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ACTIVE LABOUR MARKET POLICY AND UNEMPLOYMENT -- A FRAMEWORK FOR THE ANALYSIS OF CRUCIAL DESIGN FEATURES

by

Lars Calmfors

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ACTIVE LABOUR MARKET POLICY AND UNEMPLOYMENT -- A FRAMEWORK FOR THE ANALYSIS OF CRUCIAL DESIGN FEATURES

by

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ABSTRACT

This paper assesses the role of active labour market policies (ALMPs) as an instrument for fighting persistent unemployment. An analytical framework is developed to examine the effects of these policies on a number of economic outcomes, including: job matching; labour force participation; competition between labour market insiders and outsiders; displacement, deadweight and substitution in the labour market; productivity; and tax effects. While some of the effects converge, others work in opposite directions. The paper develops a framework to assess the net effects and examines available empirical research in this perspective. It concludes with a discussion of key design features of ALMPs which can help improve the positive labour market effects while limiting the negative effects. The role of different types of ALMPs, compensation levels, targeting, co-ordination with unemployment insurance and other social programmes are explicitly examined.

RÉSUMÉ

Ce document évalue le rôle des politiques actives du marché du travail en tant qu'instrument de lutte contre un chômage tenace. Un cadre d'analyse y est développé afin d'examiner les effets de ces politiques sur un certain nombre de résultats économiques tels que : l'adéquation de l'offre et de la demande de main-d'œuvre ; le taux d'activité de la population active ; la concurrence entre ceux qui ont un emploi et ceux qui en cherchent un ; les suppressions d'emplois, les effets d'inertie et de substitution sur le marché du travail ; les effets sur le plan fiscal. Bien que certains effets aillent dans la même direction, d'autres divergent nettement. Le document élabore un cadre qui permet d'évaluer les effets nets et analyse les études empiriques réalisées dans ce domaine. Il se termine sur un examen des principales caractéristiques des politiques actives qui pourraient améliorer les effets positifs sur le marché du travail et en limiter les effets négatifs. Le rôle des divers types de politiques actives du marché du travail, les taux de remplacement, le choix des groupes-cibles, la coordination entre les régimes d'assurance-chômage et d'autres programmes sociaux y sont également examinés.
# ACTIVE LABOUR MARKET POLICY AND UNEMPLOYMENT -- A FRAMEWORK FOR THE ANALYSIS OF CRUCIAL DESIGN FEATURES

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In recent years, there has been a growing interest in so-called active labour market policy as a means of fighting the persistent unemployment in Western Europe. This is easy to understand in view of the disillusionment with more aggregate policies: on the one hand, traditional demand stimulation runs the risk of primarily increasing inflation with only small effects on employment; on the other hand, supply-side structural reforms in order to remove various labour market rigidities have either been difficult to implement or appear to produce results very slowly. In this situation, active labour market policy seems to be regarded by many as the *deus ex machina* that will provide the solution to the unemployment problem. It is the purpose of this paper to try to make a realistic appraisal of this option.

One problem when analysing active labour market policy is that there are different interpretations of the concept. Here I shall use a narrow definition: measures targeted to the unemployed with the aim of improving the functioning of the labour market. Active labour market policy will then comprise three basic subcategories: (i) *job broking* with the purpose of making the matching process between vacancies and job seekers more efficient; (ii) *labour market training* in order to upgrade and adapt the skills of job applicants; and (iii) *direct job creation*, that may take the form of either public-sector employment or subsidisation of private-sector work.

Another complication is that each type of labour market policy measure may work through several different channels. It is another aim of this paper to try to structure the various effects with the help of a simple analytical framework and to use that to highlight the crucial determinants of policy effectiveness.

The discussion is organised as follows. Section I presents the basic analytical framework. Section II discusses the various types of effects of active labour market policy, whereas Section III discusses the possibilities to draw conclusions on the net effect of active labour market policy from existing empirical knowledge. Section IV focuses on the importance of various design features. Section V presents some conclusions.

