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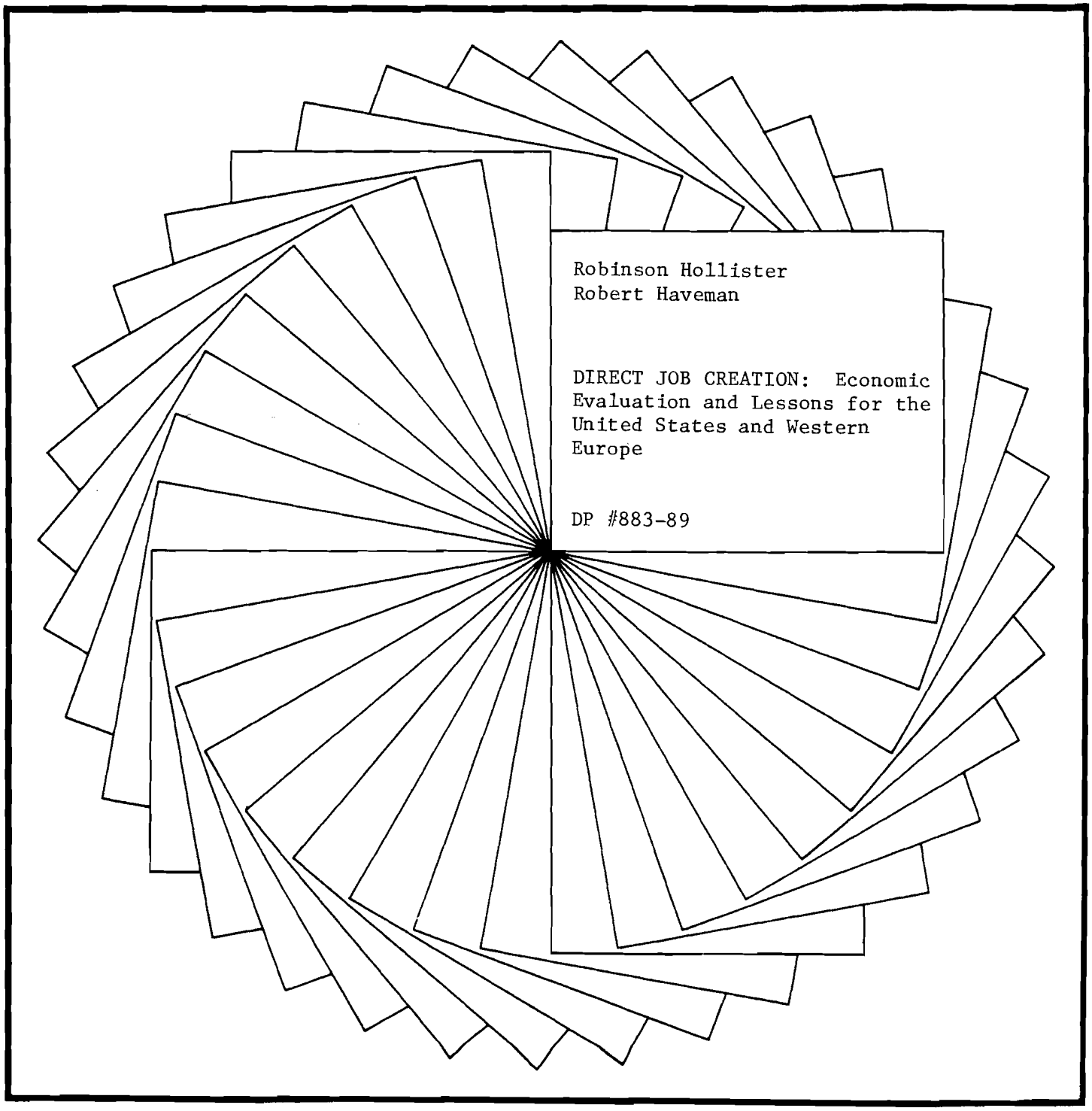

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DIRECT JOB CREATION: Economic Evaluation and Lessons for the United States and Western Europe

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DIRECT JOB CREATION: ECONOMIC EVALUATION AND LESSONS FOR THE UNITED STATES AND WESTERN EUROPE

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Abstract

This paper reviews and assesses public employment and training efforts, ranging from direct job creation to education and training programs, in Western Europe and the United States. We first address theoretical issues: economic explanations for unemployment and justification for government intervention in the labor market; the interaction of employment policy and exchange rate policies. We then evaluate job creation programs and survey program effectiveness across a variety of other employment policies, including wage subsidies and training and placement programs for adults and for youth. In the final section we offer nine general conclusions that result from the survey.

DIRECT JOB CREATION: ECONOMIC EVALUATION AND LESSONS FOR THE UNITED STATES AND WESTERN EUROPE

I. INTRODUCTION

For two decades there has been considerable employment and training activity by the governments of most of the countries in Europe and North America. This seems an appropriate time to review some of this experience in order to assess what we have learned regarding the potential of employment and training efforts and how they might be applied in the current economic and social context.

Most European countries are suffering from extremely high unemployment rates as judged by their own historical standards, and projections by many experts show little hope for improvement for the next five to ten years. Many have increased the magnitude and variety of employment and training efforts in response to this problem.

While the unemployment situation is not as severe in the United States as in most of Europe, unemployment has only recently (1988) achieved levels approximating the 1960s, despite the fact that the recovery following the 1981-82 recession has continued for a record length of time; and even now certain groups, minorities and youth in particular, have not regained the employment position they had before the recession. There has been a significant shift in labor market policies of the central government following a period of very high job creation activities in the 1970s.

Governmental employment and training efforts have been significant in magnitude at various times in both Europe and North America; for example, in Sweden it has been estimated that enrollments in public work

and training programs have accounted for as much as 3.5 percent of the total labor force. In the United States, job creation programs have been extremely important to particular groups. For example, in 1979 about 40 percent of employed black teenagers were holding jobs in the government's Youth Employment Demonstration Projects Act (YEDPA) programs.

There is both a richness and variety of experience with public employment and training efforts in Europe and North America and a set of critical issues for which knowledge about the character and effects of such programs could be important. In what follows, we will assess public employment and training efforts which range quite widely across types of programs, from direct job creation through education programs. We have chosen breadth rather than depth of detail in order to highlight what we consider major issues.[1]

Our discussion will encompass a wide range of employment and training efforts, extending from complete government production through regional development and antidiscrimination regulations. The major categories that we have in mind, described in Appendix A, are the following:

--Complete Government Production

--Shared Public/Private Production

--Subsidized Activities

--Mixed Work and Training

--Training

--Enterprise Promotion

--Regional and Structural Support

--Regulations.

II. EMPLOYMENT AND TRAINING POLICY: SOME THEORETICAL CONSIDERATIONS

Public employment and training efforts are not always conceded to have an economic justification. And even where they are justified as an appropriate public sector activity, the nature of the economic impacts expected from them are often ill-defined and poorly understood. Here we try to clarify some of these theoretical issues.

Neoclassical economists tend to regard public employment and training efforts with skepticism. In the absence of any explicit market failure, the burden of proof that such interventions can increase economic well-being, they suggest, lies with those who advocate them. The advocates respond by indicating that where the social benefits of such activities are in excess of social costs, market failure is implicitly present and the intervention is economically justified. The benefits are thought to take several forms: (a) increased total output; (b) increased total employment; and (c) a more equitable distribution of social product or employment.

Theories of Unemployment: Macroeconomic Theory and Government Labor Market Intervention

Explaining unemployment and how government policies might affect it has been the central problem of economics for over fifty years. It remains perhaps the major area of contending views and unsatisfactory resolution in the profession. It should not be surprising that we cannot present here an adequate, concise summary of theories of

unemployment nor attempt an assessment of their merits. What follows is our cursory, personal views of recent developments in this domain as they might apply to government employment and training programs.

Since the 1930s, government employment measures have been touted as fiscal instruments which can generate increased output at social costs less than financial costs owing to the use of underutilized labor and capital resources.[2]

One of the earliest refinements of this Keynesian rationale is "the Swedish Model."[3] Two features of this early formulation stand out because they anticipate many current concerns: (1) the necessity to formulate a complementary mix of fiscal, monetary, and labor market policies to increase employment without fueling inflationary pressures; (2) the design of policies appropriate for small, open economies.

Consider, for example, the Rehn-Meidner plan. Excessive inflationary pressure was to be avoided by relatively restrictive monetary and fiscal policy. Simultaneously, active labor market policies--vacancy information, local job creation, mobility allowance, retraining--were to be used to secure resource reallocation consistent with maintaining an internationally competitive economy. In addition, a "solidaristic wage policy" in which wage differences were to be related only to job content--thus eliminating interfirm and interregional differentials--would help to put pressure on inefficient firms and reward efficient firms. This wage policy would also contribute to social equality and assist in centralized bargaining to constrain inflationary wage demand.[4]

In the late 1970s, responding to stagflation and the problems of disadvantaged workers in the United States, economists began modeling the interaction of public employment programs and the unemployment-inflation trade-off (see Baily and Tobin, 1977). These models, among other things, investigated the conditions under which government employment and training programs yield more employment gains for any given degree of inflationary pressure than general fiscal expansion. The concept of the "nonaccelerating-inflation rate of unemployment," or NAIRU, was a central analytical concept in these formulations and stood as a benchmark against which alternative government policies, including training, direct job creation, and wage subsidies could be evaluated.[5] The basic idea was that by shifting labor demand toward high unemployment and disadvantaged workers through targeted programs, the aggregate rate of unemployment consistent with NAIRU could be lowered. The analysis turned on the conditions under which employment and training programs would have this desired outcome of "cheating the Phillips curve" both in the short and the long run.

At the same time, interest of theorists in the micro-foundations of macroeconomics had been developing. The rational-expectations group argued that involuntary unemployment was unlikely to exist: "involuntary unemployment is not a fact or phenomenon which it is the task of theorists to explain" (Lucas, 1978). Most unemployment was argued to be "search unemployment." This view seemed to lead to a subsequent line of theory which reasserted "classical unemployment" theories, stressing that to the extent that non-search unemployment existed, it was due to rigidities in labor markets introduced by

government policies such as the minimum wage or unemployment benefits or by union power, both of which constrained the natural equilibrating processes of the labor market.

Alternative theories of micro-foundations emerged that were largely based on characterizations of "the employment relationship"--how labor markets operate. Asymmetric information, implicit contracts (see Azariadis, 1979), overlapping contracts, and "reputational" considerations were introduced and formally modeled in a general equilibrium framework that could be related to the macroeconomic features of unemployment and inflation. Most recently, "efficiency wage" theories (see Stiglitz, 1986; Bulow and Summers, 1986) have received a great deal of attention. In "efficiency wage" models, employers are concerned with costs of turnover, with workers' "shirking" or morale, with loss of investment in training firm-specific skills, with paying higher wages than required for simple labor market clearing, and with the related pool of unemployed workers that serves to "discipline" the employed work force.

In a recent essay, Johnson and Layard (1986) draw the threads from these various theories together. They try to show how supply and demand models that incorporate various elements of these theories can affect the "natural rate of unemployment" and how some general types of government labor market interventions would affect unemployment (or fail to do so) under the various theoretical regimes. Their results are most relevant to our purposes here, so we briefly review a few of them.

In the simplest, classical supply and demand general equilibrium situation with no distortions in the market, no involuntary employment

arises. When distortions are introduced in the form of government benefits and taxes, unemployment and inefficiency may result. A broad employment subsidy financed by a tax in the same market is shown to have no effect on the distortion-induced unemployment. Note that the subsidy and the tax to finance it must be jointly considered in the general equilibrium framework.

The form of labor market intervention which does work to offset these distortions in the short run is a "marginal employment subsidy," i.e., a subsidy paid only for workers added above a given number, and in the long run this does not offset the distortions.

When there are different degrees of distortion in different labor markets, a subsidy in one market financed by a tax in the other may reduce unemployment. This depends on the relative elasticities of supply of labor in the two markets as well as the relative degrees of distortion. As pointed out by a commentator (Bosworth, in Butkiewicz, Koford, and Miller, 1986, p. 134), this is akin to the standard public finance result: taxing inelastically supplied goods to subsidize elastically supplied goods can increase efficiency in many situations. More to the point here, however, Johnson and Layard argue that under this regime, in which unemployment arises due to rigidities in the unskilled labor market, targeted public employment and government training can be effective in reducing unemployment.

Distortions can arise due to monopolistic power of firms or monopsonistic power of unions. The former case, where firms are wage setters, includes "efficiency wage" considerations which give rise to unemployment. Here it is found that lump-sum subsidies (that is, a

fixed amount per worker rather than a proportion of the wage) financed by a proportional tax will increase employment, primarily because the tax makes raising the "efficiency wage" more expensive and the opportunity costs of the worker in the skilled sector are raised by the subsidy in the unskilled sector. The union models also yield a result in which the lump-sum subsidy with proportional tax financing increases employment because it increases demand elasticity, which reduces the scope for union upward pressure on wages.

