued)

MALES, 20 & Over (Cont)		FEMALES, 20 YRS. AND OVER				BOTH SEXES, 16-19 YRS.			
1979	1981	1975	1977	1979	1981	1975	1977	1979	1981
68,098	70,322	71,650	74,159	76,733	79,228	16,261	16,470	16,351	16,082
53,883	55,154	32,959	35,685	38,865	41,841	8,799	9,252	10,157	10,483
79.1	78.4	46.0	48.1	50.6	52.8	54.1	56.2	62.1	65.2
51,727	53,476	30,310	33,199	36,569	39,712	7,046	7,610	8,650	9,108
2,156	1,678	2,649	2,486	2,296	2,129	1,752	1,642	1,507	1,374
4.0	3.0	8.0	7.0	5.9	5.1	19.9	17.7	14.8	13.1
14,216	15,169	38,691	38,474	37,869	37,389	7,462	7,218	6,195	5,600
60,384	62,176	63,145	65,104	67,132	69,079	13,854	13,975	13,812	13,513
48,080	49,057	28,609	30,853	33,658	36,239	7,858	8,295	9,178	9,503
79.6	78.9	45.3	47.4	50.1	52.5	56.7	59.4	66.5	70.3
46,400	47,799	26,459	28,930	31,886	34,637	6,452	7,020	7,992	8,442
1,680	1,258	2,149	1,922	1,772	1,602	1,406	1,275	1,185	1,060
3.5	2.6	7.5	6.2	5.3	4.4	17.9	15.4	12.9	11.2
12,304	13,120	34,537	34,251	33,474	32,841	5,996	5,680	4,633	4,010
7,714	8,146	8,505	9,056	9,601	10,149	2,407	2,495	2,540	2,568
5,803	6,098	4,351	4,832	5,207	5,602	940	957	979	979
75.2	74.9	51.2	53.4	54.2	55.2	39.1	38.4	38.5	38.1
5,327	5,678	3,851	4,268	4,683	5,075	594	590	657	666
475	420	500	564	524	526	347	367	321	314
8.2	6.9	11.5	11.7	10.1	9.4	36.9	38.3	32.9	32.0
1,913	2,050	4,154	4,223	4,394	4,548	1,467	1,538	1,562	1,590



Table 2

Demographic Composition of Projected Employment Gains, 1977 - 1981<sup>a</sup>  
 (in thousands, except as indicated)

	<u>1977 Employment</u>		<u>1981 Employment</u>		<u>Employment Increase</u>	
	<u>Level</u>	<u>% of Total</u>	<u>Level</u>	<u>% of Total</u>	<u>Level</u>	<u>% of Total</u>
Aggregate	90,546	100.0	102,297	100.0	11,751	100.0
White	80,734	89.2	90,878	88.8	10,144	86.4
Males, 20 and over	44,784	49.5	47,799	46.7	3,015	25.7
Females, 20 and over	28,930	32.0	34,637	33.9	5,707	48.6
Both Sexes, 16-19	7,020	7.8	8,442	8.3	1,422	12.1
Black and Other	9,812	10.8	11,419	11.2	1,608	13.7
Males, 20 and over	4,953	5.5	5,678	5.6	725	6.2
Females, 20 and over	4,268	4.7	5,075	5.0	807	6.9
Both Sexes, 16-19	590	0.6	666	0.6	76	0.6

a. Computed from data in Table 1.