I. The basic analytical framework

The traditional way of discussing labour market policy in macroeconomic analysis has been as a method of "cheating the Phillips curve", *i.e.*, to improve the inflation-unemployment trade-off, thereby lowering the equilibrium (natural) rate of unemployment (see, *e.g.*, Baily & Tobin (1977) or OECD (1990, 1993a)). An analysis within such an expectations-augmented Phillips-curve (natural-rate) framework, however, tends to become *ad hoc* in nature, since the fundamental determinants of the equilibrium rate of unemployment are usually left unspecified. What is required is instead an explicit theory of how labour market equilibrium is determined.

This paper will take as its starting point the type of labour market analysis developed in, *e.g.*, Layard & Nickell (1986), Johnson & Layard (1986) and Layard *et al.* (1991). The basic reasoning is illustrated in *Diagram 1*. The downward-sloping curve is an *employment schedule* relating employment (assumed to be equal to labour demand) measured as a proportion of the labour force to the real wage. The upward-sloping curve is a *wage-setting schedule*, which shows how higher aggregate employment causes pressure for higher real wages. Such a relationship can be derived from several wage-setting frameworks: monopoly-union, efficiency-wage and bargaining models. One argument is that union incentives to avoid wage increases causing lay-offs are weakened when employment is high and it is easy to get a new job, another that employers have to pay more to compete for labour and extract optimal effort from their work forces in such
a situation. Full employment of the labour force is indicated by a vertical line. The equilibrium values of employment and the real wage are obtained as the intersection of the two curves (point A). The amount of involuntary unemployment -- on the part of individuals -- can be read off as the horizontal distance between the equilibrium point and the full-employment line.

To the above diagram one can -- in the spirit of, e.g., Pissarides (1985, 1990) or Blanchard & Diamond (1989) -- append the Beveridge curve, which can be interpreted as a measure of the effectiveness of the matching process between vacancies and unemployed. More precisely, the Beveridge curve in Diagram 2 shows the equilibrium relationship between vacancies and unemployed, along which hirings exactly match quits, so that employment stays constant. More vacancies will in general be consistent with lower unemployment, since the extra hirings due to more job vacancies need to be offset by fewer job matches due to a smaller number of job applicants if employment is to stay constant. In equilibrium, the unemployment rate in Diagram 2 must, of course, be the one implied by the intersection of the wage-setting and employment schedules in Diagram 1.

To analyse active labour market policy, this model set-up has to be slightly modified. The reason is the need to distinguish between participation in labour market programmes and regular employment. For this purpose, the employment and wage-setting schedules are instead drawn with regular employment (excluding participation in programmes) on the horizontal axis in Diagram 3. Participation in training and job creation programmes (as a fraction of the labour force) is measured by the horizontal distance \( r_0 \) between the full-employment line FE and the vertical line RR, showing the proportion of the labour force that is not in programmes. (Programme participation may in principle also include subsidised private-sector jobs that are perfect substitutes for regular jobs from the point of view of the individual employee). Since the intersection between the employment and wage-setting schedules at A now determines the rate of regular employment (as a fraction of the labour force), it follows that the distance \( u_0 \) between the equilibrium point and the RR-curve measures open unemployment.

The Beveridge curve also needs to be modified (see Diagram 4). The horizontal axis now measures the total number of job searchers without a regular job, i.e., the sum of openly unemployed and participants in labour market programmes. The vertical axis indicates vacancies for regular jobs. Two implicit assumptions lie behind this illustration. The first is that regular job openings can be filled either from the stock of openly unemployed or from the stock of programme participants. The second is that the matching process with respect to labour market programmes is much simpler than in the regular job market: the labour market authorities do not usually have to post vacancies but can directly place unemployed workers in various programmes.

The diagrams can be used to illustrate the various effects of labour market programmes. Increased placement in training or job creation schemes can be depicted in Diagram 3 as a leftward shift of the RR-line (programme participation increases by \( \Delta r \)). If nothing else were to happen, the effect would simply be to reduce open unemployment by a corresponding amount (from \( u_0 \) to \( u_L \)). This will be referred to as the gross (or bookkeeping) effect of such an expansion of programmes. However, to obtain the net effect it is obviously necessary to take a number of indirect effects into account. One must analyse how the incentives for wage setting, regular labour demand and labour supply are affected. This is done below.

