AN ECONOMIC ANALYSIS OF THE FULL EMPLOYMENT AND BALANCED GROWTH ACT OF 1976

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PREFACE

This study, An Economic Analysis of the Full Employment and Balanced Growth Act of 1976, was initiated at the request of the Joint Economic Committee. It was prepared by Nancy S. Barrett and Michael S. Owen of the Congressional Budget Office's Fiscal Analysis Division.

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C O N T E N T S

T A B L E S

C H A R T S

SUMMARY

S.50, the Full Employment and Balanced Growth Act of 1976, establishes a goal of 3 percent adult unemployment to be achieved within 4 years and outlines a set of organizational structures and an administrative process designed to improve coordination of economic policy at the national level. While it mandates the use of certain types of programs to achieve the full-employment goal, it does not directly establish specific employment programs.

Both the economic impact and future budget costs of S.50 will depend on a number of different factors:

- The underlying strength of private demands in the economy that determines how much unemployment there would have been without passage of S.50;
- The particular policy mix selected to reduce unemployment to the 3 percent range;
- The definition of "adult unemployment": If "adult" is defined as non-teenage, the 3 percent target for adults translates to around 4 percent for overall unemployment; if "adult" is defined as persons 18 years and older, it translates to around 3.5 percent overall unemployment.

When these factors are taken into account, this study concludes that enactment of S.50 could result in lower unemployment, but at the risk of substantially higher inflation, particularly if the 3 percent target is viewed as a short-range goal and if teenagers are included in the definition of adult. A set of simulations by CBO shows that reaching a 3.5 percent overall unemployment rate instead of 5.0 percent by 1980 might add roughly 2 percentage points to the inflation rate by 1982. In the long run, on the other hand, it is possible that careful development of employment programs targeted at pockets of high structural unemployment could reduce these

inflationary risks. Training programs, if successful, could shift workers from situations of labor surplus to those of labor shortage. Further, vigorous pursuit of anti-inflation measures might increase the feasibility of achieving a 3 percent unemployment goal in a non-inflationary environment.

Budget costs will also vary widely, depending on the state of the economy and the policy mix adopted under S. 50. This report provides estimates of the cost of public employment programs under certain hypothetical economic assumptions. They range from $16 billion to $44 billion, depending on what is assumed about the definition of adult and the amount of displacement from other employment. If public employment programs attract previously-employed persons from low-paying jobs in the private sector or if state and local governments use public employment funds to hire workers they may have employed anyway, net employment is not increased by the full number of new public jobs. Net budget costs of a $16 to $44 billion program would be less as a result of lower unemployment insurance payments and higher tax receipts. They might range from $7.0 billion to $19.9 billion after a year of operation. It should be stressed, however, that these estimates are merely an illustration of one possible set of budgetary implications for S.50. Under different economic conditions and using a different policy mix than those shown, budget costs could vary widely.

S. 50 provides a limited job guarantee provision whereby the government would stand ready as employer of last resort to provide jobs at prevailing wages when adult unemployment exceeds 3 percent. The section mandates wage standards for the job guarantee program, standards which add to the inflationary impact of the bill. Higher wages, on the other hand, may have

other benefits as an income maintenance device and a way to draw more attention to improving pay and working conditions in low-level private sector jobs.

S.50, the Full Employment and Balanced Growth Act of 1976, has several major aspects:

- Establishment of a goal of 3 percent adult unemployment to be reached as promptly as possible, but within not more than 4 years after the date of enactment of the Act.

- Recognition that achieving a 3 percent unemployment goal will require a mix of both aggregate demand policies and more selective targeted measures.

- Recommendation that full employment policies be accompanied by anti-inflation measures.

- Extension of the organizational structures established in the Employment Act of 1946 and the Congressional Budget Reform Act of 1974 to establish an institutional framework whereby the President, the Federal Reserve Board, and Congress can coordinate national economic policy to achieve the goals set forth in the Act.

An economic analysis of S.50 should deal with its probable impact on the economy and an estimate of its budgetary costs. However, while the bill specifies a full-employment goal and an administrative process, and mandates the creation of certain types of programs, it does not directly establish specific programs. Both the economic impact and the budget cost will differ greatly depending on which measures are selected to achieve the full-employment goal. Some job-creating measures are likely to have a greater inflationary impact than others. Further, anti-inflation policies recommended in the bill may vary considerably in effectiveness depending on which measures are chosen and how rigorously they are pursued. Regional, inter-industry, and demographic impacts will also vary with program design.

Budget costs are also highly uncertain, since the cost per job of alternative measures to stimulate employment varies greatly. At best, an economic analysis can provide an illustration of the effect of some measures that might be enacted to achieve the full employment goal and programmatic mandates of S.50.

Even this illustrative analysis, however, requires answers to three preliminary questions: First, what does the goal of 3 percent adult unemployment mean, in terms of who is classified as "adult"? Second, what is the starting point for measuring the effects and costs of S.50; that is, is it to be viewed as an anti-recession bill designed to reduce unemployment from its current level of 7.5 percent, or should that short-run reduction be thought of as something the economy will probably achieve in any case and S.50 viewed as a program to lower the long-term average unemployment rate from around 5 percent to near 3 percent? Finally, what mix of tools might be used to achieve the full employment goal?

Considerations in Defining the Unemployment Goal

The requirements for reaching the goal of 3 percent unemployment depend, of course, on who is classified as an adult. A useful rule of thumb in this regard is that since the mid-1960s the unemployment rate for all workers aged 16 and over has been roughly one percentage point above the unemployment rate for those 20 and over and 0.5 percentage points above those 18 and over.[1] Table 1 contains more precise comparisons on a yearly basis. Although demographic factors in the future could reduce this differential, projections by the

1. This means 16 and 17 year olds account for about half the total of teenage unemployment.

Table 1--UNEMPLOYMENT RATES FOR ALL PERSONS 16 AND OVER COMPARED WITH UNEMPLOYMENT RATES FOR PERSONS 18 AND OVER AND 20 AND OVER

Year	(1) Unemployment Rate, 16+	(2) Unemployment Rate, 18+	(3) Unemployment Rate, 20+	(4) (1) - (2)	(5) (1) - (3)
1950	5.3	5.1	4.8	0.2	0.5
1951	3.3	3.1	3.0	0.2	0.3
1952	3.0	2.8	2.7	0.2	0.3
1953	2.9	2.7	2.6	0.2	0.3
1954	5.5	5.3	5.1	0.2	0.4
1955	4.4	4.2	3.9	0.2	0.5
1956	4.1	3.9	3.7	0.2	0.4
1957	4.3	4.0	3.8	0.3	0.5
1958	6.8	6.5	6.2	0.3	0.6
1959	5.5	5.2	4.8	0.3	0.7
1960	5.5	5.2	4.8	0.3	0.7
1961	6.7	6.4	5.9	0.3	0.8
1962	5.5	5.2	4.9	0.3	0.6
1963	5.7	5.2	4.8	0.5	0.9
1964	5.2	4.7	4.3	0.5	0.9
1965	4.5	4.1	3.6	0.4	0.9
1966	3.8	3.4	2.9	0.4	0.9
1967	3.8	3.5	3.0	0.3	0.8
1968	3.6	3.2	2.7	0.4	0.9
1969	3.5	3.1	2.7	0.4	0.8
1970	4.9	4.5	4.0	0.4	0.9
1971	5.9	5.4	4.9	0.5	1.0
1972	5.6	5.1	4.5	0.5	1.1
1973	4.9	4.3	3.8	0.6	1.1
1974	5.6	5.0	4.5	0.6	1.1
1975	8.5	7.9	7.3	0.6	1.2

SOURCE: Bureau of Labor Statistics.

NOTE: Column (1) is the unemployment rate for the civilian labor force for all persons 16 and over. Column (2) is the unemployment rate for the civilian labor force for all persons 18 and over. Column (3) is the unemployment rate for the civilian labor force excluding teenagers, that is, persons 16 to 19.