It should be pointed out that these theories of unemployment have been continuously revised and elaborated on and, indeed, Stiglitz warns us (see Butkiewics, Koford, and Miller, 1986, p. 144) that results are often quite sensitive to slight differences in parameterization or specifications of the model. Further, empirical testing of the theories generally lags well behind their initial formulation. We can venture some lessons to be drawn from these theories, however.

First, it is important to attempt to trace the effects of labor market programs which may not be directly interventionist by considering the effects of government programs in a general equilibrium context. This gives rise, for example, to sensitivity to displacement concerns in employment and training projects, a topic we review at length below. As Per-Olov Johansson (forthcoming) shows, the cost-benefit rules appropriate for assessing program impacts will vary under different types of unemployment owing to these general equilibrium considerations.

Second, under certain conditions wage subsidies, targeted public employment, and government training can work to reduce involuntary

unemployment. Under other conditions, apparently sensible policies, e.g., a proportional subsidy and tax, may be unproductive.

Third, our major problem in using the results from these theories of unemployment comes from trying to establish which sets of conditions prevail in any given place and time. If there are certain types of distortions, then particular policies are likely to be effective, but is there, for example, wage rigidity in a given market, and if so, what is the source of that rigidity? The ongoing debates over the causes of the sustained high levels of unemployment in Europe (see for example Lawrence and Schultze, 1987, and Helliwell, 1988) illustrate how difficult it is to choose among the theories of unemployment. Are U.S. labor markets significantly less "rigid" than European markets? Some analysts strongly question this supposition (see Freeman, 1988). Recently, U.S. analysts have been focusing on the persistence of interindustry and interregional wage differentials for workers with similar measured characteristics. As Krueger and Summers (1987) have put it: "Since involuntary unemployment can be regarded as confinement to the low wage home production sector of the economy, a finding of significant non-competitive inter-industry wage variations renders plausible claims that economies are subject to chronic involuntary unemployment and casts doubt on the equilibrating properties of the free market."

Fourth, more empirical testing of the predictions from the various theories of unemployment may help us to better recognize when particular forms of government labor market intervention, if any, are appropriate.

Present debate over the theories is heated and, in our view, inconclusive.

Segmented Markets

In the 1960s and early 1970s, institutional and radical economists (especially in the United States) stressed the potential importance of segmentation in labor markets. Labor, they argued, was barred from freely competing across labor markets because of institutional arrangements which effectively created different competitive conditions in various segments of the market. While this perspective has been disputed,[6] the recent growth in interest in "efficiency wage" models, discussed above, has brought this perspective back into the literature (see Bulow and Summers, 1986), and the emphasis on persistent market disequilibrium suggested by the evidence on long-term interindustry wage differentials has given it a new life among mainstream economists.

In a sense, market segmentation is one characterization of market rigidity of the type modeled by Johnson and Layard. Such segmentation might create a rationale for public labor market activities. If the government program can move workers from those sectors with an excess supply to markets in which there is a shortage of workers, total production, total employment, or the more equitable distribution of the burdens of unemployment could be achieved. This market-switching gain could occur even if the underlying productivity of workers was unaffected. We will refer to this below as the market-switching rationale for labor market policies.

Human Capital Formation

The major theoretical justification for government training programs over the last twenty years has been the economists' human capital model. The embodiment of skills through the training program raises productivity of the workers and, thereby, total social product. Because firms fear loss through worker attrition of their investment in worker training and upgrading and job changes, they invest less than would be socially optimal (see Johnson, 1980). Moreover, because liquidity constraints may make it difficult or expensive for workers to finance training (either directly or through acceptance of lower wages during the training period), the workers may underinvest.

We will refer to this below as the human capital rationale for labor market policies.

III. EMPLOYMENT AND TRAINING POLICY: MACROECONOMIC AND EXCHANGE RATE IMPLICATIONS

As recent theorizing on the economics of employment policy suggests, the interactions between these measures and macroeconomic (both fiscal and monetary) and exchange rate policies are complex and numerous. Indeed, in a very real sense, all three policy instruments have the same objectives, and measures undertaken in any one area affect the success of interventions in the others. Because these interactions appear to have been so often neglected by policymakers in the recent past, we raise them explicitly here.

The general goals for all three policy measures are similar: securing and maintaining low unemployment, reducing inflation, and promoting economic growth. A fourth goal, often unstated, is to achieve balance in the trade sector (an objective which often seems disguised as efforts to maintain an historic but arbitrary exchange rate).

Macroeconomic Considerations Relevant to Employment Policy

Consider, first, the effect of contractionary macro-policy on the success of job creation measures. In such an environment, the burden placed on job creation programs increases substantially. With labor demand soft, markets slack, and job competition increasing, the placement of trainees or other targeted groups into jobs becomes more difficult. Similarly, the probability that any trainee who finds employment will displace some other workers--either directly or indirectly--increases with the extent of labor market slack. Those groups who judge their jobs to be threatened by such effects increase their opposition to public sector efforts.

At the same time that contractionary policies erode labor demand--and simultaneously the potential social benefits of job creation programs--they also have an effect on the supply of potential program participants. With poorer labor market prospects, the opportunity cost of participating in training programs decreases for numerous potential participants--their demand for participating, in effect, rises as the programs are seen as vehicles for mobility from weaker to stronger labor market sectors. Simultaneously, the costs of other inputs to programs--

e.g., space and supervisory, materials, and equipments costs--also falls.

Finally, some job creation programs produce long-lived public infrastructure outputs--roads, bridges, parks--whose relative value is independent of the business cycle. The decrease in the social cost of the inputs to these activities during a contractionary period should increase the relative attractiveness of these measures at these times. This, of course, is a restatement of the case for countercyclical fiscal policy, or the "shelf of public works."

During an expansionary--or full employment--period, the reverse of these effects is likely. Placement of trainees will be easier, displacement effects reduced, and the expected social benefits of public programs increased. Simultaneously, the social costs of job training and job creation programs will rise as the opportunities of potential trainees improve and the other inputs to programs are produced with fully employed resources. While public works projects appear relatively less economic in such a period, skill-training measures may carry a premium if they are capable of easing private sector bottlenecks or avoiding the onset of price increases.

The lesson of this discussion is clear: Job creation measures need to be aligned with macroeconomic policy. Skill training in the face of a stock of skilled unemployed workers has little to commend it. Similarly, when labor markets are tight, it is uneconomic to pursue social infrastructure projects with workers who must be bid away from private sector activities--especially when such activities can be executed in periods of slack demands. A lesson for the evaluation of

labor market programs is also relevant--placement rates, earnings increases, or other performance indicators observed when employment is high or rising will be inappropriate guides to program efficiency during other macroeconomic circumstances.

Employment Policy Considerations Relevant to Macroeconomic Measures

For purposes of this more complex interaction, we consider three categories of job creation measures--countercyclical, human capital, and market switching. Often, public expenditures for job creation measures are viewed as effective countercyclical instruments--with recession in the private sector, unemployed resources which come at low social cost can be used to create outputs whose value persists in the long run and is relatively invariant to the business cycle. Multiplier effects on the output side complement the low social cost of the inputs. The human capital rationale has a similar basis--the creation of skills in the labor force has a long-run investment character, and hence it is the increase in the lifetime productivity of participants, properly discounted, that is relevant in evaluating the social worth of training activities. While these productivity benefits do depend on short-term employment possibilities, longer-term impacts are also relevant. The market-switching rationale views public labor market policies as vehicles for facilitating the movement of labor from declining, excess-supply sectors to those with potential bottlenecks. Consider, first, job creation programs in the context of traditional Keynesian considerations. To the extent that such programs are able to target their impacts on resources that would be unemployed in a recessionary

period, net output would be increased, worker skills maintained, enterprise administrative structures kept intact, and depreciating capital used while still of recent vintage. These gains come in addition to the standard expansionary (multiplier) effects associated with expenditure increases.

However, not all of the effects of countercyclical job creation measures are viewed as gains. For example, recessions have been seen by some as beneficial--as disciplining the market, purging the economy of inefficient practices which develop during an expansion, and constraining excessive wage demands. If this view is accepted, countercyclical job creation measures can be viewed as diluting these cleansing effects and, thereby, eliminating the long-run efficiency gains that they bring. In a similar perspective, such measures can be viewed as retarding labor mobility and, if output is produced, yielding a less valuable product than the market would yield.

Apart from these considerations, researchers have attempted to assess the short- and long-term employment and output growth effects of direct job creation measures, relative to general fiscal measures with equivalent revenue effects. While most analysts have found a greater "bang for the buck" in these resource-targeted measures, there is not general agreement on this issue.[7]

Two additional issues are relevant. First, can direct job creation measures be timed to counter the business cycle rather than reinforce it? Analysts have again compared these measures with general fiscal and monetary countercyclical measures, finding that the lag between policy action and labor market impact is shorter for these

programs than for more general measures.[8] Direct experience on the extent to which such programs can be rapidly mounted, or promptly phased out is mixed.[9]

Second is the question of the effects of the measures on the NAIRU. Again, the relevant comparison is between these direct measures and more general fiscal and monetary policies. Because direct job creation programs directly reduce employer wage costs (e.g., wage subsidies) or increase the supply of trained labor, they are generally appraised as placing downward pressure on the NAIRU; a greater expansion of employment through such measures would be possible without the generation of inflationary pressure than through more general fiscal stimulus (see Bishop and Haveman, 1979).

In their roles of creating human capital or facilitating market switching, direct job creation measures also have the potential of cheating the Phillips curve. To the extent that such programs are able to target the human capital effects on occupations with the potential for becoming bottlenecks in an expansion, or on the most disadvantaged workers--those operating in labor markets with little upward wage pressure--aggregate unemployment could be driven down further without encountering inflationary effects than would be possible with other policies. Similarly, the selective use of these measures in encouraging worker movement from low- to high-demand sectors or regions can have much the same effect. This is especially true where minimum wages, collective bargaining arrangements, or social impediments to absolute wage adjustments make market clearing difficult, or where fundamental structural adjustments in industry composition are required because of

exogenous changes in technology or demand patterns. To the extent that direct employment measures can facilitate the job switches or employment reallocations associated with a flexible labor market, the NAIRU can be reduced.

In sum, then, on the question of the impact of direct job creation programs on the NAIRU--the "bang" associated with the expenditure "buck"--the weight of the analysis provides a qualified yes. While there are numerous avenues by which economic stimulus through direct job creation can be pushed further than through other, less targeted options without encountering inflationary pressures, the direct empirical evidence on this potential is scanty.[10] This notwithstanding, we judge that the bulk of informed judgment on this issue finds direct job creation measures to be a high potential instrument for securing employment gains at reduced inflation costs. This same opinion, however, would find it essential that these measures be coordinated with general macroeconomic measures, rather than providing selective expansion in the face of general contraction.

Exchange Rate Policy and Job Creation Policy

In open economies with a large foreign trade sector, policymakers are often as much concerned with exchange rates and the balance of payments position as with unemployment and growth; therefore, the interrelationships between exchange-rate and foreign-trade policy and job creation policy are also relevant. That close ties between macroeconomic and exchange rate measures are necessary for effective and coordinated policy is well known. Without such coordination, for

example, expansionary fiscal measures may run into foreign exchange constraints as import demand is stimulated, the balance of payments position is eroded, and/or exchange rate deterioration beyond "acceptable" limits occurs. (What is acceptable, of course, may be simply a matter of national pride, in which case the options available for macroeconomic measures are artificially constrained in the interests of perceived standing.)

Consider the example of devaluation as an instrument to raise domestic demand in both export and import substitution sectors. Assume that the conditions necessary for devaluation to be an effective employment stimulus are present--sufficiently high elasticities of export and import demand.[11] Assume as well that the wages and prices in the devaluing economy are not sufficiently tied to import prices to undercut the stimulative effects of the devaluation. In this case, devaluation will have the effect of reducing the real wage, leading to an increase in the demand for labor. (Such reductions may well be more acceptable politically than direct cuts in domestic wages.)

In such a situation, a distinct role for direct job creation policy exists. Because the expansion of employment from devaluation will be concentrated in the export and import substitution sectors, skill-training programs could be oriented toward these sectors if employment bottlenecks or substantial skill-specific demand increases are anticipated. Because the lag between devaluation and demand increases is substantial (the J-curve), time is required to organize and to set training activities in place.