The emphasis will be on how regular employment and the total number of job searchers without a regular job (the sum of open unemployment and programme participation) is affected. The idea is to capture to what extent the gross impact on open unemployment is reinforced or counteracted by the indirect effects.
II. Different effects of active labour market policies

The analysis will distinguish the following types of effects of active labour market policies, which can be considered additive to each other: (i) effects on job matching; (ii) effects on labour-force participation; (iii) effects on competition in the labour market; (iv) deadweight losses and substitution effects; (v) displacement effects via wage setting; (vi) productivity effects; (vii) work-test effects; (viii) general-equilibrium tax effects; and (ix) repercussions on other policies.

A. Effects on the matching process

A traditional rationale for active labour market policy has been to facilitate the matching process in the labour market. This may occur through a number of mechanisms: (i) mismatch between different sub-markets for labour may be eliminated to the extent that the qualifications of job searchers can be better adapted to the structure of labour demand; (ii) more active search behaviour on the part of job seekers can be promoted; and (iii) labour market programmes can substitute for regular work experience in reducing employer uncertainty about the employability of job applicants.

The impact of improved matching is to reduce the number of job searchers for a given number of vacancies, i.e., to shift the Beveridge curve in Diagram 4 to the left. This is likely to affect both the employment and the wage-setting schedules in the Layard-Nickell diagram (see Diagram 5). Since vacancies become filled more quickly, they become less costly to firms, and more vacancies are opened. This is equivalent to an increase of labour demand, i.e., a rightward shift of the employment schedule (Calmfors & Lang (1993)). Moreover, to the extent that posting vacancies and offering high relative wages can be seen as substitutes for each other in the hiring process of the individual firm, an increased matching effectiveness weakens the incentives for individual employers to attract labour by pushing up wages. This tends to shift the wage-setting schedule downwards (Johnson & Layard (1986)). As can be seen, both effects work in the direction of increasing regular employment (from A to B), although the real-wage effect is ambiguous. 7

One should expect intensified placement services that help increase the search effectiveness of job searchers to have unambiguously positive effects on the Beveridge curve in Diagram 4. With placement in training or job creation schemes, there are, however, also effects working in the opposite direction, since search intensity is likely to be reduced during the period of actual programme participation. Edin (1989), Holmlund (1990), and Edin & Holmlund (1991) have shown how participants in Swedish relief work schemes appear to search no more intensively than the regularly employed, and that the re-employment chances for those still participating in programmes appear lower than for the openly unemployed.

To get the net effect on job matching, one obviously has to subtract negative locking-in effects on individual search behaviour during programme participation from the potentially positive treatment effects once programmes have been completed. One must also take into account that the prospect of being placed in a programme may reduce search effectiveness already before placement. This risk is greater, the more attractive are the programmes offered. It will not be captured by microeconomic evaluation studies comparing re-employment probabilities of the openly unemployed and earlier programme participants: on the contrary, these may show large differences precisely because of such ex ante effects on search behaviour.
On the whole, micro studies of how the job chances of specific target groups have been affected by various labour market measures provide little information on the overall effects on job matching, since improved opportunities for one category may have been bought at the expense of others. Nor are most of the available Beveridge-curve studies at the macro level very helpful. The reason is that they have usually focused on the relationship between open unemployment and vacancies (e.g., Jackman et al. (1990), Bourdet & Persson (1990), Layard et al. (1991), OECD (1992, 1993a), and Lehmann (1993)). It is not surprising that one finds an inward shift of the open unemployment-vacancy relationship, as depicted in Diagram 2, when active labour market programmes involving participation during extended periods are expanded: even with a zero effect on matching probabilities, this relationship would shift simply because of the arithmetical reduction of open unemployment when programme participation is increased (the shift from curve I to II in Diagram 2). This is why the Beveridge curve has been drawn here as the relationship between the total number of job seekers without a regular job (the sum of openly unemployed and participants in programmes) and vacancies, in which case an inward shift will only reflect an increased effectiveness of the matching process (the shift from curve I to II in Diagram 4).