Urban Institute indicate that this approximate spread will persist through the next decade. Thus, if we speak of 3 percent non-teenage unemployment we are referring to an approximate 4 percent overall rate. Similarly, a 3 percent unemployment rate for persons 18 and over implies about a 3.5 percent overall rate.

Baseline for Evaluating Employment Policy in S.50

In determining the starting point for reducing unemployment in S.50, it is useful to separate the intentions of the bill into two aspects. In part, S.50 is designed to coordinate and ensure a vigorous recovery from the current recession. In part, it is designed to improve on past performance and permanently bring adult unemployment close to 3 percent.

It is important to bear in mind that the economy is beginning a recovery from its deepest postwar recession. Even though there has been substantial growth in the economy beginning in the second half of 1975, unemployment is still 7.5 percent. Projections of economic growth based on current economic policies put unemployment in the 6.4 to 6.9 percent range by the end of 1977.[2] Further, a sustained 5 percent average annual real rate of growth beyond 1977 would not push unemployment below 5 percent until about 1981. Achieving 3 percent adult unemployment without any special jobs programs would require much more rapid growth over the next four years--sustained annual growth rates in the 7 percent range. Alternatively, countercyclical employment programs such as public employment, incentives to the private sector, temporary assistance to state and local governments, and accelerated public works could absorb some of the unemployment, reducing the unemployment rate associated with any rate of real output growth.

2. Congressional Budget Office, Budget Options for Fiscal Year 1977: A Report to the Senate and House Committees on the Budget, March 15, 1976, p. 20.

If it is viewed primarily as a long-range program for maintaining full employment, the costs of recovering from the current deep recession should not be attributed to S.50. Viewed in this way, the role of S.50 is to improve the long-run average behavior of unemployment. Unemployment since 1960 has averaged 5.2 percent. Some of this unemployment has resulted from the economy operating at less than full capacity in recession periods; some is due to longer-run factors. Based on this historical benchmark, the 3 percent adult unemployment target (or 3.5 to 4 percent overall) of S.50 can be evaluated relative to a 5.2 overall rate of unemployment rather than the present 7.5 percent.

Given the many unpredictable events that befall modern economies--external price fluctuations, wars, changes in trade relationships, and the like--together with the many internal instabilities in our complex economic system, some cyclical activity is likely to occur. The role of the administrative mechanisms outlined in S.50 is to improve coordination of economic policy and reduce cyclical instability as well as provide special employment programs. Its intended result is to reduce the historical gap between actual unemployment and the full-employment goal. However, even with improved coordination of fiscal and monetary policy, some cyclical unemployment is still likely to occur.

This paper will focus on the second, or long-range aspect of S.50. Viewed in this way, the policies and costs attributable to S.50 require (on the average) less additional stimulus to the economy and entail lower budget costs than would the entire job of bringing unemployment from its present 7.5 percent to 3.5 to 4 percent.

Alternative Policy Options

S.50 outlines a number of policy measures that might be implemented to achieve the full-employment target. Standard fiscal and monetary measures might be supplemented by special job-creating policies like public service employment, accelerated public works, grants to state and local governments, and special tax incentives to business. A number of anti-inflation measures are also described. Further, there is a provision of a limited job guarantee for persons able and willing to work and seeking work.

Special employment programs are to be enacted to the extent that fiscal and monetary policies are unable to achieve the 3 percent adult unemployment target. Presumably what this means is that supplementary measures are to be used if the inflationary pressures or budget costs associated with using standard fiscal and monetary policy to achieve the unemployment target become unacceptably high. Further, certain demographic groups, regions, and industries may experience high unemployment rates even when the overall unemployment rate is in the target range, and special targeted programs might be sought to alleviate these special unemployment problems.

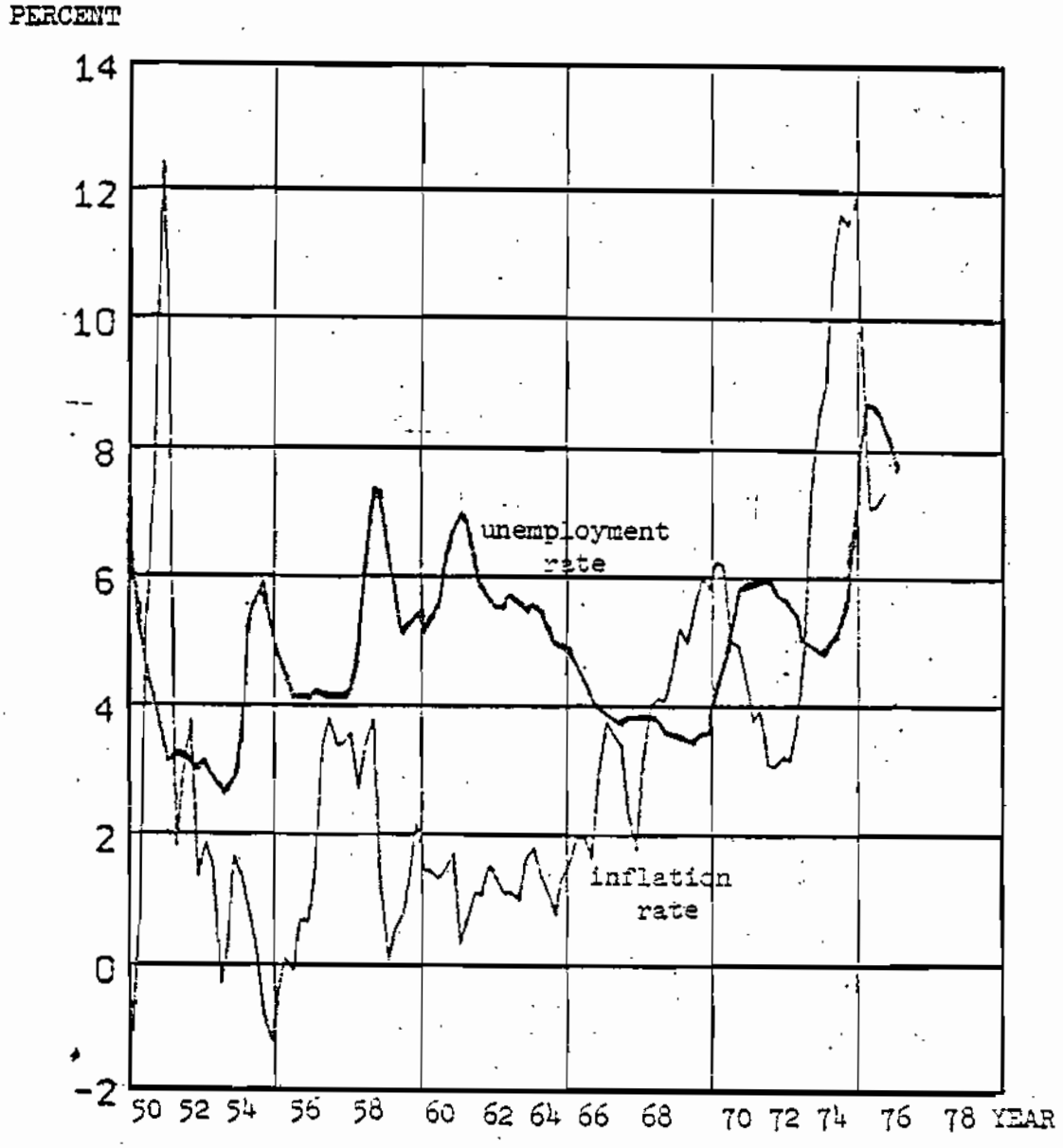
The choice of employment programs also depends on the underlying causes of unemployment. Across-the-board measures are generally not considered to be the best remedies for unemployment that results from lack of skills, job dissatisfaction, regional problems, or special industry dislocations. Increasing aggregate demand to reduce these types of unemployment in relatively tight labor markets will be more inflationary than targeted programs. However, in practice, it is not always possible to distinguish cyclical unemployment (that due to inadequate aggregate demand) from the longer-run varieties.