A second example of the foreign trade-job creation nexus concerns long-term strategies to develop internationally competitive industries--the "infant industry" argument. With such strategies, new activities judged to have high potential for establishing comparative advantage are promoted by government and protected during their formative stages. Although most such assistance is in the form of capital subsidization (e.g., loan subsidies for investment, special import licensing), job creation programs in the form of wage subsidies or training programs could provide equally valuable start-up assistance. They would, at the same time, contribute to long-term employment creation by retarding excessively capital-intensive production methods.

The inverse of this problem is that of easing the adjustment of established industries to changing patterns of international competition --the structural adjustment problem. Given an exchange rate position which is in reasonable equilibrium, the problem here is forecasting, and then accommodating, major shifts in sectoral comparative advantage which are long-term. Such adjustments often require substantial (and painful) movements of labor resources out of particular activities and regions--recent examples of the collapse of shipbuilding come immediately to mind. In this case, there is a clear need for market-switching forms of job creation programs to ease the transition. On the other hand, should the industry be in only temporary difficulty, transitional employment policy measures may be in order--wage subsidies to enable the sector to sustain employment and hence to be in position to take advantage of the next upswing. A difficult question is that of deciding whether a particular industry really is in long-term trouble owing to loss of

international position or is, rather, simply at a short-term disadvantage. As one Danish expert recently pointed out:

> In Denmark, the textiles industry has been doomed several times due to competition from other countries with much cheaper labor. But impressive efforts on the part of the manufacturers have made this sector one of the strongest growth poles in Danish industry. The production has been automated to a degree which means that Danish clothing and textiles firms can compete with countries with low labor costs in terms of both price and quality. This has also led to increasing employment in this field (Hovedelementer i den danskearbejdsministers indlaeg, Konference on Teknologi og Beskaeftigelse iVenedig, Den. 10-11, April 1985).

Determining which of these is the appropriate strategy in any particular case is clearly not a simple matter.

These illustrations suffice to indicate the need to coordinate labor market policies with exchange-rate and foreign-trade policy, in much the same manner as with macroeconomic policy.

IV. THE EVALUATION OF JOB CREATION PROGRAMS[12]

The basic purpose of systematic evaluations of the performance of job creation programs is to secure information on which to base future decisions regarding the reorientation of programs or the initiation of new activities. Relevant information can be of various kinds. The most simple and straightforward is the documentation of program processes--Who entered the program? What kind of activities were engaged in? What was the administrative structure? What resources were utilized? How many participants completed the program? A more helpful evaluation would try to assess what difference the activity caused--What events

occurred because the program was undertaken that would not have occurred in its absence? This form of evaluation requires a much higher standard of evidence, since some means of establishing conditions in the absence of the program--the "counterfactual"--must be found. The most complete form of evaluation, a benefit-cost analysis, follows directly from the evaluation of program effects--i.e., if the differences caused by a program are known, the natural question is to ask whether these effects are worth the resources that were required to create them. A quantitative answer to this question requires both a proper accounting of all of the costs of the program and a comprehensive estimate of the social benefit that these changes represent.

In this section we discuss several of the most important issues involved in obtaining a consistent and reliable evaluation of direct job creation programs, moving from the most simple and straightforward evaluation approaches to a variety of the most recently developed methods for generating reliable and useful information.

Measuring Immediate Impacts

Prior to about 1965, most evaluations of social programs were simply descriptions of what occurred during the program, sometimes accompanied by the subjective assessments of "experts" as to the effects of the program. Since that time, however, evaluations have moved beyond the descriptive to take on the more difficult task of trying to establish what happened when the program was in effect, relative to what would have happened had there been no program. A basic requirement for assessing the effect of programs is to secure reliable information on

the individuals who have participated in them. In the last decade, significant advances in such recordkeeping activities have been made; these are often called "management information systems." Such systems involve detailed records on individuals who participate in the program, maintained in computerized form. They provide ongoing data to program administrators in a form designed to aid in management decisions.[13]

Such individualized information is, however, just one building block for a reliable evaluation. The central issue is to determine how these participants would have fared had they not had the benefit of the program. The primary method for obtaining the counterfactual is the creation of a "comparison group" of persons who did not participate in the program.

The most refined method of creating a comparison group is derived from the classical paradigm for a scientific experiment. Subjects are randomly assigned either to receive "the treatment" or to a "control group" that receives no treatment. Given a sufficient sample size, the random assignment of individuals effectively reduces the probability that receipt of the "treatment" will be correlated with particular individual characteristics. The objective is to avoid a case in which, for example, more highly skilled persons are predominantly in the "treatment group" and unskilled persons are predominantly in the comparison group. This could lead to a mistaken inference that the program was effective, as the superior performance of the "treatment group" would be due more to the inherent skills of those assigned to the "treatment group" than to the treatment itself.

Until recently, however, random assignment has rarely been used for program evaluation purposes. Instead, the usual approach has been to create "comparison groups" which serve as proxies for the randomly assigned control group.[14] Often, comparison groups are created after the fact, by finding a group of individuals who have similar characteristics to those who participate in the program. The more similar are the measured characteristics of the two groups, the less likely it is that being in the "treatment group" will be correlated with some particular trait and the more likely that the evaluation will not be seriously biased. Alternative means of establishing a comparison group involve selecting people who applied for the program but who were not accepted or who failed to show up after they were accepted (see for example Cain, 1968) or selecting people from areas where the program was not available for participation (see Mallar, Kerachsky, Thornton, and Long, 1982). Yet another approach has been to construct groups from records which provide information on the characteristics and on the employment and earnings of nonparticipants (see Keifer, 1979).

Although both constructed comparison groups and randomly assigned control groups are techniques for securing unbiased estimates of program impacts, they are not equally effective in achieving this goal. While a constructed comparison group is able to introduce some statistical control into an analysis, and is hence superior to no comparison group at all, recent evidence has led to the judgment that analyses based on this technique are not free of bias. The problem is one of selection bias, whereby some unmeasured characteristic of people--say, motivation--both influences the probability that a person will

participate in the program and affects the person's employment capability even in the absence of the program. If highly motivated persons are overrepresented in the participant group, they will make the program effects appear stronger than they actually are. Because constructed comparison groups are chosen on the basis of observed characteristics of people, they are not able to control for these unmeasured effects. Only random assignment to treatment and control groups can provide the necessary statistical control required for an unbiased evaluation of the impact of the program. There now exist several major examples of evaluations of job creation efforts which rely on the creation and use of randomly assigned control groups. With the record now established that such methods are both feasible and likely to yield a high level of reliability concerning program effectiveness, the use of descriptive evaluations or those based on constructed comparison groups should recognize the potentially biased nature of their results. (A number of important recent studies provide a strong empirical basis for the conclusion that even the most carefully constructed comparison groups may yield erroneous conclusions. We review these studies in Section VI, below.)

Dimensions for Assessment

The major objective of job creation programs is employment, and hence it is the dimensions of employment--rates of employment, hours of work and earnings--that are assessed. Furthermore, insofar as direct job creation programs have a long-lived effect on participants, a full evaluation of their worth must consider the work and earnings

performance of the worker after he or she has completed the program. Since participants leave the program upon completion, special post-program followup data are required for both the participants and the control group. It is necessary to obtain information on these dimensions for both the participants in programs and for the members of the comparison or control group.

To ensure that this information is comparable across the groups, personal interviews--taken before the program starts, during the course of the program, and after participation has been completed--form the most common data collection method. These data will permit estimation of the changes in employment and earnings which are related to participation in the program by comparing the employment and earnings over time of the comparison group members and those participating in the program.[15]

In addition to data on employment-related phenomena, evaluation studies often seek to obtain data on other aspects of participant performance which the program might affect. Examples include skill achievement, formal educational attainment, health status, criminal activity, the utilization of drugs and alcohol, the extent of receipt of transfer payments, changes in family structure or circumstances, and attitudes toward work, the community and self.[16]

Two additional issues in securing reliable post-program information are important and should be mentioned. The first is the problem of inability to trace sample members after they have left the program or to reinterview control or comparison group members. This is known as "sample attrition," and its presence has much the same effect

in undermining the reliability of evaluations as the selection bias problem mentioned above. When there is substantial attrition, it is not known whether differences that appear between the comparison group and the participants are due to actual differences in behavior and experience or are due to differences in the characteristics of the individuals that were lost disproportionately from one group as opposed to the other. The statistical techniques that have been used to eliminate the effects of attrition are similar to those developed to deal with the selection bias problem (see Brown, 1979; Mallar, Kerachsky, Thornton, and Long, 1982; Skidmore, in Hollister, Kemper, and Maynard, 1984; and Betsey, Hollister and Papageotgiou, 1985, Chapter 8).

A second issue is the length of time over which participants and control group members are followed after the program has been terminated. Because program effects have been observed in some cases to erode quickly and in other cases to emerge only after a lag (Kemper and Long, 1981), it is important to adopt a reasonably long period of post-program followup. In addition to the effects of the program on participants, others may also feel its impact, either positively or negatively. The most recognized of these effects has already been alluded to--the displacement or substitution impact. Displacement, as we have pointed out, can come either by way of the direct substitution of program workers for others, or indirectly through the products which might be produced as part of the program. Evaluation of these displacement effects is difficult.

Also relevant is a related phenomenon involving resources which may be complementary to the outputs or effects of a program. Training to

avoid bottlenecks in the labor market was one rationale of these programs. When a key skill is provided by the program, not only are the workers with that skill employed, but so also other workers who have skills which are complementary to those of the trained worker. This employment is also a gain which is properly attributed to the program. These other-person effects, it should be noted, can arise either during the program itself or in the post-program period.

The final effect of the program which must be evaluated is the output of the program itself. Only a few efforts have been made to value the social worth of the product of a program (see, for example, Mallar, Kerachsky, Thornton, and Long, 1982; Skidmore, in Hollister, Kemper, and Maynard, 1984; and Betsey, Hollister and Papageorgiou, 1985, Chapter 8). This estimation is difficult, as programs are often constrained to produce outputs that will not compete with those produced in the private sector. Such outputs will typically not have a market-established value or will not be highly valued in the social/political process. In addition, a large number of direct job creation efforts have involved environmental improvement outputs or other "public goods" for which there is again no market price observed. To the extent that the output has a social value, however, it must be included in the evaluation.

Benefit-Cost Analysis[17]

Benefit-cost analysis builds on the measurement of the effects of a program and attempts to determine if the effort yields an increase in

the social value of resources, goods, and services which exceeds the value of the resources used in the program.

Although benefit-cost analysis can be done from several points of view or "accounting frameworks," the most comprehensive is that of the society as a whole.[18] This framework accounts for all social benefits and costs associated with the project or program and ignores transfers among citizens that may be part of the program--for example, stipends to participants during a training program, a transfer from taxpayers to participants. Whereas the social benefits and costs represent real outputs produced (goods and services contributing to consumption or further production) or real inputs used up, transfers shift resources from some citizens to others with no net increase in social output.

Specifying an accounting stance for the benefit-cost analysis of a program is the easy part; developing accurate estimates of the components of benefits and costs is the difficult part. In the case of direct job creation programs, three special problems of analysis exist in addition to all of the standard issues in benefit-cost studies.[19]

The first of these is the valuation of the outputs that are produced as part of the program. These in-program outputs are more often associated with direct job creation programs than training or education programs, and in those few programs that have been subjected to a comprehensive analysis, valued in-program outputs have been significant enough to offset a large proportion of the total cost of the program. Those components of in-program production which either pass through a market and are priced or are similar to other products that are marketed are the easiest to value. Others are not marketed or, if

sold, are priced at a below market value. Programs in the environmental improvement or public infrastructure areas are of this sort. In these cases, shadow-valuing techniques must be applied, but heretofore there has been little experience with them and few principles on which to base a generally accepted method (see Kemper and Long, 1981).

The second analytic problem peculiar to direct job creation programs involves the displacement issue that we touched on earlier. Such displacement could be direct, worker-for-worker, or indirect, through the composition of goods produced in the public program with those privately produced. One form of "direct displacement" is placing government-trained or -sponsored workers in jobs that constitute displacing workers who would have gotten those jobs in the absence of the government program. Another form "substitution" refers to the same phenomenon: the government-sponsored worker (through training, public service employment, or wage subsidy) is substituted for a worker without such sponsorship. "Windfall" is the term applied to gains that employers enjoy when the government subsidized the cost of training or employment which the firm would have undertaken even in the absence of the program. This issue is complex, and a substantial literature has now been developed on it (Johnson, 1979; Kemper, 1980; Bassi and Ashenfelter, 1986). We will mention a few major aspects.