In the Swedish case, there is some -- but unfortunately conflicting -- evidence on how the total Beveridge curve in Diagram 4 has been related to active programmes. On the one hand, Bourdet & Persson (1993) find that there has been no trendwise outward shift of this curve in Sweden, in contrast to other countries, such as France, which have placed less emphasis on active labour market measures. On the other hand, the estimations in both Jackman et al. (1990) and Calmfors (1993a) fail to disclose any time-series relationship between the variations of programmes and the movements of the total Beveridge curve. Some further indirect evidence is provided by McCormick & Skedinger (1991), who find that more programme placements in an individual region appear to increase open unemployment, which they interpret as the consequence of a weakening of incentives for labour mobility.

B. Effects on the labour force

One of the negative effects of unemployment, especially when it is of long duration, is that labour supply tends to be reduced. Discouraged workers who do not find jobs will tend to leave the labour force. The risk of such negative supply effects appears greatest for elderly workers, especially when early retirement is used as a method of solving the labour market problems of this group, as has been the case in, e.g., Belgium, France, the Netherlands and the Nordic countries. In addition, prospective entrants may not enter the labour force in situations of high unemployment.

This reasoning points to another possible channel of influence of active labour market policy, namely to maintain labour force participation. There have not been many quantitative studies of this link, but one example has been provided by Wadensjö (1993) in the case of Sweden. The qualitative effects are, however, easy to outline.

The larger is the labour force, the lower is the proportion of it that is regularly employed at each wage level (since each wage is associated with a given number of employed persons). Hence a positive labour-supply effect of labour market programmes means a *ceteris paribus* shift to the left of the employment schedule in Diagram 5. The higher supply of labour relative to demand means more competition for the available jobs, which puts downward pressure on wages. A new equilibrium tends to be established at C. As can be seen, the labour-market situation *deteriorates* in the sense that a lower proportion of the *labour force* is now regularly employed, and hence a larger proportion is either openly unemployed or participating in programmes. But since the wage rate has fallen, inciting employers to create more jobs, the labour-market
situation has improved in the sense that a larger proportion of the population is regularly employed. This illustrates the importance of distinguishing between different goal variables when analysing labour market programmes.

C. Competition effects for insiders

The labour-force effect discussed above does not presuppose that labour-market programmes are targeted on outsiders in the labour market, such as the long-term unemployed or other marginal groups (young people, women not previously seeking work, immigrants etc.): in principle, programmes for the short-term unemployed may also help counteract the tendency to lower labour supply, since the pace with which these are turned into long-term unemployed with larger risks of demotivation is slowed down (Calmfors & Lang (1993)). Programmes targeting outsiders should, however, be expected to be more effective in promoting labour-force participation. Such programmes may also increase the competitiveness of outsiders relative to insiders and therefore have wage-reducing competition effects in addition to the aggregate labour-supply effect analysed above, as has been emphasised by, e.g., Layard (1986, 1989, 1990), Layard et al. (1991) and Calmfors & Lang (1993). This is explained by the hypothesis that insiders — in this context the employed and the short-term unemployed — exert a dominating influence on wage setting (Gottfries & Horn (1986), Blanchard & Summers (1986), Lindbeck & Snower (1988), Nickell (1990)). An increase in the competitiveness of outsiders may occur through several channels: by increasing their productivity, by substituting labour market programmes for regular work experience when employers screen job applicants, or by encouraging more active search behaviour. The competition effect, can be illustrated as a downward shift of the wage-setting schedule in Diagram 5.11 This tends to move the equilibrium to D with lower wages and higher regular employment.