Cyclical Unemployment. Cyclical unemployment occurs as a result of the economy operating below capacity. This condition can be eliminated by expansionary aggregate demand policies--tax cuts, across-the-board increases in spending, and expansionary monetary policy. However, as the economy moves toward capacity, inflation typically begins to pick up. This means that one's view of whether or not the economy is at or below capacity, and hence, how much of the prevailing unemployment should be characterized as cyclical, depends on how much added inflation one is willing to accept (or reduce by direct price controls or other anti-inflation measures) in exchange for a given reduction in unemployment.

Historical evidence alone cannot provide a definitive answer to the question of how far fiscal and monetary policy can bring the economy toward a full-employment goal before inflation picks up substantially. While it is not always true that unemployment and inflation go in opposite directions--the last few years have demonstrated that they can sometimes go up together--falling unemployment has been associated with rising inflation for most of the last three decades. This is shown in Chart 1. The periods in which the "tradeoff" appears not to exist were often characterized by special factors, such as direct wage and price controls and government materials allocation in 1951-52 when low rates of inflation were associated with falling unemployment, and large increases in food and energy prices in 1973-74 when high rates of inflation occurred simultaneously with rising unemployment. Because we are currently experiencing a legacy of inflationary expectations that has followed in the wake of recent high rates of inflation, it is extremely difficult to predict how much added inflation would be associated with any expansionary fiscal and monetary policy strategies adopted today.

CHART 1

UNEMPLOYMENT AND INFLATION
1950-1978



SOURCE: Bureau of Labor Statistics.

NOTE: Inflation is measured by the percent change from two quarters earlier in the Consumer Price Index, expressed at an annual rate.

While projections of the potential inflationary impact of achieving various unemployment targets are highly uncertain, simulation models can provide evidence of past relationships between prices and unemployment. Projecting these into the future is one way to gauge the magnitude of the inflation-employment tradeoff, although this technique is, of course, subject to error.

One set of simulations by CBO[3] shows that if expansionary aggregate demand measures were enacted in 1976:III (the third quarter of calendar year 1976) to achieve various unemployment targets by 1980, reducing unemployment by 0.5 percentage points (below 5 percent) would add roughly 0.3 to 0.4 percentage points to the Consumer Price Index (CPI) by 1980 and 0.5 to 0.7 by 1982. That is, if inflation were 5 percent per year in a 5 percent unemployment economy, it would be 5.5 to 5.7 percent two years after reaching a 4.5 percent unemployment economy, and roughly 7 percent per year two years after reaching a 3.5 percent unemployment economy. The details of the simulations are shown in Table 2. If this tradeoff exists, whether or not one is willing to exchange more jobs for higher prices at these rates is still a matter of values. Further, various anti-inflation measures as outlined in S.50 could conceivably improve price performance as the economy expands towards full employment.

3. The simulations are based on a two-equation wage-price model in which there is a lagged mutual interdependence between wages and prices; price changes depend in part on wage changes and wage changes depend in part on current and past price changes. A technical paper describing the model in detail is available from the Fiscal Analysis Division, Congressional Budget Office.

Table 2--PROJECTIONS OF ADDED INFLATION FOR DIFFERENT UNEMPLOYMENT TARGETS

Unemployment Target for 1980 (percent)	5.0	4.5	4.0	3.5	3.0
Addition to CPI in 1980 (in percentage points relative to the 5.0 percent unemployment target)	0	0.3 - 0.4	0.8 - 0.9	1.1 - 1.4	1.6 - 1.9
Addition to CPI in 1982 (in percentage points relative to the 5.0 percent unemployment target)	0	0.5 - 0.7	1.1 - 1.5	1.7 - 2.3	2.4 - 3.3

SOURCE: U.S. Congress, Congressional Budget Office, "A Simplified Wage-Price Model," September 1975.

For purposes of illustration only, we will define unemployment above 4.0 percent as cyclical and the rest noncyclical; that is, based on longer-run factors.[4] Thus, of the 5.2 percent average unemployment over the 1960-75 period, about 1.2 percentage points will be attributed to the economy operating below potential and the other 4 percentage points to longer-run factors.[5] If a higher definition of cyclical unemployment had been used, say 5.0 percent, then less of the past unemployment would be attributed to the economy operating below potential (in this case only 0.2 percentage points on the average) and more to longer-run factors.

Standard fiscal and monetary measures are one way to reduce cyclical unemployment. In addition, special countercyclical measures such as public service employment, special tax incentives to private industry, accelerated public works, and special assistance to state and local governments can also be used on a temporary basis either to provide jobs directly to the cyclically unemployed (as in public employment and public works), or to provide special incentives to private industry and state and local governments to employ more people than they would have anyway. A recent study by CBO of temporary measures to stimulate employment,[6] concluded that selective measures can potentially have a higher employment impact per dollar spent than across-the-board fiscal policy. Further, in some cases, the potential inflation impact per job is less than for standard

4. The distinction is made to allow an estimate of the number of jobs that would be required for various employment programs under S.50. It is not an attempt to prejudge the desired inflation-unemployment tradeoff.

5. This distinction between cyclical and noncyclical unemployment means that whenever unemployment exceeds 4 percent, both kinds of unemployment occur simultaneously, suggesting that both countercyclical and structural programs need to be developed in tandem.

6. U.S. Congress, Congressional Budget Office, Temporary Measures to Stimulate Employment: An Evaluation of Some Alternatives, September 2, 1975.

fiscal and monetary policy, suggesting that using selective measures can improve the inflation-unemployment tradeoff.

Table 3 shows estimates of the employment impact and net budget cost (taking into account savings from unemployment compensation and higher tax payments for alternative temporary employment programs).[7] Initially, there is a fairly wide variation in cost-per-job, although these differences tend to narrow after a year or two of program operation. Public employment has a lower cost-per-job than other measures, although more costly programs have other benefits reflected in the value of their output. After a year of operation, for instance, accelerated public works may cost about one and a half to twice as much per job as public employment. But across-the-board tax cuts could entail a cost of from three to four times that of public employment.

Table 4 provides in summary form some of the considerations discussed in Temporary Measures to Stimulate Employment in making comparisons between programs. While such special measures to stimulate employment may be less costly and potentially less inflationary in the short run, aggregate demand policies are sometimes viewed as a more neutral way to stimulate economic growth and employment and are also sometimes thought to be more effective ways to create jobs in the long run than selective measures. In addition, as compared to aggregate demand programs, targeted programs may be difficult to implement and imprecise or untimely in their impact.

7. A detailed explanation of the assumptions behind these estimates can be found in Temporary Measures to Stimulate Employment; cited in footnote 6 of this paper.

TABLE 3--ESTIMATES OF EMPLOYMENT AND BUDGET IMPACT OF VARIOUS PROGRAMS COSTING $1 BILLION[1]

Type of program	Initial impact			12 months			24 months		
	Increase in jobs (thousands)	Reduction in unemployment rate	Net budget cost (millions)	Increase in jobs (thousands)	Reduction in unemployment rate	Net budget cost (millions)	Increase in jobs (thousands)	Reduction in unemployment rate	Net budget cost (millions)
Public service employment	80-125	0.07-0.11	$754-$815	90-145	0.08-0.13	$402-$425	90-150	0.08-0.13	$392-$312
Anti-recession aid to State and local governments	40-77	.04-.07	850-718	70-97	.07-.09	590-570	72-100	.07-.09	480-450
Accelerated public works	16-46	.02-.04	915-793	56-70	.06-.07	537-510	64-80	.07-.08	430-390
Tax cut [2]	8-15	.01-.02	980-960	26-35	.02-.03	740-720	30-40	.02-.03	663-637
Government purchases	20-50	.02-.04	948-870	40-70	.03-.05	600-590	60-80	.04-.05	475-425

[1] These estimates assume no monetary accommodation. If the money supply were increased to prevent interest rates from rising as a result of the expansionary fiscal measure, the job-creating effect would be higher and the net deficit cost lower. Accommodating monetary policy would increase the expansionary effect by 25 percent or more which, in turn, would reduce the budget cost by an average of about $125 million.