The possibility that displacement effects will offset the increased earnings and employment of participants exists in all direct job creation programs. The issue is how significant these effects are likely to be--what proportion of the increased earnings and employment

of participants will be washed out by displacement? The primary circumstances that affect the degree of displacement are as follows:

- The effect of the program on participant productivity and skills. If the program in fact increases participant productivity, there is a presumption of a pre-existing market failure. Without such market impediment, workers would have undertaken the investment on their own. In this case, human capital theory suggests that the benefits of the program in the form of employment and earnings increases exist without displacement.

- The effect of the program in moving workers from labor surplus regions to shortage regions. Even in the absence of a program-induced increase in productivity, a social gain will exist if underutilized workers are shifted to locations where they will be more fully utilized. This effect, as in the previous case, requires a market impediment to have restrained this mobility in the absence of the program. Note that the worker who is moved need not have been unemployed him- or herself, if the area from which he or she is drawn is a labor surplus area. In this case, "replacement" would have occurred. (This issue of replacement is important in the benefit/cost analysis framework. An important calculated cost of the program can be the earnings of the proportion of the participants who would have been employed in the absence of the program. Since they are in the program rather than employed, the appropriate procedure is to subtract the value of their employment as a cost of the program; it is an opportunity cost. However, if a worker who is drawn into the program is quickly replaced by an unemployed worker in a labor surplus market, this opportunity cost is in fact zero.)

- Macroeconomic circumstances of markets in which participants operate. The key issue is labor surplus or shortage conditions in the labor markets from which participants are drawn and those in which they are placed. With surplus in the drawing markets, replacement is likely, and the departure of the worker implies little or no opportunity cost. Conversely, with surplus in the placement market, displacement is likely, and the entry of the worker implies little or no social benefit. In this context, then, macroeconomic policy takes on direct relevance to job creation efforts: Macro policy should be such as to accommodate the additional labor supply and productivity generated by the program if its benefits are to be realized.

Measuring the extent of replacement or displacement is, of course, more difficult than conceptually identifying their effects on the evaluation of program worth. Assessment of labor market conditions in both drawing and placing markets--often small geographical areas with poor data--is necessary, in the presence of programs which are small relative to the markets in which they operate, making the identification of program effects difficult.

There have been a few attempts to measure displacement specifically. Some have proceeded by interviewing job creation program administrators, asking whether the particular economic activity would have been undertaken without that program, and then using these subjective estimates to make some estimate of the degree to which there is, in fact, a net addition of jobs as a result of the program. Such estimates are only as good as the subjective judgment of the administrators (see, for example, Zimmerman, 1980; Nathan, Cook, Rawlins, and Associates, 1981).

A second method has been to estimate an econometric model of employment in a given area in the absence of the program, based upon data series that extend before the start of the program and continue after the conclusion of the program. The estimates of displacement derived in this way are, obviously, only good if the econometric model is very effective at predicting employment in the given labor market area or among a given set of firms in the absence of the programs (see Crane and Ellwood, 1984; Gould, Ward, and Welch, 1982).

A very specific method used to estimate displacement involved a special job creation program which covered all persons of particular

ages in a limited set of areas within a few cities. These areas could be matched with other areas with similar characteristics, used as comparison groups. The quality of the estimate of displacement achieved by this method depends critically, however, on the exact matching of the comparison areas (discussed further, below; Farkas et al., 1982).

The central lesson regarding displacement estimates is clear, however. When surplus labor exists in markets from which participants are drawn, straightforward control-treatment comparisons of employment differences will understate the net benefits of the program; when labor surplus exists in markets where participants seek employment, such comparisons will yield an overstatement of net benefits. The task of the analyst is to identify and reflect these considerations in evaluation, even though their precise measurement is difficult. How much labor surplus is there in markets where participants are drawn or placed? Is macro policy accommodating the changes engendered by the program, or is it working at cross-purposes?

Sensitivity Analysis

The final evaluation issue we mention concerns the role of sensitivity analysis. By its very nature, benefit-cost analysis is a comprehensive analytic tool, attempting to bring together in one uniform dimension all of the social impacts of a public program. Although this is difficult to accomplish in practice, because it is so difficult to measure impacts as well as difficult to value impacts which are measurable, the effort to do so is an integral component of a rational public decision process. Because numerous assumptions are necessary in

any such analysis, the decision-maker needs to be informed regarding the dependence of the analysis on them. The best that can be done is to make the assumptions as explicit as possible and then to test whether slight variations in those assumptions will have a big effect on the overall estimates of benefits and costs, i.e., to do a sensitivity analysis.

In the case of direct job creation programs, sensitivity analysis is especially important in assessing the long-term effects of the program on participants. Because these effects may extend through the remaining lifetime of the worker, it is necessary to extrapolate the behavior of those variables that are important to the analysis beyond the period of observation, and extrapolation requires assumptions. These extrapolations of persistence or decay should be made explicit and their effect on the analysis evaluated.[20]

V. WHAT DO WE KNOW ABOUT WHAT WORKS AND FOR WHOM?

Many analysts have noted the large disparity between Western Europe and the United States in the extent of efforts to evaluate the effectiveness of employment and training programs.[21] In 1982, Schwanse concluded: "Most of the European evaluations are confined to relatively simple questions and methodologies. Impact evaluations are almost non-existent" (in Haveman and Palmer, 1982). To our knowledge, this situation persists. In what follows, therefore, we focus on impact evaluations of programs in the United States, realizing that conclusions regarding this experience may not apply fully to the European situation.

Broad-Scale Programs

We define broad-scale programs to be those that are so open and widely spread in their administration that their impact cannot be evaluated by direct measurements concerning program participants and a comparison group. This distinction, then, involves both evaluation methodology and program scope.

Countercyclical Programs. A primary rationale for public employment and training programs is to counterbalance the effects of the private sector business cycle on employment. The effectiveness of broad countercyclical employment-based programs is difficult to assess; there is no "counterfactual" indicating what employers would have done had the government programs not been in place. Short-time compensation programs have been the primary form of countercyclical program in Europe, but there are few attempts to measure their effectiveness. Two examples characterize this situation. The 1975 short-time compensation program in Germany was estimated to have reduced the unemployment rate from 5.4 to 4.7 percent (Schmid, 1982), but even this estimate was questioned on the grounds that employers would have retained workers even without the subsidy. And while Sweden's heavy subsidization of production in the 1970s is generally viewed as an ineffective attempt to bridge a short-term gap in private sector employment, there is no thorough evaluation of its effectiveness.

A simple way to judge countercyclical efforts is in terms of their timing. Bassi and Ashenfelter (1986) point out that for the United States, the timing of explicitly countercyclical (as opposed to

structural) employment and training expenditures has been poor; from 1973 to 1982 every 1 percent increase in the unemployment rate was associated with a -.08 change in real per capita funding for countercyclical programs. Most analysts feel that, because of long lead times, countercyclical expenditures--e.g., public works projects--often exacerbate the cycle, injecting their stimulus just when recovery is in process (see U.S. General Accounting Office, 1984), a study which used county data in an econometric model to estimate the impact of grants and loans from the Economic Development Administration and which demonstrates the methodological difficulties in evaluating the impact of this type of program). Improvements in the timing of funding and implementation are needed if such programs are to be effective countercyclic measures.

Wage Subsidies. Economists tend to prefer wage subsidies to direct government hiring for employment promotion. It is argued that private, relative to public, employers have known production processes, standards of worker productivity, and marketing networks.

While these arguments are strong, concerns about "windfalls" to employers subsidized for workers they would have retained or hired anyway and/or "displacement" of the output of unsubsidized firms by that of subsidized firms have been expressed as reasons to oppose wage subsidies. While the existence of windfalls to employers would seem to undercut the employment impact of wage subsidies, evaluation of the full general equilibrium impacts of the subsidies, including evaluation of the use of windfalls by employers, is required to determine its effects. (As noted above, concerns with displacement effects on both the

production and employment studies of the market have been expressed regarding direct public employment as well.) Empirical assessment of the extent of windfalls or displacement of either public or private interventions is very limited.

The most prominent and perhaps largest wage subsidy programs are the New Jobs Tax Credit (hereafter NJTC) and the Targeted Jobs Tax Credit (hereafter TJTC) programs in the United States.

The NJTC program, which operated in 1977 and 1978, offered tax credits to any firm that increased its employment above 102 percent of its previous year's employment. It provided a tax credit of 50 percent of the first $6,000 of the wages paid to workers hired above the 102 percent level. It is estimated that 1 percent of the labor force received the subsidy; it resulted in lost revenue of nearly $2 billion.

Evaluation of such a broad-scale program requires estimation of employment levels in the absence of the program. The most careful estimates for NJTC focused on its effects on employment in the construction and retailing industries, and concluded that in the 12-month period from mid-1977 to mid-1978, 20 to 30 percent of the observed employment increase in these industries could be attributed to the subsidy (Bishop and Haveman, 1979). The time-series models underlying these estimates may fail to isolate the pure NJTC effect from other macro changes; nevertheless, these results indicate a substantial positive program impact on employment. They do not, however, indicate that the social benefits of the intervention exceed the social costs.

The NJTC was replaced by the TJTC in 1979. Under this program, private employers receive a two-year subsidy of wages paid for any hired

worker from designated target groups. Fifty percent of the first $6,000 of wage cost for any new hiree is paid for the first year; the subsidy falls to 25 percent for the second year of employment. While the NJTC was designed to increase employment generally, the TJTC was targeted on certain disadvantaged groups.

Although the TJTC has been in place since 1979, few attempts to assess its impact overall have been made. It has been documented that few eligible firms actually utilized the subsidy, but there has been little evidence gathered as to the reasons for the lack of response.

Some insight on TJTC has been given by a small experimental study. A random assignment of able-bodied welfare recipients to three groups was undertaken. One group received a tax credit voucher informing prospective employers that the person was eligible for a TJTC and the terms of the payment. A second group was given a similar voucher, but reimbursement was to be made through a cash payment rather than a tax credit. The third group had no vouchers. While 21 percent of those without vouchers obtained employment within eight weeks, only 13 percent of the vouchered groups obtained employment. Even among those vouchered who obtained jobs, only a quarter of their employers claimed the subsidy. These results have been interpreted as indicating that a targeted program can actually stigmatize members of the target group and make their employment chances worse rather than better (see Burtless, 1985).

This finding has been widely viewed as providing the first conclusive evidence that targeted government programs may be stigmatizing and should be taken seriously. However, some of the

analysts involved suggest that other factors may have driven the results. In particular, because local operators were concerned that the control group would resent not receiving the subsidy, all control-group members were referred to the Employment Service, where they received the regular services provided; none of the experimental group was given special access to those services. It is true that the U.S. Employment Service is generally regarded as ineffective, particularly in assisting the disadvantaged groups to whom this subsidy was targeted. However, knowing of the experiment the Employment Service may have made extraordinary efforts in behalf of the controls. Some analysts also felt that the printed description of the subsidy program given to employers by the experimental group members was written in a way that called attention to the limitations of this group. Still other analysts have taken the evidence primarily as another example of the peculiar and little-understood response of American employers to wage subsidies. In virtually every small demonstration involving wage subsidies, U.S. employers have been very slow to take advantage of the subsidy offer. Their reluctance seems to be related to the fear that acceptance will lead to greater governmental scrutiny of their books and operations.

Reviewing a number of European evaluations of wage subsidy programs, Casey and Bruche (1985) describe their overall evaluation as follows:

> Despite the very different mechanisms employed (tax refund, exemption from employer social insurance contributions, direct subsidies), levels of support, targeting, and other restrictions, analyses of the multiplicity of European programs come to surprisingly similar conclusions. . . . In general the 'net employment effect' is about 10 percent, with a maximum of some 25 percent being reached in the case of the German scheme of 1974-75.

> This last figure is to be compared to the approximately 45 percent 'net employment effect' estimated to have been necessary for that particular program to have been fiscally neutral (pp. 42-43).

Because of the need to account for the full general equilibrium implications of the programs, including of "windfalls" and "displacements," and the difficulty of doing so, this generalization seems questionable.

A large number of important questions remain regarding the impact of broad-scale wage subsidy programs on employment. In theory, such subsidies seem an attractive alternative to other forms of public job creation efforts. However, if this expectation is to be tested, improved methodologies for evaluating the effects of such programs are required, as well as additional wage subsidy interventions designed with impact evaluation as part of the mission.

Direct Job Creation. "Direct job creation" refers to employment programs in which hiring decisions are made by government (or government-supported entities) and employment is paid for by public revenues. In fact, the boundaries differentiating "direct job creation" from other government employment and training efforts are fuzzy.[22] In most countries, however, programs exist which are generally agreed to be "direct job creation." To cite just a few: the ABM program in West Germany, Relief Work in Sweden, the Job Offer Scheme in Denmark, Travaux d'Utilité Collective in France, the Community Programme in the United Kingdom and the Public Employment Program and Public Service Employment in the United States.