In principle, all forms of active labour market policy may contribute to a redistribution of employment opportunity. As has been found in a number of studies for e.g., Britain, France, the Netherlands, Sweden and the United States, intensified counselling and encouragement of active search behaviour for the long-term unemployed or other disadvantaged groups appear to have significant effects on job finding rates (Björklund (1990), Haveman & Hollister (1991), OECD (1993a,b), Lehmann (1993)). In fact, one might expect such job search assistance to produce the fastest results with respect to competition effects: training programmes and temporary job creation will not have an effect until the participants leave the programmes. And while in programmes, the participants may even compete less vigorously for regular jobs, as discussed in Section II.A. On the other hand, successful training and job creation schemes might produce more sustained competition effects if they have permanent effects on the skills of the participants. Placement in job creation schemes or programmes giving on-the-job training may also prove necessary to overcome employer reluctance to hiring long-term unemployed because of uncertainty about the job applicants’ work capability (Meager & Metcalf (1987), Colbjørnsen et al. (1992)).
D Deadweight and substitution effects

So-called deadweight losses and substitution effects have received substantial attention in the literature (e.g., Haveman & Hollister (1991), Layard *et al.* (1991), Björklund & Holmlund (1991) and OECD (1993a)). These apply mainly to job creation schemes. The *deadweight loss* is defined as the hirings from the target group that would have occurred in the absence of the programme. The *substitution effect* is defined as the extent to which jobs created for a certain category of workers simply replace jobs for other categories, because relative wage costs are changed.

The deadweight and substitution effects of job creation programmes can be illustrated by a leftward shift of the employment schedule in *Diagram 5*, which will tend to reduce regular employment and counteract the fall in open unemployment (the equilibrium tends to move from A to C in this case as well). Such effects are likely to be most important in the case of subsidies for private-sector work, which are common in many countries for young people and long-term unemployed. Similar effects may, however, also occur with public-sector job creation schemes: since these usually are organised at lower levels of government, there is a risk that they hold back ordinary job creation in order to be able to take advantage of schemes financed by the central government (fiscal displacement). In order to minimise this danger, a principle of *additionality* is often imposed on public work programmes: they are designed to be of such a character that they would not otherwise have been undertaken (Grubb (1993)).

Available empirical evidence indicates that deadweight and substitution effects may indeed be substantial. Studies of subsidisation of private-sector work in Australia (Department of Employment, Education and Training (1989)), Ireland (Breen & Halpin (1989)), and the Netherlands (de Koning *et al.*, (1992)) all point to combined deadweight and substitution offsets of the order of 70-90 percent of the gross number of jobs created. For Sweden, Vlachos (1985) found that the majority of new hirings benefiting from a recruitment subsidy would have been made anyway, whereas subsidies in order to prevent lay-offs achieved a net impact of around 40 percent under the assumption that wage setting was not affected (see Section II.E below).

The evidence on fiscal displacement effects in the case of public-sector job creation is more mixed. For the Netherlands, de Munnik (1992) found only small effects in a programme offering permanent municipal work to the long-term unemployed. For Finland (Eriksson (1993) and Germany (Bellmann & Lehmann (1990)), public-sector job creation was found to increase the flow out of unemployment. In contrast, Jackman and Lehmann (1990) found no significant impact on the flows out of unemployment from the British Community Programme. For Sweden, a recent study by Ohlsson (1993) comes up with similar results. During their first quarter, public-sector relief works are estimated to have a net impact of around half the gross effect, but in subsequent quarters no significant effects on open unemployment can be found. (Incidentally, a similar result is obtained for labour market training). The conclusions in Gramlich & Ysander (1979) and Forslund & Krueger (1993) are more ambiguous. For road building, Gramlich & Ysander find the regular work force to be reduced by more than the increase in the number of relief workers, whereas Forslund & Krueger estimate that total deadweight and substitution effects amount to 60-70 percent of the gross employment in job creation schemes in the building sector. In contrast, there is not much evidence for such displacement effects in the health and welfare sector in the two studies. One can only speculate about the reasons for these sectoral differences. Gramlich & Ysander suggest that there are more complementarities in the health and welfare sector (relief workers cannot substitute for the ordinary personnel). Another possible explanation is differences in the budget process: the decisions in the municipalities to apply for relief-work grants in the case of large building projects may
often be taken at the same central level as where the overall budget allocations are made. In contrast, the decisions to use relief workers may be taken at more decentralised levels, and with fixed budgets, in the health and welfare sector.