[2] The income tax cut is assumed to be one-third corporate and two-thirds personal. If the tax cut were entirely personal, the expansionary effect would be about 50 percent greater and the net budget cost about $175 million lower.

Source: See app. B.

SOURCE: U. S. Congress, Congressional Budget Office, Temporary Measures to Stimulate Employment: An Evaluation of Some Alternatives, September 2, 1975.

TABLE 4--SUMMARY OF THE POTENTIAL IMPACTS OF ALTERNATIVE MEASURES TO STIMULATE EMPLOYMENT

	Employment impact per dollar expenditure	Startup time	Phaseout flexibility	Inflation impact	Value of output	Targetability
Income tax cut.	Relatively low, particularly in the short run.	Subject to lags in individuals' spending.	Potentially easy to terminate.	Same as any aggregate fiscal measure.	Entirely private sector.	None.
Increase in Government purchases.	Higher than tax cut; lower than special employment programs.	Potentially fast; subject to policy initiation lag.	May be hard to terminate, especially if useful output, services involved.	Same as any aggregate fiscal measure, depending on employees' skill mix.	Mostly public sector; 2d round effects on private sector.	Low.
Accelerated public works.	Potentially low if wages are high; greater job impact from low-wage projects.	Potentially long; but with wide variations depending on type of program.	Wide variation; appropriations easier to stop than some other Government programs, but large-scale projects may take long to complete.	Somewhat greater than other programs if workers highly skilled; lower if aimed at less skilled workers.	Mostly public sector; 2d round effects on private sector.	Can be directed at high-employment areas, construction trades.
Public service employment.	Relatively high if wages are low.	Potentially fast if existing programs expanded.	Relatively flexible if job tenure limited.	Low if aimed at unskilled workers and if wages are lower than private sector alternatives.	Low if emphasis is solely on job impact; if combined with training can produce useful skills.	Can be directed at most needy individuals.
Antirecession aid to State and local Governments.	Less than PSE if skill levels high; more than other Government purchases, public works.	Potentially fast; no new programs, only transfer of funds.	Potentially easy to terminate.	Moderate, depending on skill level of employees.	State and local government services.	Can be directed at Governments hit by recession.

SOURCE: U. S. Congress, Congressional Budget Office, Temporary Measures to Stimulate Employment: An Evaluation of Some Alternatives, September 2, 1975, p. VIII.

Non-Cyclical Unemployment. Some unemployment is caused by factors others than the business cycle, and thus continues even when the economy approaches capacity and inflation begins to increase. In some cases, high rates of cyclical unemployment exacerbate structural problems and it is generally agreed that reducing or eliminating cyclical unemployment contributes to the effectiveness of all types of employment programs. Hence, cyclical and other types of unemployment should not be viewed as entirely separate problems.

A major cause of non-cyclical unemployment is an excess supply of labor in some pocket or pockets of the labor market. These pockets may be regional, they may result from a decline in demand for a particular product requiring labor with a specialized skill, or they may be due to the crowding of some individuals into a limited number of occupations because of discrimination, lack of education, or other barriers that prevent occupational mobility. Programs designed to increase the demand for labor in these pockets and/or to increase the mobility of individuals out of the pockets (by geographic mobility allowances, training or retraining, and removal of discriminatory barriers, to name a few) might be more effective in reducing this sort of unemployment than across-the-board increases in demand that might only drive up wages in other sectors of the labor market where unemployment is not a problem.

A second kind of non-cyclical unemployment consists of short spells of unemployment accompanying job change or initial entry into the labor force. To some extent, this represents a normal period of job search for new job-seekers or for persons who have left a job to seek a better one.

(Many individuals take a first job or change jobs without experiencing unemployment, however.)[8]

Some groups of people experience frequent occurrences of unemployment, resulting in high unemployment rates. Unskilled and disadvantaged individuals--among whom blacks and young people are disproportionately represented--experience more frequent spells of this sort of unemployment than other groups. These persons tend to hold jobs at the bottom of the labor market hierarchy and they become unemployed frequently because the are fired, because they quit, and because they leave and reenter the labor force more frequently than other workers. Job attachment is weak. There is little incentive for employer or employee to maintain a long-term work relationship since there is little if any on-the-job training and hence no payoff to seniority. Job satisfaction is low, and this also weakens job ties.

Increasing job attachment by providing jobs with some training and chances for upward mobility would certainly be a desirable component of a program designed to reduce the relatively high unemployment rates of the unskilled and disadvantaged. In fact, failure to do so might result in continued high rates of unemployment for these groups, making a 3 percent adult unemployment goal

8. It is sometimes noted that this type of unemployment may be higher in the United States than in other countries because of higher mobility and greater expectations of the possibility for advancement in the labor market here.

difficult or even impossible to achieve.[9] Further, a case could be made that paying participants a higher wage than in the countercylical program and providing in general a more attractive work environment would increase job attachment and reduce the frequent spells of unemployment that characterize their job market experience. This means that such programs are bound to be more costly on a per-job basis than countercyclical programs. Further, if they are made more attractive than private sector alternatives, workers will be drawn from the private sector, increasing the size of the public jobs program and driving up wages in the private sector. Over the longer run, however, this displacement could result in improved working conditions in the private sector.

If the line between cyclical and non-cyclical unemployment is defined at 4 percent (the arbitrary distinction made earlier), then according to the mandate of S.50 various programs going beyond countercyclical efforts would be required to provide enough jobs to reduce unemployment from 4 percent overall to 3 percent for adults. Presumably, eligibility to participate in the structural programs would be limited to adults. (Special programs for teenagers are also mandated in a separate section of S.50).

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9. It should be noted that the unemployment rate for adult white males has been below 3 percent in six years since 1965. In 1969 the rate was 1.9 percent. High rates of noncyclical unemployment in the United States are confined to certain groups or pockets of the labor force. Further, other countries are able to achieve overall employment rates below 2 percent. Viewed in these terms, a 3 percent adult unemployment target does not seem unrealistic if employment programs are effective in dealing with the special factors contributing to high unemployment for certain groups and are not limited to across-the-board measures or programs that simply create jobs without increasing employment stability or job attachment.

Focusing on a single unemployment target for the entire labor force may give the misleading impression that once the target is achieved unemployment is no longer a problem. Serious unemployment problems may persist even if the overall target is met.

If adult is defined as nonteenage, the bill would mandate a relatively small employment program (in addition to countercyclical measures) to achieve the 3 percent target, since teenagers account for about one percentage point of unemployment.[10] Projections of current demographic trends in employment and labor force participation by The Urban Institute suggest that in 1980 a 4 percent overall unemployment rate would mean about 3.2 percent for persons 20 and over, or about 186,000 unemployed persons 20 and over based on a projected labor force of 92.8 million for non-teenagers. If adult is defined as persons 18 and over there would be more unemployment over and above the 3 percent adult unemployment target when the economy is at a 4 percent overall unemployment rate. The Urban Institute projects the unemployment rate for persons 18 and over would be about 3.6 percent in 1980 if the overall rate were 4 percent. This would mean about 590,000 unemployed persons 18 and over based on a projected labor force of 98.4 million for persons 18 and over.

The Inflation Problem

A serious problem associated with pursuing a goal of 3 percent adult unemployment is the risk that inflation will begin to accelerate as the economy approaches the goal. Two major sources of inflation need to be identified. The first is likely to be associated with any attempt to reduce unemployment to low levels. The second is related to a specific provision of S.50.

10. If cyclical unemployment were defined as 4.5 percent, however, the structural programs would be larger and cyclical programs smaller. Further, if high rates of structural unemployment persist for certain groups--such as black teenagers--additional programs may be desired even if the mandated target has been achieved for the adult labor force.