A major concern in evaluating direct job creation programs is the issue of displacement or fiscal substitution. The question here is

whether funds provided by the central government to, say, a local government for the purpose of hiring otherwise unemployed workers ultimately pay for positions that would have been supported by the local government in the absence of the subsidy. Initial evaluations of the Public Employment Program in the United States suggested that the extent of such substitution would grow from low levels early in the life of the program to nearly total substitution over several years (see Johnson and Tomola, 1977). These results created doubts as to whether or not such nontargeted direct job creation programs would have any sustained effect on employment levels. Evaluations of the more targeted public employment programs which followed after the early interventions yielded a more optimistic appraisal. In the first years of a later program (Public Service Employment), between 40 and 60 percent of the positions funded were estimated to be net new employment (see Nathan et al. 1981, and Adams, Cook, and Maurice, 1983).

Estimation of the extent of fiscal substitution in direct job creation programs is difficult, requiring estimates of the level of public employment in the relevant governmental units in the absence of the program. Although all of the estimates are clouded with uncertainty because of the inevitable unreliability of this estimated counterfactual, analysts have come to agree on a number of propositions regarding the potential of these programs:

- Some fiscal substitution inevitably will occur, the degree varying with program design and the prevailing economic circumstance.
- The degree of fiscal substitution is likely to increase over time as government units have time to adjust.

- Public employment programs which explicitly seek to constrain activities that would have been undertaken in their absence yield higher net-to-gross employment ratios.

- Programs targeted on the disadvantaged will be less vulnerable to fiscal substitution, because the skill mix of target-group workers hired does not conform closely to the mix of regular public employees.

Three additional observations should be made regarding fiscal substitution. First, even reliable estimates of substitution capture only its effects within the public sector. Private sector responses, including the spending that would have occurred had the funds not been raised through taxation, are not captured in the estimates. Second, even when fiscal substitution occurs, redistribution of employment toward disadvantaged workers may result if such a target group is designated. Third, tightly constraining a public employment program to avoid activities in which governmental units normally engage may force program participants into activities which have little skill carryover outside the program.

One might argue that, to the extent that a direct job creation program's objectives are largely countercyclical, these should not be evaluated by comparing the post-program earnings of participants in the program to those of a comparison group; long-term earnings gains are not the primary objective. However, in assessing the benefits of countercyclical programs one should not ignore the possibility that maintaining workers in employment may prevent the decay of their human capital (skills and work habits)--i.e., that after the end of the cycle, workers maintained in employment through the program may prove more productive than workers who suffered an extended period of unemployment.

Designing and executing a study to actually estimate the extent of such effects is, as far as we know, a challenge not yet taken up.

A primary argument for countercyclical programs is that they utilize resources that would otherwise remain idle. Therefore, a major aspect of evaluation of such programs should be an assessment of the value of output produced by workers involved in the program. As we have already noted above, only recently have efforts been made to evaluate output produced in employment and training programs, but the methodology for doing so is becoming established and efforts to do so more common. The closest thing to a direct job creation program in which the value of output was estimated as part of the program evaluation is the National Supported Work Demonstration in the United States. For that program the value of output produced by the participants was estimated to be an important component of the benefits of the program, offsetting about 43 percent of the total program costs.

Enterprise Creation. Government efforts to foster the development of private sector enterprises, often as part of regional development plans, have a long history. In the 1980s there has been a renewed emphasis on promotion of enterprises, primarily because of the expected positive impact on aggregate employment. (See Appendix A, footnote 15, for references on enterprise promotion and employment.) The rapid growth in jobs in the U.S. economy in the 1980s was viewed by some as generated by the strong performance of new, often small, enterprises. Enterprise creation fostered by public support, it was felt, could create the same growth. Several countries have undertaken small-scale programs to enable unemployed persons to remain covered by benefits if

starting up a new enterprise, or using unemployment benefits in lump-sum form for enterprise capitalization. As with direct job creation, the performance of enterprise creation efforts is difficult to assess. Again, the establishment of a reliable counterfactual is required. To what extent would the enterprises subsidized by government have been created without the subsidy? Would the activities undertaken in the absence of the program be more or less labor intensive? One study of an unemployment diversion program indicates that about 70 percent of enterprises assisted in this way were in existence after one year (Bloch-Michel et al., 1983, cited in Casey and Bruche, 1985). Whether this performance is superior to other new enterprises is not known. Moreover, the assisted enterprises are clearly not a representative sample of all new enterprises, and may be either more or less risky. The evaluation problems confronted in assessing these efforts are difficult ones, and the methodology for accurately measuring their effectiveness has not yet been developed.

Traditional Training and Placement Programs

Traditional training and placement programs seek to improve the employability of individuals by providing workers with new skills and placing them in regular private or public employment. Such programs are aimed at individuals, rather than at broad alteration in labor market circumstances, and hence can be evaluated by comparing the labor market experience, both during and after the program of participants in the program, with similar individuals who are not participants.

Adults

Consider, first, programs that have been targeted on the adult population. While there have been substantial training and placement programs for adults in Europe, there are few evaluations of the net employment gains of participants based on control group comparisons. Hence we again focus on the U.S. experience.

The first substantial employment and training effort in the United States since the Great Depression was the Manpower Development and Training Act of 1962, a program motivated by a perception of increasing structural unemployment. After the War on Poverty began, in 1964, the program became targeted on disadvantaged workers. By the early 1970s these early efforts had been complemented by a wide range of other federally sponsored training and job creation efforts. The Comprehensive Employment and Training Act of 1973 (CETA) pulled the numerous federally sponsored, but state and locally run, employment and training programs together under a single administrative structure. This coordinated structure, involving many different types of programs, remained in place until 1981, when it was replaced by a far smaller, private-sector-oriented program designed by the Reagan administration, under the Job Training Partnership Act (JTPA).

While there were many evaluations of small, particular components of CETA over the years,[23] at the end of the 1970s and into the 1980s major evaluations of the program were centered on the use of the Continuous Longitudinal Manpower Survey (CLMS). A brief sketch of the features of that system will facilitate understanding of the results and the critique of them.

Building on Ashenfelter's earlier work, the U.S. Department of Labor supported the development of data files on large, representative samples of persons participating in the CETA program in the period 1975-79. The data contained in the files indicated not only the type of program in which the person was involved but also his or her labor force status during the year before enrollment and basic demographic characteristics. In addition, data on earnings were taken for these individuals from Social Security records and merged with the CLMS records. These data for CETA participants were supplemented with sets of data for other individuals taken from the Current Population Survey (hereafter CPS), the monthly representative sample of U.S. households which is the basis of national labor force statistics. These CPS data were also merged with Social Security records for the individuals in the sample. The CPS sample enabled construction of comparison groups made up of persons who had not participated in the CETA programs (or at least reported they had not), with basic demographic information on them as well as their earnings history from the Social Security data (hereafter referred to as SSA). The important feature of this combined data source was that it provided a longitudinal data file on earnings, so that the impact of CETA programs could be traced for a period following exit from the program and compared with the earnings experience of those from the CPS-SSA file who had not participated. To many this appeared to provide a potentially powerful means to do impact evaluations of CETA programs.

A large number of evaluations of CETA have been performed utilizing the CLMS (the most recent review, Barnow, 1987, examines eleven major studies in detail), as well as several summary assessments of these

evaluations (see also Bassi and Ashenfelter, 1986, pp. 140-145; Betsey, Hollister, and Papageorgiu, 1985, pp. 175-181; Burtless, 1984; and Barnow, 1987).

A few of the studies sought to evaluate CETA overall. They concluded that at best there were small, positive effects of CETA on the earnings of participants, primarily through higher hours of work rather than higher wage rates.

The evaluations of CETA presented not only overall assessments but results further disaggregated by broad types of programs and by subgroups of the participants according to race (usually defined broadly as minority or nonminority) and by sex. The general conclusions seem to be that the programs were more effective for those with the least previous labor market experience. This showed up most strongly in greater positive effects for women than for men, but also as more positive results for the disadvantaged in general.

With respect to program types, public service employment and on-the-job training were more effective than work experience or classroom training. However, estimates of the effects on earnings for any given program and population subgroup varied widely, even though roughly the same basic data were being used. For example, among work experience programs for women, one set of analysts estimated the impact on earnings to be an increase of $800 to $1,300 (Bloom and McLaughlin, 1982), while another estimated the impact at $500 (Dickinson, Johnson, and West, 1986). Both estimates were statistically significant. There are extended examinations of the possible reasons for the differences in the findings among these studies, but, rather than try to summarize them, it

is more useful to turn to much more disturbing findings that indicate that the methodology upon which these studies were based may be fundamentally flawed.

The studies that have shown grave problems with the CETA evaluations depend critically on information drawn from the National Supported Work Demonstration. These findings can be discussed more efficiently if readers are acquainted with the basic features of the Supported Work project, so we digress to sketch them. In any case, the findings from the research on Supported Work are in themselves relevant to our discussion of program evaluation.

Supported Work. Supported Work was a national demonstration program which ran from 1975 to 1979. The program had four target groups: women who had been on welfare (Aid to Families with Dependent Children) for at least three years; ex-drug addicts; ex-criminal offenders and youth (17-20 years old) who were high school dropouts. These groups were felt to need employment assistance because they had not recently, in some cases never, had a regular connection with the labor market. The objective was to help them establish or reestablish regular employment. Participants were provided subsidized work experience in which work standards were gradually made more demanding, and they were guided by supervisors knowledgeable about the problems of the target groups. Participants could continue in the program for up to 12 months (18 months in a few sites), after which they had to move on to regular employment (or back to unemployment if they were unsuccessful, even with the program's assistance, in finding work). Note that this was explicitly not a program providing skills training; such skills as

were obtained during the program experience were to be the result only of direct work experience. The demonstration was run in 15 sites across the country, different sites having different combinations of the three target groups.

An extensive evaluation of the program's effects was carried out (fully reported in Hollister, Kemper, and Maynard, 1984). The most important feature of this evaluation is that 6,600 applicants to the program were randomly assigned to be participants in the program or to be members of a control group. Both participants and controls were interviewed at the point of random assignment and every 9 months thereafter, up to a maximum of about 36 months. A special resurvey done at the end of the evaluation study provided data on youth for 38 to 67 months after initial enrollment. Another important feature of the evaluation is that it provided a very careful and extensive benefit-cost analysis.

The evaluation showed that for all the target groups, the hours of work and earnings of the participants increased relative to the control group during the period in which they were in the program (hardly surprising, since both groups were unemployed at the point of random assignment and the participants were given immediate access to the subsidized job). However, in the post-program period, the evaluation found different impacts for each of the target groups.

The program had the strongest impact among women on welfare: two years after enrollment the participants had a 20 percent higher employment rate, 35 percent more hours worked, and 48 percent higher earnings than did the control group. All these differences were

statistically significant at conventional levels. The benefit-cost analysis showed that, from the perspective of society as a whole, the net present value of benefits per participant exceeded those of costs by $8,150 (a benefit-cost ratio of about 1:3). (Note, however, that the average rate of employment of the participants, while higher than that of controls, was still a relatively low 42 percent.)

The evaluation indicated positive, but more equivocal, results for the ex-addict group. The strongest effects showed up in lower crime rates for the participants, as indicated by statistically significant differences in arrests and incarcerations. The employment effects, while positive in the post-program period, were statistically significant only for that portion of the group for whom data were available in months 30-36 after enrollment, leaving considerable uncertainty about the strength and reliability of such effects. There were no statistically significant effects on measures (self-reported) of drug and alcohol use. The benefit-cost analysis indicated that the net present value of benefits exceeded costs (by $4,345), but most of the estimated benefits arose from the valuation of the gains from the reduced criminal activity of the ex-addicts who had participated in the program. (When sensitivity of the results to variations in the underlying assumptions was tested, the conclusion of substantial benefits in excess of costs was robust.)

For the ex-offender group there were no statistically significant impacts on employment or earnings in the post-program period, nor were there any significant measured effects on the level of criminal activity. There were scattered suggestions that the program may have

reduced drug use, but the patterns over time were not consistent enough to draw any strong conclusions about the program impacts in this domain. The benefit-cost analysis indicated that the net present value of costs exceeded benefits by $3,180 per participant. There is no evidence here to indicate that Supported Work was likely to be an effective program for ex-offenders.

The program impacts for the youth group were essentially nil in the post-program period. There were no statistically significant differences in employment or earnings. The program had no statistically significant long-term impacts on education or training decisions, drug use, or criminal behavior. The results of the benefit-cost analysis showed that from the point of view of society as a whole costs exceeded benefits by $1,465 per youth participant.

There were many interesting features of the Supported Work program and its evaluation. We select a few that are most salient to our review.