E. Reduced welfare losses for the unemployed and crowding-out effects

An explicit aim of active labour market policy is to reduce the welfare loss from being out of work. The pursuit of this aim may, however, give rise also to undesirable side effects, because insider wage demands are accommodated, as has been stressed in the Scandinavian discussion of these policies (see Calmfors and Forslund (1990, 1991), Calmfors and Nyemoen (1990) or Holmlund (1990), but also Corneilleau et al. (1990)). The reason is that most wage-setting models postulate a negative relationship between the welfare reduction from a job loss and the wage level. This is the case in union and bargaining models, where unions are assumed to trade off the welfare gains from higher wages for the employed members against the welfare losses for those members that are laid off (see, e.g., McDonald and Solow (1981), Oswald (1986) or Layard et al. (1991)). It is also the case in efficiency-wage models, where employers have to pay more to induce effort on the part of the employees as well as to recruit and prevent quitting when the welfare for a job searcher is higher (Shapiro and Stiglitz (1985), Johnson and Layard (1986)).

There are several reasons why participation in job creation or training schemes may reduce the welfare loss of the unemployed. One is that a labour market programme may offer higher compensation than unemployment benefits. If so, an expansion of labour market programmes will have effects similar to a rise of the unemployment benefit (Calmfors and Forslund (1990, 1991), Calmfors and Nyemoen (1990)). But the welfare losses from unemployment may also be reduced to the extent that programme participation decreases the risks of future "unemployability" or unfavourable wage developments due to present unemployment spells (Calmfors and Lang (1993), Calmfors (1993a)). Unfortunately, these desired effects of labour market programmes always involve the risk of weakening incentives for wage restraint. In Diagram 5, this is illustrated as an upward shift of the wage-setting schedule, which works in the direction of reducing regular employment (tending to move the equilibrium from A to E).

The effect discussed here thus means that active labour market programmes may crowd out regular employment. It can be seen as a generalisation of the so-called displacement effect, i.e., the possible reduction of jobs elsewhere in the economy because of competition in goods markets, which has been discussed especially in connection with subsidised jobs in the private sector (see, e.g., Haveman and Hollister (1991), Layard et al. (1991) or OECD (1993a)). Here the correspondence would be the case when participation in a labour market programme is regarded as a perfect substitute for regular work. Then the wage increase from the upward shift of the wage-setting schedule in Diagram 5 would be exactly the same as would have occurred if the employment schedule had been shifted to the right by the amount of jobs created through subsidisation.

F. Productivity effects

A common argument, dating back to Phelps (1982), is that unemployment may have negative productivity effects because the opportunities to acquire human capital through on-the-job training are lost and working habits deteriorate. The recent debate has stressed this risk, especially for the long-term unemployed (see, e.g., Layard et al. (1991), Pissarides (1992) or Bean (1992)). Another possible effect of active labour market programmes is to counteract these tendencies. To raise or maintain the
productivity of the unemployed is, of course, the explicit aim of labour market training, but job creation schemes may serve the same end via on-the-job training.

Usually, it is just taken for granted that training, by raising the marginal productivity of programme participants, contributes to higher employment. If one, as a first approximation, views labour market training as just one form of general technological progress, the illustration would be a rightward shift of the employment schedule in Diagram 5 (tending to move the equilibrium from A to F). This works in the direction of increasing regular employment. It is well-known, however, that all forms of technological progress need not give rise to such positive labour-demand effects. For instance, if technological development is labour-augmenting, i.e., if output depends on the amount of labour in efficiency units and labour becomes more efficient, the net employment effect is uncertain. On the one hand, there is a scale effect tending to increase employment because of the incentive to expand output by using more efficiency units of labour when the unit cost falls. On the other hand, there is a substitution effect tending to reduce labour demand, because a given output can be produced by fewer and more efficient workers. The scale effect dominates the substitution effect only if labour demand is elastic. This uncertainty about the net employment effects of technological progress in general carries over to labour market training as well.