First, as noted in the analysis of cyclical unemployment, inflation is likely to pick up as the economy moves closer to potential. As expansionary fiscal and monetary measures are used to bring the economy closer to capacity and the unemployment rate falls, some added inflation is likely. While economists' understanding of inflation is too limited to warrant any confidence in precise estimates of the inflationary risk, the historical record since 1960 does suggest that inflation picked up considerably in the late 1960s when unemployment approached 3 percent for adults. The very high rates of inflation experienced in the 1970s can be traced largely to factors other than tight labor markets, but an attempt to drive unemployment to the target mandated in S.50 within four years would result in an acceleration of wage inflation similar to that experienced in the late 1960s. Indeed, some of the pickup of inflation in 1973 may have been due to the decline in the overall unemployment rate to 4.6 percent, a rate considerably higher than the goal of S.50.

According to the simulations in Table 2, the added inflation associated with achieving a 3.5 percent unemployment target relative to a 5.0 percent target is around 1.25 percentage points in the year the target is achieved and around 2 percentage points two years after achieving the target. If unemployment were to be held at the 3.5 percent rate indefinitely, the simulations show a growing inflationary impact.

The second potential source of added inflation is the requirement in S.50 that wages in public employment programs must meet certain standards.

They must, for example, be at least equal to prevailing wages paid by the local government if the local government is the employer, and they must meet Davis-Bacon standards in the case of construction jobs.

Particularly since persons who refuse private sector jobs at less than prevailing wages or "fair rates of compensation" would be eligible for "employer-of-last-resort" jobs, these provisions would tend to drive up wages in private industry, where many workers do not now earn these wage rates. While higher wages, particularly in special programs targeted at the poor and unskilled might have other benefits--both as an income maintenance device and a way to reduce job turnover and frequent occurrences of unemployment--these provisions of S.50 are likely to result in a higher average level of wages economy-wide than would otherwise prevail, adding to the inflationary pressures that could arise from the economy operating close to capacity. No estimate of the added inflation from this source can be made, however, without a more specific statement of the wage provisions envisioned.

It is possible that the careful coordination of employment programs proposed in S.50 could reduce the inflationary risk. Well-designed programs could be targeted on pockets of unemployment instead of spreading their effects over all sectors of the labor market. Training programs, if successful, could shift workers from situations of labor surplus to those of labor shortage. Pursued over a period of years, such measures could improve the inflation/unemployment tradeoff. As a long-range goal, therefore, pursuit of a 3 percent adult unemployment target would seem more realistic (in terms of its potential inflationary consequences) than if it is viewed as a short-range target.

The anti-inflation section of S.50 adds some other approaches to the reduction of inflationary pressures. These include actions to ensure adequate supplies of scarce commodities, particularly food and energy, recommendations to strengthen and enforce antitrust laws, measures to increase productivity in the private sector, and recommendations for administrative and legislative actions to promote reasonable price stability if serious inflationary pressures arise. Although the bill does not specify, these actions might include price and wage controls, guidelines, or an incomes policy. In any case, the bill focuses much less on these anti-inflation suggestions than on the unemployment goal; there is no target set for inflation as there is for unemployment.

Budget Implications of S.50

One concern in evaluating S.50 is the potential budget cost. The direct cost associated with the new administrative structures proposed by S.50 is likely to be small, but the cost of employment programs that might be needed to achieve the 3 percent adult unemployment target, while difficult to estimate, could, in some circumstances be quite high.

Indeed, the cost of such programs in any hypothetical year is impossible to estimate because the cost will depend critically on the strength of private demands in the economy and the policy mix selected to reduce unemployment to the 3 percent range. In periods of peak economic activity, program costs may be limited to targeted measures to reduce a relatively small amount of non-cyclical unemployment; in recession periods, larger and therefore more costly countercyclical employment programs would be needed. Further, costs will vary with the mix of policy options adopted.

Standard fiscal policy measures--tax cuts and across-the-board increases in spending--entail higher costs on a per-job basis than special employment

programs like public service employment, public works, and special tax incentives and employment subsidies to private industry. Monetary policy, on the other hand, involves no added budget costs.

Costs in any year will also depend on the size of the labor force (in absolute terms the program cost will grow as the labor force grows), the definition of "adult," and definitions of cyclical and non-cyclical unemployment (program costs are likely to be different for cyclical programs).

Estimation of costs also depends on the baseline against which costs are evaluated. Under the Employment Act of 1946 the federal government has pursued full employment goals through a wide range of strategies, although emphasis has been on standard fiscal and monetary measures. S.50 is intended to improve on past performance by offering a numerical goal for unemployment and an expanded set of administrative mechanisms to coordinate national economic policy in pursuit of that mandate. Consequently, one measure of the added costs of S.50 is the cost of policies to improve on average past performance--that is, to reduce unemployment from its 1960-75 average of 5.2 percent overall to 3 percent for adults.

Given the illustrative definition of unemployment in excess of 4 percent as cyclical, then the difference between the historical average of 5.2 percent and 4 percent can be viewed as the failure of stabilization policy on the average to achieve full capacity levels of output and employment. Improved coordination of monetary and fiscal policy could potentially improve on this average past performance, reducing the average amount of cyclical

unemployment in the future and hence the future costs of countercyclical employment programs.[11]

Although S.50 may result in better coordination of national economic policy in the future and hence less cyclical unemployment than in the past, it may be useful to examine the general order of magnitude of an employment program that would provide enough jobs to bring cyclical unemployment from its 1960-75 average of 5.2 percent to 4.0 percent and to provide enough jobs in non-cyclical employment programs to reduce adult unemployment to 3 percent.[12]

In 1980, the total civilian labor force is estimated to be about 102.5 million persons (at 5.2 percent unemployment).[13] Reducing unemployment from 5.2 percent to 4.0 percent of that labor force thus involves about 1.23 million unemployed persons. Under the assumption that about 10 new jobs need to be created for every six person reduction in unemployment due to increases in the labor force as unemployment falls, a countercyclical employment program in 1980 would involve approximately 2 million jobs.

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11. Standard fiscal policy measures are not, of course, costless. Tax cuts add to the federal budget deficit, but do not increase the resources allocated to the public sector. Increases in government purchases add to budget costs, but may not be traceable to specific employment measures. If monetary policy is used as as principal stabilization instrument, there are no budget costs involved.

12. Additional structural programs may be desired to deal with pockets of high unemployment even if the 3 percent goal is reached. However, this possibility is not specifically mandated in S.50, and consequently will not be dealt with here.

13. This estimate is 1.3 million above the Bureau of Labor Statistics projection of 101.2 million. CBO assumes somewhat higher participation rates for certain groups in the labor force in 1980, resulting in the higher labor force estimate. The Urban Institute projects an even higher labor force for 1980.

As shown in Table 3, a wide variation in the cost per job is possible depending on the policy mix adopted. Public employment, for instance, has a relatively low cost-per-job. However, public employment programs might just displace some workers who had previously been employed, rather than increasing net employment by the full number of new public jobs. For example, some workers might be attracted from low-paying jobs in the private sector. Further, if public employment programs are administered through state and local governments, these governments may use public employment funds to hire workers they may have hired anyway. If such displacement were to run as high as 50 percent, the number of public jobs required to employ 2 million additional people doubles (to 4 million), doubling the cost per net addition to employment. Other programs like accelerated public works may entail lower displacement rates but a higher cost per job. The job-creating impact of other indirect measures, like private sector subsidies and tax incentives, is much more difficult to estimate than for direct job-creating programs.

An illustrative cost estimate for a countercyclical public service employment program is shown in Table 5.[14] Ranges are provided, depending on what

14. Alternative policy options would have different costs. Some, like across-the-board tax cuts would be considerably more expensive--perhaps three to four times as expensive--as public employment. Other options, like expansionary monetary policy would be less expensive.