Supported Work can be looked upon as a form of direct public job creation (even though specific sites used private sector agencies to some degree). We can say from the evidence that if assessed in terms of its post-program effects, this type of intervention works best for women, does not work at all for ex-offenders and low-income youth, and has some positive effects for ex-addicts. Of course, it should be remembered that an objective of direct public job creation can be considered the immediate provision of income for the unemployed in the form of a work opportunity, regardless of its long-term effects. In these terms the program worked for all four groups, since it raised

their incomes above those of the control group during the program period.[24]

Supported Work is often regarded as a "work experience" program, in contrast to, e.g., classroom training or job search assistance. Again the effectiveness of this form of work experience varies across the four groups in the same fashion: yes, for women on welfare, no for ex-offenders and youth, and maybe for ex-addicts.

Beyond the findings regarding program effectiveness, the Supported Work evaluation has proven particularly useful for purposes of improving the methodology of evaluating job creation programs, because the evaluation was carried out in the framework of a random assignment design. The evaluation showed that (1) random assignment to the program and to a "no-treatment" control group could indeed be effectively carried out for an employment and training program involving a very large number of subjects in many sites spread across a nation, and (2) the random-assignment design considerably enhanced the power of the subsequent evaluation.

The value of this experience with random assignment has been compounded by the further use of Supported Work data to assess the validity of the comparison-group methods used to evaluate CETA, described above. Two sets of investigators, Fraker and Maynard (1987) and LaLonde (1986), working independently, decided to use the data from Supported Work and from the CLMS-CPS-SSA data base (described above) to generate two sets of estimates of the impact of the Supported Work program, one based on the comparative earnings of participants and the control group created by random assignment, the second based on

participant earnings and those of comparison groups created from the CPS data in exactly the same fashion as had been done for the evaluations of CETA. The objective was to determine the extent to which the use of constructed comparison groups, combined with various econometric methods for dealing with selection bias, could yield estimates of employment and training program impacts that were generally reliable, i.e., providing impact estimates which were unbiased and reasonably precise. The data from Supported Work provided an unusual opportunity for such a test, since the random assignment impact estimates could be taken as a benchmark of the "true" program impacts.

The two sets of investigators tested a wide range of methods for constructing the comparison groups (including all those used by the CETA studies cited above) and a wide range of econometric methods in modeling and estimating the program impacts. The results showed that the comparison-group procedures generally provided unreliable estimates of the impact of the program. The comparison-group estimates were sensitive to both the method used to select the group and the econometric method used to estimate the impact, but in either case no method appeared consistently superior to another. They did find that the bias was smaller and the precision greater for the estimates of the impacts on women on welfare than they were for youth and other male groups, but even for the women the comparison-group estimates ranged from 27 percent to 159 percent more than the estimates from the random-assignment control group.

These results cast serious doubt on the reliability of the estimates of the impacts of CETA cited above, both according to type of

program and to type of participant. It is probably safe to conclude that CETA had a greater positive impact on women than on men, since the Supported Work program and several other experimental studies reviewed below support this conclusion. Beyond this, it must be concluded that not much can be said about the impacts of CETA.

Job Training Partnership Act. The most significant change introduced by the Reagan administration's Job Training Partnership Act (JTPA) concerned the structure of control over funds. Funds flow first to states, then to "service delivery areas," and then to local bodies called Private Industry Councils (PICS). One-half of the members of the PICs (plus the chair) must be from private industry, the view being that since private sector employers will largely be the source of jobs for program completers, they should have a large role in shaping the training program. PICs control the allocation of resources at the local level.

A strong emphasis on quantitative performance standards--involving post-program employment and earnings, as well as costs--has developed under JTPA. The local PICs have tended to translate these standards into performance contracts under which the agencies provide the training and other services to participants.

There are some early process evaluations of the implementation of JTPA (e.g., Walker et al., 1986), but we know of no impact evaluation studies of this program. An important development can be reported, however. Largely as a result of the problems reviewed above in the use of the CLMS-CPS-SSA data and nonexperimental comparison group methodology for the evaluation, an advisory committee to the U.S.

Department of Labor recommended that the evaluation of JTPA be carried out through a limited number of experiments in which subjects would be randomly assigned to program participation or to a control group. The Department accepted and implemented that recommendation and work has begun this year on the development of 16 experimental JTPA sites.

Dislocated Workers. Under JTPA, special emphasis was given for the first time to providing training for displaced (or dislocated) workers. As mentioned, federal funds provided to states are passed to local organizations for implementation. Assistance is provided for training, job placement, worker relocation, and child care and transportation, while in training.

Identifying dislocated-worker status in a dynamic economy is problematic. There is a continual flow of workers out of one economic activity and into another, often with a period of unemployment. For example, between January 1979 and January 1984, 11.5 million workers in the U.S. lost jobs owing to plant closing, plant relocation, or slack work. By the end of 1984, 500,000 of those who had held their jobs for at least three years prior to layoff had been unemployed for more than 27 weeks. By some standards these are dislocated workers.

However, for the purposes of employment and training programs, the issue would seem to be the use of training resources to move unemployed workers efficiently into productive activity.[25]

Evidence on the impact of programs for dislocated workers is quite limited. A mid-1970s evaluation of a program for workers dislocated by trade impacts was inconclusive, as most workers simply waited to be recalled to their prior jobs, and most had in fact been recalled in six

months (see Corson and Nicholson, 1981). Several major dislocated-worker training program demonstrations were implemented and extensively evaluated in the early 1980s.[26] These evaluations provided mixed results. A reasonable conclusion is that a well-structured job search and assistance program can shorten the period of unemployment and reduce the associated loss of earnings. However, the magnitude of the effects and the conditions under which they are likely to obtain remain unclear. Furthermore, major issues remain about how best to target and to implement such programs. (A comprehensive review of issues and experiences to date is provided in U.S. Congress, Office of Technology Assessment, 1986.)

Workfare. In the late 1970s and 1980s, attempts to bring those receiving welfare into the work force have been referred to as "workfare." Workfare programs seek to reduce welfare dependency over the long term by providing mandatory training and employment to recipients.

Results from a number of these projects, primarily those involving a compulsory work requirement, have been reported. Generally, women taken into the program were first given job search assistance. If, after a period of search, they failed to obtain a job, they entered mandatory service. In some cases, mandatory service included training, in others, it involved unpaid (i.e., no payment beyond their welfare grant) public sector or private nonprofit work, entitled the Community Work Experience Program (CWEP). These demonstration projects were all carried out with random assignment to program participation or to a control group.

In almost all cases, the studies showed small, positive impacts of the programs on employment rates and earnings and, concomitantly, small reductions in welfare benefits received.[27] Because the costs of these programs are small, ranging from about $150 to $900 per participant, even the relatively small positive impacts were sufficient for benefit-cost analyses to show net social benefits. The results also showed that those with the least labor market experience appeared to gain most. The importance of the random-assignment design of the evaluations should be emphasized, as the small estimated effects might well not have been detected in a nonrandom assignment design, and certainly would have been more strongly questioned. Further, the control-group data highlighted the degree to which simply looking at results for program participants could be misleading: in one site 78 percent of the program participants were on welfare at the outset and only 35 percent were on welfare a year and a half later. But the data from the control group show that most of this decline would have happened anyway: the net program impact was not a 43-percentage-point reduction, but a one-percentage-point reduction (Gueron, 1986, p. 23). This highlights the subtle findings that can result from careful evaluations: there are indeed statistically significant impacts from this type of program and they appear to more than justify their costs, but they will by no means lead to dramatic changes in employment of this population nor to huge declines in welfare costs. The rhetoric of the "workfare" debate in the United States has tended to ignore both parts of this subtle message and to characterize mandatory work and training for welfare recipients either as harsh and

ineffective or as a powerful instrument for putting welfare recipients to work and reducing public welfare costs.

A set of studies related to workfare deserves mention, as much for their example of style of analysis as for their findings (Grossman, Maynard, and Roberts, 1985; Ellwood, 1986; Maynard and Maxfield, 1986; all prepared for the U.S. Department of Health and Human Services by Mathematica Policy Research).

These studies focused on questions of targeting training. They sought to determine (1) which types of programs were most effective for which subgroups of the welfare population, and (2) which subgroups were most important in determining total welfare costs. The cost-effectiveness of "workfare" program resources could be increased by combining findings on these two issues.

The studies were stimulated by previous research on the dynamics of the welfare recipient population, showing that the majority of welfare recipients are on the welfare rolls for a short period of time, but the majority of welfare resources go for benefits paid to the small group of recipients who are on welfare for long periods of time. By reanalyzing longitudinal data on welfare recipiency, and using the total correlation of individual characteristics and the length of time on welfare, it was found that women who have never married and who have a child under 3 years of age are those most likely to become long-term welfare dependents. In order to estimate which types of programs work best for various subgroups of the welfare population, data from five different demonstration programs were reanalyzed. These studies indicated that programs were more effective for those women with less education, less

recent work experience, and a very young child, and that more extensive training programs were more cost effective in increasing earnings and reducing welfare payments than short-term job search assistance programs.

The findings of the two sets of studies were combined in a simulation model designed to test the effects of different combinations of programs targeted on different subgroups of the welfare population. The results of this work did suggest a revision of previous views. Contrary to the conventional wisdom that targeting on long-term recipients with older children was the superior strategy, the new analysis indicated that intervention at the point of first application to receive benefits, targeted on relatively young women with little education and with young children, would be the most cost effective. On the basis of this work, a new demonstration design was developed which targets mandatory employment and training resources primarily on teenage mothers who are school dropouts at the point of their entrance to welfare. It is currently being implemented in two states and involves a full evaluation using random assignment.

These studies are especially interesting because they carefully combined the results of past experimental and nonexperimental studies into explicit designs for future programs, which themselves will be further tested and evaluated.

Youths

Programs for youth have been a major component of national employment and training efforts in most countries since the mid-1960s; in the late 1970s and early 1980s their share of total resources became

even larger. In England, the Youth Training Scheme has been extended to make all 16- and 17-year-old school leavers eligible to participate. In France, the scope of Travaux d'Utilite Collective for those 16 to 21 has been greatly expanded. In Ireland, the Work Experience Program, in Sweden, Youth Teams, and in Denmark, the Job Creation Law, all have become substantial programs for youth.

In the United States, the most important youth employment and training programs were supported under the Youth Employment and Demonstration Projects Act of 1978 (YEDPA). The YEDPA umbrella covered a large number of diverse programs. Moreover, the legislation contained an explicit injunction "to test the relative efficacy of different ways of dealing with [youth employment problems] in different local contexts" and allocated substantial sums to demonstration and research activities. Although YEDPA was terminated in 1981, a panel was appointed by the National Academy of Sciences in 1983 to review what had been learned from the YEDPA evaluations. We draw heavily on the findings of the National Academy review (see Betsey, Hollister, and Papageorgiou, 1985).

In addition to the youth component of the Supported Work program (already discussed), two youth programs stand out because of their size, the quality of their evaluations, and the program concepts they embodied. They are the Job Corps and the Youth Incentive Entitlement Pilot Projects.

Job Corps. This federal program began in the late-1960s. It is targeted on out-of-school, economically disadvantaged youth aged 14 to 21. The program is residential: participants live in quarters at the site where the program services are provided. It provides a complex mix

of services, including remedial (basic) education, vocational skills training, work experience, health services, and job search assistance, at sites scattered throughout the United States. In fiscal year 1985 the program served 120,000 participants.

The major evaluation of the Job Corps was of high quality. Data were gathered for three to four years on a large sample of program participants (2,800) and a nonparticipant comparison group (1,000). The comparison group was carefully drawn from youth eligible for Job Corps but residing in geographic areas where Job Corps enrollment was low. The best econometric methods available were used to try to control for selection bias. A careful cost-benefit analysis was part of the evaluation.

The evaluation found that, after leaving the Job Corps, participants' earnings were 28 percent higher then those of the comparison group. Educational attainment of the participants increased more than for the comparison group: within the first six months after leaving the Job Corps the probability of attaining a high school degree of equivalent was .24 for participants versus .05 for those in the comparison group. Similarly, positive impacts on the level of criminal activity were found (i.e., fewer and less serious crimes committed by participants in the Job Corps).

The study estimated that the net present value of social benefits was $2,300 per enrollee (in 1977 dollars). This positive conclusion was robust under reasonable variations in assumptions.

While this evaluation strongly indicates that the Job Corps is an effective intervention targeted on the disadvantaged youth population,

two problems should be noted. First, random assignment was not used to create participant and control groups. Hence even though the comparison group was carefully selected, and state-of-the-art econometric methods were used in the analysis, some doubts regarding potential selection bias remain. Second, while we may conclude that the Job Corps as a whole is effective, there is little evidence regarding which of the several components of the program are the primary contributors to its effectiveness. For example, the contribution of the unique (expensive) residential character of the program remains unknown.