Another uncertainty concerns the response of wages to productivity changes induced by labour-market training. Although our knowledge on this point is very limited, we can draw parallels to the discussion about the wage and employment effects of productivity change in general. Here there exist two opposing views. On the one hand, insufficient adjustment of wage aspirations to the productivity slow-down in the early seventies has been advanced as a major explanation of the rise in unemployment in most OECD countries (Grubb et al. (1982, 1983), Bruno and Sachs (1985), Sachs (1987)). On the other hand, it has been claimed that the absence of a secular trend in the unemployment rate must be taken to imply that productivity increases in general result in corresponding wage rises (Bean et al. (1986), Blanchard and Summers (1986), Bean (1992)). For instance, Bean's interpretation of the available empirical evidence is that "the productivity slowdown has only a modest role to play in explaining the rise in unemployment". If this interpretation is correct, labour market programmes should not be expected to contribute to higher regular employment via their productivity effects. In terms of Diagram 5, a productivity rise will be associated with a corresponding upward shift of the wage-setting schedule, leaving the employment rate unchanged (with the new equilibrium at G). This would not, however, mean that productivity-raising labour market programmes are without value: although they will not in this case help increase regular employment, there are, of course, likely welfare gains from the higher productivity (output) in itself, and from the reduction of open unemployment.

A more elaborate analysis must allow for the heterogeneity of labour. The celebrated active labour market policy in Sweden has traditionally been motivated within a disaggregated framework. The original idea was to alleviate aggregate wage pressure by retraining labour in low-productivity sectors with excess supply, so that it could be moved to excess-demand sectors with high productivity (Fackföreningarsrørelsen og den fulla sysselsättingen (1951)). With the help of Diagram 6, the argument can be cast in terms of the analytical framework used here. The Diagram shows a stylised wage-setting schedule, which is horizontal when there is unemployment and becomes vertical at full employment. The employment schedules I and II represent a low-productivity and a high-productivity sector, respectively. A transfer of labour from the former to the latter sector can be illustrated as a rightward shift of the employment schedule I and a leftward shift of the schedule II (at each wage, labour demand increases as a proportion of the labour force in the former sector, whereas it decreases in the latter). The result is a higher employment rate in the low-productivity sector and an unchanged one in the high-
productivity one. Since a larger share of the labour force also finds itself in the sector with a high employment rate, the aggregate employment rate must also increase. This effect will be reinforced to the extent that the two types of labour are complements in demand, since the wage reduction in the high-productivity sector also stimulates employment in the other sector.

The argument will be qualitatively the same with less extreme wage-setting assumptions. It is enough that wages increase progressively more as the employment rate increases (unemployment decreases), as claimed to be the case by, e.g., Blanchflower and Oswald (1993). This case is also illustrated in the diagram. However, the scope for such employment-increasing re-allocations of labour is much smaller in a situation of general excess supply for labour -- which would seem to characterise Western Europe at present -- when most sectors will find themselves clustered close together on the flat part of their wage-setting schedules. The Swedish re-allocation model was not designed to solve such a problem, but to facilitate a process of structural change.

Models have also been constructed in which re-allocation of labour through training programmes may have perverse employment effects. Saint-Paul (1992, 1993) has analysed the case when skilled and unskilled labour are substitutes. If firms are to hire some unskilled workers in this framework, their lower productivity must be balanced by higher unemployment: this may either reduce their relative wage (Saint-Paul (1993)), or allow vacancies to be filled more quickly than for skilled workers (Saint-Paul (1992)). Transforming some of the unskilled workers to skilled ones in this analysis raises unemployment among the latter category as an impact effect. As a consequence, the relative wage of skilled workers falls and skilled job vacancies are filled more quickly. This makes it profitable for firms to substitute skilled for unskilled workers, and hence unemployment rises for unskilled workers as well. The net outcome for aggregate unemployment is ambiguous: on the one hand the employment rates increase for both types of labour, on the other hand a larger fraction of workers find themselves in the high-employment category.