TABLE 5--ILLUSTRATIVE COST ESTIMATE FOR A PUBLIC SERVICE EMPLOYMENT PROGRAM

	Initial Cost				Cost After 12 Months of Program Operation				Cost After 24 Months of Program Operation			
	Estimated Cost (1980) $ Billions		Estimated Net Budget Cost (1980) $ Billions		Estimated Cost $ Billions		Estimated Net Budget Cost $ Billions		Estimated Cost $ Billions		Estimated Net Budget Cost $ Billions	
Unemployment Target	3%, non-teenage	3%, 18 and over	3%, non-teenage	3%, 18 and over	3%, non-teenage	3%, 18 and over	3%, non-teenage	3%, 18 and over	3%, non-teenage	3%, 18 and over	3%, non-teenage	3%, 18 and over
Non-Cyclical Component												
Public Employment and Training ($10,000 average cost per job)	2.9-5.8	10.5-21.1	1.8-3.6	7.2-14.4	2.9-5.8	10.5-21.1	1.2-2.5	5.0-10.1	2.9-5.8	10.5-21.1	0.9-1.9	3.9-8.0
Cyclical Component												
Countercyclical Public Employment ($8000 average cost per job)	16.4-27.4	16.4-27.4	10.3-17.1	10.3-17.1	13.7-24.4	12.7-23.0	5.8-10.6	5.3-9.8	13.7-24.4	12.6-23.0	4.5-8.4	4.1-7.9
TOTAL COST	19.3-33.2	26.9-48.5	12.1-20.7	17.5-31.5	16.6-30.2	23.2-44.1	7.0-13.1	10.3-19.9	16.6-30.2	23.1-44.1	5.4-10.3	8.0-15.9

NOTE: This table presents Congressional Budget Office staff calculations. Cost estimates are presented in ranges with the low end based on an assumption of zero displacement and the high end on a 40 percent displacement rate. A higher displacement rate would increase upper-range costs in all cases. Average costs per job are in 1976 dollars. Inflation that occurs between 1976 and 1980 could increase these costs. See the Appendix for further details.

is assumed about displacement. A U.S. Department of Labor study[15] of past experience in countercyclical public employment programs administered through state and local governments estimates a 40 percent displacement rate in past experience. An evaluation of past experience with public service employment under CETA (the Comprehensive Education and Training Act of 1973) suggests that future programs could be designed to reduce this amount of displacement significantly. The most optimistic view is that displacement could be significantly reduced and perhaps even eliminated entirely by such measures as restricting eligibility to persons unemployed five weeks or longer and by administering the programs at the federal level instead of through state and local governments. At an assumed cost of $8,000 per job a program to provide 2 million new jobs would cost from $16 billion (with no displacement) to $27 billion (with 40 percent displacement.) Of course, displacement could be even higher than 40 percent, with costs going up proportionately.

Estimates of the net budget costs of the programs are also shown in Table 5. These take into account the budget savings that occur when workers no longer collect unemployment compensation and begin to pay taxes and contribute to social security. Budget savings are somewhat less when younger workers are included since they are less likely to have been drawing unemployment benefits. If jobs are given to workers who would have been receiving unemployment compensation, the cost per job is reduced by an average of $3,900 per worker (the current saving), in addition to the effect of increased tax payments. These offsetting savings are larger for programs like public employment that have a

15. U.S. Department of Labor, Office of the Assistant Secretary for Policy Evaluation and Research, "An Evaluation of the Public Employment Program," by George E. Johnson and James D. Tomola, Technical Analysis Paper No. 17-A, September 1974, pp. 14-55.

higher job impact than for aggregate demand measures, especially if the newly employed persons have been receiving unemployment compensation. Other budget savings result from higher corporate tax payments and personal tax payments from higher incomes of persons previously employed. These savings begin to show up more with the passage of time, as higher levels of unemployment and income generate higher profits and wages through second-round "multiplier" effects. After 24 months of program operation, net budget costs amount to about a third of program outlays. Thus, a program costing from $13.7 to $24.4 billion in outlays might entail a net budget cost between $4.5 billion and $8.4 billion after two years of operation. A detailed explanation of the assumptions behind these estimates is provided in the Appendix.

In addition to countercyclical employment programs, other employment policies are also mandated under S.50. Although the bill does not specify, these might take the form of subsidies to private industry to hire and train disadvantaged workers, grants to firms that move to regions experiencing high unemployment or mobility allowances to individuals who move out of such regions, and grants to state and local governments to provide training and job placement services. An analysis of the potential effectiveness of such measures and consequently the potential cost of reducing a given amount of unemployment by these means would be highly complex and beyond the scope of the present study.

One possible option, chosen only because the cost is less difficult to estimate than for other options, is the provision of a different kind of public employment program. Such a program would not simply provide work for people who are temporarily jobless, as in the countercyclical case. If unemployment is due to high rates of job turnover, as is the case with unskilled and disadvantaged workers, on-the-job training, an attractive wage and working

environment might be needed to increase job attachment and reduce frequency of unemployment. If this were the case, it would mean a higher cost per job than for countercyclical public employment programs.

The size of the program needed to bring adult unemployment to 3 percent depends on the definition of adult. If adult is defined as nonteenage then in 1980 only about 230,000 jobs would be required, assuming countercyclical employment programs have absorbed unemployment in excess of 4 percent overall. If adult unemployment means persons 18 and above, then about 840,000 jobs would be required.

Noncyclical public employment programs may have a higher cost per job than countercyclical public employment (although not necessarily a higher cost per job than other, more costly countercyclical employment options). This is because the noncyclical programs are likely to involve training in addition to participants' salaries. If they also pay higher wages and offer a more attractive working environment in order to increase job attachment and reduce frequency of unemployment this adds to the cost per job. Moreover, the more attractive the job relative to private-sector alternatives, the higher the probable rate of displacement.

The estimates in Table 5 assume a cost per job of $10,000 and a displacement rate of between 20 percent and 60 percent. Regional and industry employment programs will also have a higher cost per job than pure countercyclical programs since they are likely to entail relocation costs and training. However, displacement is not likely to be high at this wage level.

As in the case of the countercyclical public employment programs, net budget costs for the noncyclical programs are also shown. A detailed breakdown of the computations behind these estimates is provided in the Appendix.

After 24 months of program operation, a public employment program to reduce unemployment from 5.2 percent overall to 3 percent for adults in 1980 might cost between $16.6 billion and $44.1 billion, depending on the definition of adult and on the amount of displacement of employment from other parts of the economy. Higher rates of displacement than those assumed in the estimates would result in even higher program costs. The net budget costs of such a program, taking into account savings in unemployment insurance outlays and higher tax payments, might range from $5.4 to $15.9 billion. Once again, it should be stressed that these estimates refer to only one approach to creating jobs--public employment programs--and to an "average" state of the economy.

Other Costs. Other provisions of the bill include a teenage unemployment program, increased responsibilities for the Council of Economic Advisers and the Federal Reserve Board, establishment of a Full Employment Office in the U.S. Department of Labor and a Division of Full Employment and Balanced Growth within the Congressional Budget Office. These provisions would add to the costs shown in Table 5.

Offsetting Benefits

Whatever the costs of achieving a 3 percent adult unemployment goal, there are offsetting benefits.

Joblessness entails a loss of output. The added output that results from the employment programs mandated in S.50 will vary with the policy mix selected. Tax cuts will stimulate private employment and output. Public employment projects may add public works and government services. While an evaluation of the additional output that would be produced by 2 million additional workers would depend on what they are put to work doing, it is likely

that the value of that output to the economy as a whole would at least offset the costs to the federal budget of putting them to work.

In addition, joblessness entails many social costs that cannot always be measured--deterioration of work habits and skills, loss of self esteem, increased incidence of crime, and other problems. Putting 2 million additional people to work would eliminate some of these less measurable but equally important costs.

Government as Employer of Last Resort

One of the difficulties with the Employment Act of 1946 is that it fails to provide an enforcement mechanism to ensure that full employment will be achieved. Section 206 of S.50 attempts to provide such a mechanism by mandating the federal government to stand as employer of last resort for adult Americans unemployed in excess of the 3 percent goal.