Youth Incentive Entitlement Pilot Projects (YIEPP). The Youth Incentive Entitlement Pilot Projects guaranteed disadvantaged youths minimum-wage jobs, part time during the school year and full time during the summer months. No skill training was provided. The program was a saturation intervention, in that all low-income youth in the target area of a project were guaranteed a job provided that they remained enrolled in school and were making reasonable progress toward a high school diploma. The short-term objectives were to reduce school dropout rates, provide work experience, and raise incomes of program participants during the program phase. The long-term objectives were to improve employment and earnings after the program period. There were 17 demonstration projects across the country, and about 70,000 youth participated.

The evaluation research on YIEPP posed a serious problem because of the saturation (or "entitlement") nature of the program, which made it impossible to draw a comparison group from the same area. The evaluation design called for the selection of four large-scale sites to

be evaluated and four other sites at which the program was not offered to serve as comparison sites. An attempt was made to match the program sites with comparison sites in terms of important characteristics of the population, industry, and employment.

The evaluation of YIEPP reported statistically significant effects on weekly earnings both for the program and the post-program periods. In-program earnings effects during the school year were estimated to range from 46 to 161 percent above those in the absence of the program. Summer earnings increases ranged from 48 to 65 percent.

During its operation, YIEPP significantly lowered unemployment rates and raised employment and labor force participation rates of both black and white youths. Importantly, about two-thirds of all youths eligible for the program in the target sites did participate at some time. This suggests that youth are willing to work at the minimum wage but that, in the absence of a program like YIEPP, employers are unwilling to hire as many youth at that wage as want to work.

A stated objective of YIEPP was to increase school continuation rates (reduce dropout rates) of the low-income youth eligible for the program. Indeed, continued enrollment in an education program was a condition for continuation in the program. The evaluation concluded that the program had no sustained effects on school continuation rates.

Estimates of the effect of the program on post-program employment and earnings were severely limited because of the premature termination of the evaluation study in the fall of 1981. The final analysis focused on the sample of black youth and found that the program substantially increased the weekly earnings of those eligible. If this is correct,

the program would appear very cost-effective, since it provided both immediate employment and earnings during the program and favorable post-program employment and earnings experience.

Unfortunately, the studies of YIEPP have serious methodological problems, particularly with respect to post-program earnings. These problems highlight the difficulties which any attempt to evaluate "saturation" type programs will face.

At the heart of the issue is the feasibility of accurately matching geographic areas so as to create reliable comparison sites. This site-matching procedure is necessary because of the local "saturation" nature of the program. The belief that the matching of geographic sites can be accomplished so that the residents of matched sites can be used as comparison subjects requires a belief that all the factors which determine the evolution of the local labor markets have been captured and adequately matched at the outset and that any changes in the context external to the local area are also measured and controlled for in the analytic model used to estimate program effects. It seems unlikely that the knowledge of the factors that affect the evolution of local labor markets, and the ability to accurately model and predict that evolution, is sufficiently advanced to rely upon the estimates of impact yielded by evaluations based on this model.

The problems of using matched sites for comparison can be seen in some of the results of the YIEPP study. The final analysis sample was limited in two ways: first, the major analysis excluded whites and Hispanics, even though data had been gathered on them; second, the Denver/Phoenix pair of program and comparison sites was excluded from

the analysis because the Denver program had "implementation difficulties." The exclusion of the Hispanics from the analysis was tied to the exclusion of the Denver/Phoenix pair because the Hispanic sample was highly concentrated in this pair of sites. The rationale for the exclusion of whites was that a large portion of the comparison sample of whites was concentrated in the Louisville site, which experienced very sharp drops in white school enrollments, perhaps because of a controversy over school busing. A third example of site comparison problems can be seen in the individual site results, which show no significant effect on post-program earnings in the Baltimore site, which had a program generally regarded as the one best designed and implemented. The evaluators suggest this may be due to an unexpectedly healthy economy in the comparison site, Cleveland. These examples provide concrete evidence that evaluation based on the use of matched comparison sites is quite vulnerable to unpredictable developments.

In sum, YIEPP was an important and sizable program designed to investigate the importance of direct job experience for low-income youth. Many important things were learned from the demonstration about the feasibility of placing large numbers of youth in jobs. It was also learned that a sizable proportion of youth would take such jobs. However, in spite of indications that it may have had long-term effects on employment and earnings, the method of evaluation is sufficiently weak as to preclude any overall conclusion regarding the effectiveness of this strategy for helping youth.

Overall Findings on Youth Programs

In 1985 a study conducted by the National Academy of Sciences, Committee on Youth Employment Program, surveyed over four hundred reports on training programs focused on youth. Applying criteria for judging the soundness of the evaluation[28] only 28 evaluations were found to contain reasonably reliable information on impacts. The following summarizes the conclusions from these reliable studies.

Following the schema used by the National Academy of Sciences committee, programs[29] are grouped according to program type and, under each program type, a distinction is made between those aimed primarily at out-of-school youth and those aimed primarily at in-school youth. Only the estimates of post-program effects are summarized here.

Occupational Skills Training. For in-school youth, virtually no skills training programs had been adequately evaluated, so no conclusions could be drawn. For out-of-school youth, the Job Corps was the major occupational skills training program and, as indicated above, an evaluation of very high quality indicated that the program was quite effective. The program had many different components and the evaluation was not designed to assess the components separately, so we do not know, for example, how important was the residential aspect of the program or its remedial basic education. The benefit-cost analysis showed that, in spite of the fact that costs per participant are quite high, the net present value of estimated benefits exceed that of costs.

Labor Market Preparation. This category contains a mix of program types: career exploration (information on opportunities and

requirements); basic education training, often leading to a General Equivalence (GED) certificate (equivalent to U.S. high school completion); orientation to "the world of work" with some direct job experience. For in-school youth, once again, there was no reliable evidence available. For out-of-school youth these program appeared to generate some positive effects on employment in earnings in a 3-8 month post-program period but there was no reliable evidence about whether these effects would be sustained for a longer post-program period.

Temporary Jobs. These programs provide temporary, often subsidized, employment for youth. The major program for in-school youth was YIEPP, reviewed above. It must be concluded that we do not know whether this program had post-program effects. This is especially regrettable, because nonexperimental work had found a strong relationship between work during the school years and better employment and earnings in the labor market after school (see Meyer and Wise, 1982).

The Supported Work demonstration, described above, was the major example for temporary work programs for out of school work. As noted above, a careful evaluation based on a random-assignment design showed that this program had no long-term effects on youth and its costs far outweighed its benefits. The program did serve a particularly disadvantaged segment of the youth population, so it may be that its negative conclusions cannot be generalized to the out-of-school youth population in general.

Job Placement. Programs in this category devote most of their effort to finding job opportunities for youth and referring youth to an

employer which has a reasonable match with the youth's interests and abilities. They usually also include some training in job search techniques, how to prepare resumes, conduct job interviews, and sometimes follow-up support once the youth is placed on a job. For in-school youth these programs appear to have increased employment and earnings in the year following the program, but by the second year the effects have disappeared. The conclusions are the same for out-of-school youth in such programs: short-term positive effects, with comparison-group members catching up by the second year.

VI. CONCLUSIONS

In this wide-ranging review of issues and evidence regarding job creation policies and programs in the Europe and the United States, we have been able at best to skim over many topics and have had to omit many details, qualifications, and in-depth analyses. For these reasons, general conclusions are especially risky, but we attempt some here.

First, both good institutions and good evaluations are necessary elements for the best employment and training policies (Europe seems to typify the first, the United States the second), but we seem rarely to see these occur together.

Second, a general finding in most evaluations has been that employment and training programs have had their greatest impacts and largest social returns for those in the population who have had the least previous labor market experience and are most disadvantaged: in general, programs work better for women than for men, for those less

educated and poorer than for those better educated and with higher income. Even where they have had statistically significant effects, the effects have been small relative to the size of the problem, but though small they are often still socially significant.

Third, intensive, residential skills-training programs for youth may be very effective.

Fourth, job search and placement efforts produce at least short-term effects in a wide variety of circumstances and are generally of low cost.

Fifth, for seriously disadvantaged males there is little evidence pointing to any particular employment and training policy as effective, primarily because of the lack of quality evaluation evidence.

Sixth, marginal employment subsidies with simple structures, outreach efforts, and minimal interference appear to be a cost-effective labor market policy to reduce cyclical unemployment and deserve more extensive utilization and careful evaluation than they have gotten in most countries to date.

Seventh, employment and training policies cannot be substitutes for effective fiscal, monetary, and foreign trade policies. In general, employment and training policies will prove more effective when aggregate demand is increased.

Eighth, more effort needs to be put into fitting employment and training policies to changes in the general economic context. This is a problem both of understanding which types of programs are likely to be most effective in which circumstance and of implementing policies in light of that understanding in a timely fashion. It is important that

programs be started in time to yield effects at the right phase, but also shut down when the changed context makes them less appropriate.

Ninth, all countries need to devote more resources to systematic learning from their experiences with employment and training programs. The strongest indictment of the past is not that countries have failed to try employment and training policies, but that they have learned so little from their experience. Examples exist which show that carefully designed evaluations, following a few simple rules, can be implemented so as to yield powerful insights. The information they provide is often not good news, but it is important news if the resources used in employment and training programs are to yield substantial social benefits. Good intentions are not enough.

Appendix A

Forms of Employment and Training Efforts

This Appendix reviews, in general terms, the wide range of employment and training efforts that have been undertaken.

A. Complete Government Production[1]

This is the purest form of job creation program by a government, in which the government organizations themselves direct all or nearly all of the factors of production; that is, not only the workers but the supervisors, the provision of materials, the working space, in some cases even the marketing of the product. These programs can either be directed from the central government organization or, as is more typically the case, they may be directed and controlled on a decentralized governmental basis through regional state, or local government authorities.[2]

B. Shared Public/Private Production

In this type of job creation effort, some nongovernmental organizational entities are involved in the direction of production, but

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[1]Reviews of direct job creation programs and issues can be found in Organization for Economic Cooperation and Development (1980), and Balkenhol (1980).

[2]There are many examples of programs run by state, provincial or local governments, e.g., Relief Work in Sweden, the Youth Conservation Corps in the United States, Job Offer projects in Denmark, but we know of no examples of programs run completely by officers of the central government.

the public still plays a major control function. The sharing agency is in many cases a nonprofit organization.[3] Thus the government might provide the materials and pay the wage bill, but a nonprofit organization such as, say, a charitable organization, a church organization, or a private social welfare agency would actually organize and supervise the work. Typically, however, the government would maintain control over project selection. In a few cases the sharing agency may be a private for-profit organization.[4] But again, the government would maintain a major control function.

C. Subsidized Activities

It is difficult to draw a precise line between shared public/private production and subsidized activities, but the most common form of subsidized activities occurs where the government underwrites the wages, or a portion of the wages of particular individuals[5] or for particular types of jobs.[6] The private sector organization, either

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[3]The projects in the West German ABM and the Community Program in the United Kingdom are of this form.

[4]In Sweden a small percentage of Youth Teams and in the United Kingdom some of the Community Program projects involve private profit groups.

[5]There are many examples of these, perhaps the most explicit being the U.S. Targeted Jobs Tax Credit, which has a clearly defined set of individual characteristics that qualify a person for the subsidy.

[6]The U.S. Employment Tax Credit was an example of a broad subsidy attached to the creation of new jobs. Denmark had, until recently, a Job Creation scheme which subsidized particular types of job positions. Several countries have had subsidies which are paid if a job is converted to a job-sharing position or if an early retirement is encouraged and replaced by a younger person.

nonprofit or profit, has, largely, the control of the work activity as part of its normal production processes.

In some cases the subsidization extends beyond wages to other costs that can be related to the particular subsidized job or the particular subsidized person. Thus, in some cases, the subsidy would also extend to supervision costs or even, in a few cases, to costs of materials and tools.[7]

Subsidization for the purposes of creating or preserving jobs can also take the form of total cost subsidization, where there is not an attempt neatly to separate out wage costs from other costs of production, but rather the support goes to the enterprise as a whole in some form or other.[8]

It should also be noted, in terms of subsidized activities, that the subsidization can come in several forms. It can be a direct flow of funds from the government agency to the private organization, or it can come in the form of vouchers given to individuals,[9] which are then reimbursed by the government agency. Another form which it can take is tax credits, tax deductions, or tax rebates.

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[7]The Community Program in the United Kingdom provides overhead support in addition to wages.

[8]Swedish structural support for industries in the mid 1970s is an example, as is the U.S. loan support to Chrysler.

[9]A small experiment to compare the effectiveness of vouchers to individuals vs. subsidies to employers was carried out in the United States, but the results were anomalous. See Rivera-Casale, Friedman, and Lerman (1982).

D. Mixed Work and Training

The most traditional form of mixed work and training is, of course, the apprenticeship system, and some job creation efforts have taken the form of subsidization to apprenticeship programs for part or all of the wage costs[10] of the individuals involved. In some cases, the government has managed to encourage apprenticeship efforts without subsidization per se through threats to intervene in the apprenticeship system if sufficient apprenticeship places are not provided "voluntarily" by the private sector.

In many cases, governments have tied the subsidization of apprenticeships to a requirement for more formal schooling for some portion of the time that the individual is in the subsidized apprenticeship scheme.[11]

Mixed work and training are sometimes referred to as "alternance training," i.e., a period of pure work is alternated with a period of pure training.[12]

E. Training

The usual categories for training are on-the-job training or institutional training.

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[10]For example, Denmark has recently been providing substantial subsidies for increasing the number of apprenticeships and training places.

[11]The Youth Training Scheme in the United Kingdom, for example, requires 13 weeks out of the year in more basic educational activities, off the job.

[12]The Contract Emploi-formation in France is an example of this sort of program.

It is fairly difficult to separate out on-the-job training from the category of apprenticeship just discussed above. One might make a distinction by arguing that apprenticeship normally involves a more clearly defined curriculum of skill attainment and some testing and certification that a given skill is obtained, whereas in on-the-job training the normal practice is simply to set up a period of time during which the organization agrees to put the individuals into a specialized work situation which will allow them to learn while they are doing the activities that are normal to the production activities of the firm.

Institutional training is, of course, training that takes place outside of the normal work place in formal educational institutions or in specially set up training units.

F. Enterprise Promotion

Currently there is a great deal of government interest in programs to promote new, mostly small-scale, enterprises as a form of job creation.[13] Enterprise promotion in general has, in most countries, been an older governmental effort, not necessarily directly linked to its job creation potential.[14]

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[13]See, for example, OECD (1984) and Center for Employment Initiatives (1985).

[14]In the United States in the 1970s there were many programs for assistance to small businesses run through the Department of Commerce. In some cases special emphasis was given to providing capital and management assistance to businesses owned by members of minority groups, e.g., Minority Enterprise Small Business Investment Company, and in these cases the objective was primarily to increase the numbers of minority owners of enterprises rather than to increase employment per se.

Enterprise promotion can take many forms, most of which provide some assistance to the enterprise through special financial arrangements, but also providing, in some cases, special assistance in developing management procedures and management skills.

More recently governments and private agencies have been setting up enterprise agencies as intermediaries to work at stimulating and coordinating efforts among the government sources, large private enterprises, and the smaller new enterprises which are trying to get under way.

G. Regional and Structural Support

It can be reasonably argued that many governmental efforts to reduce regional imbalances in economic activity are, in effect, job creation efforts. Similarly, when governments provide support to particular industrial sectors, it is often motivated by a concern to preserve the employment provided by those sectors--or at least to minimize the losses in employment in the sector--so these can also be, in some sense, classified as job creation efforts.

H. Regulations[15]

There is a very broad category of governmental efforts and actions which can be viewed as job creation efforts to the extent that actions in these domains can affect the level and character of employment

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[15]For an up-to-date review of evidence regarding effects of regulations on labor market flexibility and job security, see OECD, Employment Outlook 1985.

provided by the private sector.

1. Job Security. Regulations with respect to hiring and tenure and in firms, and firing or redundancy, are domains in which legislation has been passed (in a number of countries and over several decades) defining the conditions of employment contracts which may be made in the private sector.[16] In the 1980s, in some countries there have been major attempts to attenuate the more restrictive (for the employer) of these types of legislation[17] on the grounds that they have created rigidities in the labor market which are detrimental to continued, dynamic resources reallocations which are critical for job creation.

2. Hours of Work. In addition to defining circumstances for employment contracts regarding hiring and firing, government regulations also either directly specify, or affect indirectly, the hours of work which a private sector employee will typically experience.

There are, of course, many dimensions to hours of work. For example, the number of hours that are considered full time and the number of hours that are considered overtime. In addition, the ability of firms to hire part-time workers is sometimes directly legislated or indirectly affected by government regulations.

Annual hours of work are also sometimes affected by legislation bearing on the amount of annual vacation. In addition, increasingly in

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[16]See, for example, International Labour Office, "Termination of Employment at the Initiative of the Employer," Report VII (1), International Labor Conference, 67th Session, Geneva, 1981, pp. 9-11.

[17]For an example of relatively mild revisions in this direction, see the changes embodied on the West German Employment Promotion Act, effective January 1985.

recent years there has been legislation dealing with special leaves[18] from work with maintained job security under special circumstances, such as maternity leaves or parental leaves for early child rearing, and a number of other special leaves.

One can also think of government regulations regarding hours of work in terms of work over the life cycle. There are often government regulations dealing with child labor, with the employment of young workers and, of course, the conditions under which involuntary retirement may be enforced.

3. Compensation. Government regulations can affect the level of compensation most typically by setting minimum wage levels (see Starr, 1981) and the extent of their coverage. More important, the compensation is affected by the general framework for collective bargaining. In most countries legislation sets the framework for collective bargaining and the nature of the framework for collective bargaining will usually greatly condition the effects in many of the other dimensions we have already mentioned.

4. Access and Discrimination. Government regulations affect access to employment, in some cases by requiring positive discrimination in favor of a given type of worker, such as physically handicapped workers, and in other cases by constraining the extent of choice (in terms of hiring, promotion, wages) on the part of employers on the grounds of discrimination based on characteristics unrelated to work productivity, e.g., race, sex, age.

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[18]A number of pieces of legislation bearing on such issues were passed in France in 1984.

Notes

[1]Readers are advised to consult Industrial Relations, Vol. 24, no. 1 (Winter 1985), which includes a symposium on active labor market policies and provides a multinational perspective on many of the issues discussed in this study. While the high, sustained rates of unemployment in Europe and the somewhat different experience in the United States provide the backdrop to this review, we will not attempt to enter into, or evaluate, the debate over the character and causes of these phenomena. Where appropriate, however, we will emphasize the necessary coordination of employment and training efforts with macroeconomic and exchange rate policies.

[2]Haveman and Krutilla (1967) provide an analytic framework for evaluating public projects in these macroeconomic circumstances. See Jon Kesselman, "Work Relief Programs in the Great Depression," in Palmer (1978).

[3]We hasten to note that our knowledge of the model is quite limited and largely based on the Swedish Model as described in Lundberg (1985), Rehn (1985), and Bosworth and Rivlin (1987).

[4]Some of the wage-price aspects of the Swedish Model were incorporated in the U.S. Council of Economic Advisers' wage and price guidelines in 1962.

[5]Other NAIRU-based analyses include Phan-Thuy (1979), Balkenhol (1979), Layard and Nickel (1980), papers by K. Burdett and Bryce Hool,

Jeffrey Perloff, and Donald Nichols in Haveman and Palmer (1982), Organization for Economic Cooperation and Development (1983), Whitely and Wilson (1983), and Johnson (1983).

[6]See Cain (1976) and Wachter (1974). For recent reformulations, see Lang and Dickens (1987).

[7]Disputes over this issue are found in Haveman and Palmer (1982), Layard and Nickel (1980), and Whitely and Wilson (1983). Most analysts have based their estimates of the response to wage subsidies on estimates of the elasticity of labor demand in Hamermesh (1976). Two subsequent works, one theoretical and one empirical, suggest that Hamermesh's estimates are too low: see Killingsworth (1985), and Clark and Freeman (1980).

[8]For a theoretical discussion of this issue, see Burdett and Hool, in Haveman and Palmer (1982).

[9]The employment and training system in the United States was able to build jobs very rapidly under the Youth Employment and Demonstration Projects Act from 1978 to 1981; see Betsey, Hollister, and Papageorgiou (1985), p. 21 and Chapter 3. On the other hand, a number of U.S. studies of purposefully countercyclic programs have concluded that expenditures are allocated too slowly for proper phasing with the cycle; see, for example, Vernez and Vaughan (1978) and U.S. General Accounting Office (1986).

[10]The papers by Nichols, and by Baily and Tobin, in Haveman and

Palmer (1982) provide some of the earliest and latest estimates of this impact.

[11]For a discussion of this and many of the related issues of employment effects of macro and trade policies applied to an open economy, see Dreze and Modigliani (1981).

[12]For a general discussion of the methods for evaluating employment and training programs, see Cain and Hollister (1983). In this section, we discuss the methods and problems involved in evaluation, not actual evaluations of programs. In Section V, below, we briefly summarize major findings. Fuller summaries of evaluations of the effects of programs are provided in Industrial Relations, Vol. 24, no. 1 (Winter 1985), Betsey, Hollister, and Papegeorgiou (1985), Schwanse, in Haveman and Palmer (1982). Most of the references to program evaluation methods and results are from the United States literature, as that is where the bulk of efforts on this issue have been located. Western European analysts have shown less interest in these matters.

[13]For an unusual attempt to use such records in combination with follow-up data, see Hollister, Kemper, and Wooldridge (1979).

[14]An important early example in which comparison groups were created from Social Security records on earnings is reported in Ashenfelter (1978). Subsequent studies using comparison groups created from other types of data sources are Bloom and McLaughlin (1982) and Bassi (1984).

[15]In some cases, it has been possible to use records regularly collected for other purposes in order to obtain information on some of

the topics of concern. Where there is a social security system that requires regular reports of earnings by individual workers, it has been possible to obtain information on the subsequent earning histories of both participants and comparison or control group members (see Ashenfelter, 1978). Records collected through the payment of unemployment insurance taxes have also been used (see Gueron, 1986).

[16]Crime and drug and alcohol abuse were measured for the Supported Work program (see Hollister, Kemper, and Maynard, 1984), and crime was measured for the Job Corps (see Mallar, Kerachsky, Thornton, and Long, 1982); Betsey, Hollister, and Papageorgiou (1985), Appendix A, for a discussion of such attitudinal measures and some of their problems.

[17]This section draws heavily upon Kemper, Long, and Thornton in Hollister, Kemper, and Maynard (1984). A shorter, slightly different report on this analysis can be found in Haveman and Margolis (1983). This benefit-cost study is generally regarded as the most thorough and complete analysis of a job creation or training program.

[18]An alternative perspective is from the point of view of the participant. Analysis based on this perspective will indicate if the program yields gains which are sufficient to induce potential participants into the program.

[19]See the chapter by E. J. Mishan in Haveman and Margolis (1983) for a discussion of the main issues in benefit-cost analysis and the main techniques used in such studies.

[20]The most comprehensive and effective use of sensitivity analysis is the Supported Work benefit-cost study. See Hollister, Kemper, and Maynard (1984).

[21]See, for example, the chapter by Schwanse in Haveman and Palmer (1982), and Wilensky's article in Industrial Relations (1985).

[22]Consider for example the case in which the central government provides funds to local governments that cover most but not all costs of a job project which is partially implemented by private organizations that help train workers in the skills necessary to execute the project. Is this "direct job creation" or "wage subsidies" or "skill training"?

[23]Ashenfelter (1978) is generally regarded to have established the paradigm for the evaluation of federal training programs in the United States, although, as the author himself has indicated, it has been superseded by the subsequent works cited below.

[24]When evaluated without regard to any gains in post-program earnings, but taking into account reduced transfer payments, the net present value of benefits just about equaled the costs. See Hollister, Kemper, and Maynard (1984), Table 8.4, p. 254, where costs and benefits from the nonparticipant perspective are given. If society prefers to provide income support in forms that involve work rather than cash transfers alone (as they seem to do, at least in the United States and Sweden), then when benefits equal costs in monetary terms, they would exceed costs if account were taken of this social valuation of work.

[25]Some analysts have argued that dislocated workers cannot be sufficiently distinguished from the more generally unemployed to merit targeting resources on them. See, for example, Bendick and Devine (1982).

[26]These projects were in Detroit, Buffalo, El Paso, and Houston. The evaluations involved both matched comparison groups and random assignment to treatment and control groups. See Kulik, Smith, and Stromsdorfer (1984); Maynard et al. (1985).

[27]Reported in Gueron (1986). The estimated impacts on employment rates were usually statistically significant, whereas the differences in earnings and welfare payments were less often so, probably because sample sizes were too small, given the large variance in these measures.

[28]The criteria were (1) pre- and post-program measurement of relevant aspects of performance, (2) the presentation of adequate comparison-group data, and (3) sample sizes sufficient to enable statistical analysis and minimize attrition biases.

[29]While discrete program categories are reviewed, many programs have a variety of components and cannot be considered as falling in only one category. For example, a skills training program will also have a job placement component at the end of the program.

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