Section 206 of S.50 states that adult Americans able, willing, and seeking work who are unable to find jobs through other provisions of S.50 shall be provided jobs through federally operated public employment projects and approved private nonprofit employment projects. This so-called job guarantee is not necessarily unlimited, however. According to S.50, the size of the public employment program may be limited as long as adult unemployment is not in excess of 3 percent. Further, eligibility or priority criteria based essentially on need could be established under the provisions of S.50.

While there have been many interpretations of what a federal job guarantee might imply (S.50 does not specify the provisions and coverage of the job guarantee--it only lays out guidelines), one way to view the employer-of-last resort feature of S.50 is that it might involve the rough equivalent of the structural employment programs shown in Table 5. This would mean providing from 230,000 to 840,000 additional jobs by 1980 (depending on the definition of "adult").

Two major questions come to mind in connection with the job guarantee program. First, Section 206 stipulates that the federal job guarantee should also carry with it a guarantee of the prevailing wage for that type of work in the labor market in which the job occurs. In the case of construction jobs, they must meet Davis-Bacon Act standards; and they must be at least equal to prevailing wages paid by a local government if the local government is the employer. This provision would undoubtedly drive up the average level of wages for the economy as a whole, both in government and in the private sector as private employers are forced to compete with government for workers. As mentioned earlier, this would add to the potential inflation impact of S.50 unless offsetting anti-inflation measures were adopted.

These wage standards are likely to attract workers from other sectors of the economy, adding to the size of the federal employment program required to achieve the 3 percent unemployment target. For instance, at a displacement rate of 50 percent, a public employment program to provide 230,000 additional jobs would have 460,000 participants.

The possibility that the employer-of-last resort feature of S.50 would result in a large and unwieldy bureaucracy cannot be ruled out, particularly in view of the attractive wages that would be offered. At the same time, however, this feature could draw more attention to improving the quality of life in the private sector. This has been the case in certain European countries that enacted job guarantee programs in the 1960s. Upgrading working conditions in low-level private-sector jobs could be facilitated by appropriate subsidies to business to provide training and an improved working environment. To the extent that increased training and better working conditions enhance worker productivity, some or all of the inflation effects of the higher wages might be offset. Further, over the longer run, individuals would return to the private sector as wages and working conditions improve.

TECHNICAL APPENDIX

This technical appendix describes the procedure used in estimating the size and costs of the public employment programs shown in Table 5, page 25.

Alternative Definitions of the Unemployment Rate Target

The number of jobs required to achieve the 3 percent adult unemployment goal of S.50 depends on who is classified as "adult."

Two separate sets of estimates were prepared in this study, each based on a different definition of "adult;" one set is for nonteenagers, and the other for all persons 18 and over.

Cyclical versus Noncyclical Programs

Total program costs are divided into two components. A countercyclical public service employment (PSE) program designed to provide temporary jobs to the cyclically unemployed would have an average cost per participant of $8,000--$7,500 in wages and $500 in administrative costs. This cost per participant is based on Department of Labor estimates for Title VI of CETA for fiscal year 1976. The countercyclical component would provide enough jobs to reduce the overall unemployment rate from 5.2 percent (the 1960-75 average unemployment rate) to 4.0 percent (the arbitrary delineation of cyclical unemployment used in this study.)

A noncyclical PSE program would further reduce unemployment from 4.0 percent overall to 3.0 percent for adults. The size of the noncyclical program varies depending on the definition of adult; the more inclusive the definition, the larger the noncyclical program. The cost per participant in the noncyclical program is estimated to be $10,000--$8,500 in wages and $1,500 for training and administration.

Initial Program Cost

The initial cost of each program will depend on the size of the labor force, the cost per PSE participant, and the net increase in jobs associated with the provision of one PSE job (the displacement effect).

Labor Force. The civilian labor force in 1980, at an unemployment rate of 5.2 percent, was estimated to be 102.5 million. This estimate is 1.3 million above the Bureau of Labor statistics projection due to CBO's assumption of somewhat higher participation rates for some demographic groups in 1980.

Further, it was assumed that as unemployment falls below 5.2 percent, additional persons would enter the labor force: for every 10 jobs created, 4 additional persons would enter the labor force. Taking this into account, the number of countercyclical PSE jobs required to reduce the unemployment rate in 1980 from 5.2 percent to 4.0 percent would be 2.05 million.

For the noncyclical program, labor force estimates for the two definitions of adult are: 92.8 million (nonteenage) and 98.4 million (18 and above). Lower labor force responses were assumed for the noncyclical programs, since the number of discouraged workers and potential labor force entrants are proportionately fewer when young people are omitted from the labor force: a response of 30 percent was assumed for persons 18 and above, and 20 percent for nonteenagers.

Based on these labor force and response estimates, the noncyclical PSE component would require 230,000 jobs if adult is defined as nonteenage, and 840,000 jobs if adult is defined as 18 and over.

Displacement

The net increase in employment associated with any PSE program depends on what is assumed about displacement, that is the degree to which federal spending on PSE replaces state and local jobs. A range is provided.

For the countercyclical program, the low end of the range assumes no displacement. This would mean a program with carefully designed safeguards (such as federally administered programs) to prevent displacement. The upper end of the range assumes the 40 percent displacement rate which a recent Department of Labor study[1] has estimated for recent past PSE experience in CETA. Since CETA has been widely criticized for not having adequate safeguards against displacement, it could be expected that a future PSE program could be designed to improve on this performance. On the other hand, it is unlikely that displacement could be eliminated altogether. Consequently, the actual amount of displacement in future PSE programs would be likely to lie somewhere within the range provided.

Thus the countercyclical program would need to provide from 2.05 million to 3.4 million jobs, taking displacement into account. At a cost of $8,000 per job, the total program cost would range from $16.4 million to $27.4 million.

Displacement was assumed to be higher for the noncyclical program. This was due to the assumption that higher wages in this program might attract more workers from the private sector. If adult is defined as nonteenage, the noncyclical program would involve 290,000 to 575,000 participants. At a cost per participant of $10,000 the costs would range from $2.9 billion

1. George E. Johnson and James D. Tomola, "The Efficacy of Public Service Employment Programs," unpublished, June, 1975, Table III, p. 21.

to $5.8 billion. If adult is defined as 18 and over, 1.05 million to 2.1 million participants would be involved, with program costs ranging from $10.5 billion to $21.1 billion.

Second and Third Round Effects

Policy changes such as these PSE programs also have second and third round effects on employment and income which must be calculated. The initial spending results in increased income and employment in later periods, that may more than offset increases in displacement over time. Because of these effects required program outlays may be reduced as time passes.

Estimates of the employment impact of these programs after 12 and 24 months were derived from similar estimates made in an earlier study by the Congressional Budget Office.[2] Total employment was estimated to increase by a small amount after 12 and 24 months in the high displacement case, and by somewhat larger amounts in the low displacement case. An adjustment in the spending multiplier was made to account for lower levels of transfer payments as PSE participants are taken off unemployment insurance.

If total program outlays were held constant at their initial levels, these second and third round increases in employment would be sufficient to drive the adult unemployment rate even lower. Since the goal of the program is to maintain the adult unemployment rate at 3.0 percent, these second and third round employment gains allow some reduction in total program expenditures after the passage of time. It was assumed that, in both cases, noncyclical PSE programs would be held at their initial spending

2. U.S. Congress, Congressional Budget Office, Temporary Measures to Stimulate Employment: An Evaluation of Some Alternatives, September 2, 1975.

levels, and all second and third round spending changes would come from the countercyclical program. Labor force estimates were derived in the same manner as earlier; desired employment levels (to maintain the 3.0 percent "target") for both "adult" definitions were then calculated. The differences between these desired levels of employment and the actual levels that would occur if all programs were held at their initial levels of funding measure the amounts by which the countercyclical program can be reduced (for both cases) after 12 and 24 months. The actual dollar amount of the reduction in total program outlays is the product of this "employment differential" and the average cost per job ($8,000). These calculations show that sizeable reductions in expenditures on the countercyclical program can be made in both cases, particularly when displacement is low.

Net Budget Costs

Net budget costs will be lower than program expenditures because the increased employment would result in reduced expenditures for unemployment compensation and increased tax receipts. Net budget cost calculations are shown in Tables A1 and A2.

A rule of thumb that is often used to calculate the net budget cost of a given policy action is to assume that for every dollar by which the policy increases income, the deficit falls by 31 cents to 34 cents. This simple rule was derived by inspecting the historical relationship between changes in total income and changes in receipts and outlays (corporate taxes, personal taxes, unemployment compensation, etc.)

However, because the policy measures described in this report have different impacts on employment, they will necessarily have different impacts on unemployment compensation and personal tax receipts as well. To rely

TABLE A1

Countercyclical PSE Programs--Net Budget Cost Calculations

	Initial Impact		12 Months				24 Months			
			Non-teenagers 20+		Persons 18+		Non-teenagers 20+		Persons 18+	
	Low	High	Low	High	Low	High	Low	High	Low	High
Increase in Jobs (thousands)	2050	3420	2041	3470	1919	3302	2065	3420	1915	3232
A. Direct Effect										
1. Increase in tax receipts (millions)	$2050	$3420	$2041	$3470	$1919	$3302	$2065	$3420	$1915	$3232
2. Decrease in unemployment compensation	$4077	$6802	$3836	$6652	$3513	$6206	$3845	$6527	$3448	$6026
3. Total direct savings	$6127	$10222	$5877	10122	$5432	$9508	$5910	$9947	$5363	$9258
B. Indirect Effect										
4. Total change in income	NA	NA	$23544	$40816	$22568	$39408	$28454	$49882	$26821	$47731
5. Wages and salaries paid to new job holders	-	-	$15307	$26025	$14393	$24765	$15488	$25650	$14362	$24240
6. Remainder	-	-	$8237	$14791	$8175	$14643	$12966	$24232	$12459	$23491
7. Indirect savings ((6) x .25)	-	-	$2059	$3698	$2044	$3661	$3242	$6058	$3115	$5873
Total Savings ((3) + (7))	$6127	$10222	$7936	$13820	$7475	$13169	$9152	$16005	$8478	$15131
Total Outlays	$16400	$27360	$13704	$24376	$12728	$23032	$13672	$24376	$12624	$23032
Net Budget Cost (millions)	$10273	$17138	$5768	$10556	$5253	$9863	$4520	$8371	$4146	$7901

TABLE A2

Structural PSE Program--Net Budget Cost Calculations

	Initial Impact				12 Months				24 Months			
	Non-teenagers 20+		Persons 18+		Non-teenagers 20+		Persons 18+		Non-teenagers 20+		Persons 18+	
	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
Increase in Jobs (thousands)	288	575	1050	2110	334	647	1218	2373	346	647	1260	2373
A. Direct Effect												
1. Increase in tax receipts (millions)	$288	$575	$1050	$2110	$334	$647	$1218	$2373	$346	$647	$1260	$2373
2. Decrease in unemployment compensation	$764	$1525	$2293	$4608	$886	$1716	$2660	$5183	$918	$1716	$2752	$5183
3. Total direct savings	$1052	$2100	$3343	$6718	$1220	$2363	$3878	$7556	$1264	$2363	$4012	$7556
B. Indirect Effect												
4. Total change in income	NA	NA	NA	NA	$4608	$9200	$16800	$33760	$5760	$11500	$21000	$42200
5. Wages and salaries paid to new job holders	-	-	-	-	$2839	$5500	$10353	$20170	$2941	$5500	$10710	$20170
6. Remainder	-	-	-	-	$1769	$3700	$6447	$13590	$2819	$6000	$10290	$22030
7. Indirect savings ((6) x .25)	-	-	-	-	$442	$925	$1612	$3398	$705	$1500	$2572	$5508
Total Savings ((3) + (7))	$1052	$2100	$3343	$6718	$1662	$3288	$5490	$10954	$1969	$3863	$6584	$13064
Total Outlays	$2880	$5750	$10500	$21100	$2880	$5750	$10500	$21100	$2880	$5750	$10500	$21100
Net Budget Cost (millions)	$1828	$3650	$7157	$14382	$1218	$2462	$5010	$10146	$911	$1887	$3916	$8036

completely on this simple rule would misstate the budget impact of each of the programs. Therefore, we have used a slightly more complex two-part procedure designed to take into account the differing employment impact of the various programs.

Initial Impacts. In the first round, budget costs should be reduced by the amount of unemployment compensation that would have been paid to program participants and by the increased personal and payroll (social security) tax payments of program participants.

For the countercyclical program it was assumed that there would be provisions in the program requiring participants to have been recipients of unemployment compensation, but that some exceptions would have been made. Thus, it was assumed that because of the labor force response described above, 60 percent of the jobs would be filled by persons previously unemployed, and of these it was assumed 85 percent were previously insured (a slightly higher proportion than the proportion of insured unemployed due to the assumed eligibility restrictions). The average benefit of $3,900 per year is based on estimates for fiscal year 1977. The reduction in unemployment benefits is therefore derived by multiplying the change in employment by 60 percent and then by 85 percent to obtain the number of insured workers, and then multiplying this by $3,900 to obtain the actual dollar savings.

Further, it was assumed that each new employee would pay $1,000 in various taxes per year. The net budget cost is then to total program cost less the calculated savings from increased tax receipts and reduced unemployment insurance outlays. So for example, with the low displacement estimate of 2.05 million jobs, the reduction in unemployment compensation payments would be (2.05 X 0.6 X 0.85 X $3,900) or $4.077 billion. Increased tax

receipts would be $2.05 billion so total savings would be $6.127 billion and the net budget cost would be $16.400 - $6.127 = $10.273 billion.

Calculations for the noncyclical PSE programs were similar except that the assumption about the percentage of the participants that would have been covered by unemployment insurance was different. In part, this is due to assumed differences in labor force response mentioned earlier. When adults are defined as nonteenage, 8 of every 10 jobs are assumed to be filled by previously unemployed persons. An 85 percent rate of insurance coverage is assumed. (Although the noncyclical program would not necessarily be restricted to previously covered individuals as was the countercyclical program, the exclusion of teenagers would increase the proportion of the unemployed population covered). If adults are defined to include persons 18 and above, 7 of every 10 jobs is assumed to be filled by previously unemployed persons with an 80 percent rate of insurance coverage. The average benefit level and tax payments are assumed to be the same as for the countercyclical program.

Indirect Effects

The budget savings calculated in this fashion do not include changes in receipts from higher corporate tax liabilities, increased excise tax recepits, and the increased personal tax receipts of those individuals who were employed prior to the policy action. A second step, relying in part on the rule of thumb mentioned above, was used to calculate the increase in receipts from these other sources.

As mentioned earlier, the second and third round effect of initial outlays on public employment programs result in higher employment and incomes after 12 months and 24 months. We have assumed certain policy

"multipliers," which tell us the amount by which income will change following a given policy action. These multipliers measure the amount by which income will change as a result of the PSE program. Income multipliers of 1.6 at 12 months and 2.0 at 24 months were assumed here, so that each $1.0 billion in spending increases income by $1.6 billion after one year and $2.0 billion after two years. A certain amount of this increase in income is going to pay the wages and salaries of new job-holders; this amount is simply the average wage times the number of new jobs created. This amount has already been accounted for in calculating the direct savings above; the indirect effect is simply calculated by multiplying the difference between the total change in income and the part attributable to the new employment by 0.25.[3] The total budget savings will then equal the sum of the direct and indirect budget savings, and the net budget cost equals total program cost less total savings.

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3. A smaller proportion (0.25 rather than 0.31 to 0.34) was used because the savings associated with persons not previously employed make up a larger proportional share of the total savings.