G. Work-test effects

There will always be a certain fraction of those that receive unemployment benefits who are not really searching for work. With high unemployment, it is impossible for the labour market administration to test the willingness to work of benefit claimants through regular job offers. Placements in labour market programmes may provide an alternative work test for the eligibility of unemployment benefits, since some of those who are not genuinely interested in work will prefer to lose registration rather than to participate in a programme (OECD (1991), Grubb (1993)). This, of course, presupposes that it is compulsory for obtaining benefits to accept offers of programme participation, as is indeed the case in many countries.

The work-test effect will tend to reduce unemployment, as measured by the number of benefit claimants. There is not, however, much information on the magnitude of this effect. One would perhaps not expect it to be very large. According to some studies, more intensive counselling of the unemployed has, however, led to 5-10 per cent of the target group leaving the register (OECD (1991)). These figures could perhaps be regarded as minimum estimates of the work-test effect of programme participation.

There is, however, no reason to expect a fall in the number of benefit claimants to reduce the real amount of involuntary unemployment (as the Labour Force Surveys try to capture), since those affected by the work-test effect were not actively seeking work in the first place. If there is any effect on the effective supply of labour, it ought rather
to increase it, by making it less attractive to try to live only on unemployment benefits. Arguably, such an effect -- to which the analysis in Section II.B applies -- ought to be minor.

H. Tax effects

In a complete analysis, one would also have to consider the tax repercussions of active labour market policies and how they impinge on wage and employment determination. To analyse this, it is necessary to distinguish between the real consumption wage (the after-tax real wage) of employees and the real product wage (the real wage cost including pay-roll taxes) to employers. There is a general presumption that tax repercussions may reinforce the net of the effects discussed above (Calmfors and Lang (1993)). For instance, higher regular employment (and output) tends to increase the tax base and reduce the sum of the costs for unemployment benefits and programmes, which should allow tax rates to be lower than would otherwise be the case. If we think of the vertical axis in Diagram 5 as denoting the real consumption wage, lower tax rates will then shift the employment schedule to the right, since the real product wage associated with each real consumption wage falls.14 There is an on-going discussion - similar to that about the link between productivity and wages (see Section II.F above) - on how such a tax change will affect wage-setting behaviour in the long-run, i.e., on whether the wage-setting schedule will ultimately shift so much upwards that the real product wage is left unchanged (see, e.g., OECD (1990), Calmfors and Nymoen (1990), Layard et al. (1991), Andersen (1992), Bean (1992)). If the wage-setting schedule shifts less than the employment schedule - as some evidence indicates - active programmes that tend to increase regular employment in the first round also give rise to additional reinforcing tax effects.

However, it is also possible that programmes are more expensive than unemployment benefits because of higher compensation levels and/or the costs of arranging them (from which one has to deduct the value added produced in job creation schemes). To the extent that this is the case, there will be a tendency for tax rates to increase, thereby increasing real product wages and reducing regular employment. There will be similar effects if participation rates increase, with the consequence that more people claim unemployment benefits, but this will be counteracted by lower costs for early retirement pensions and the work-test effects on the number of unemployment benefit claimants discussed above.

I. General-equilibrium effects on other policies

In a full general-equilibrium analysis, account must finally be taken of possible interrelations between various policies.

One common claim is that labour market programmes may act as a substitute for long duration of unemployment benefits (e.g., Layard (1991) and OECD (1993c)). It is well known from a number of studies that unemployment in general and long-term unemployment in particular is correlated with the duration of unemployment benefits (e.g., Burda (1988), Layard (1990), Layard et al. (1991), Layard and Nickell (1991), Heylen (1993), OECD (1993a), Zetterberg (1993)). If one interprets this correlation as a causal relationship, one can argue that a sufficient condition for active labour market policy to increase regular employment is that the "partial" effect without policy responses -- i.e., the net of the employment effects discussed in Sections III.A-III.H -- is less negative than the net "partial" effect of the alternative with long duration of benefits.
Another alternative to active labour market policy may be aggregate-demand policies in order to increase regular employment. It is a common view, especially in the older literature on labour market policy, that an increase in participation in job creation schemes will contribute less to wage pressure than a corresponding increase in regular employment — even if the same wage is paid and the jobs are also regarded by workers as perfect substitutes in other respects (see, e.g., Baily and Tobin (1977)). The basic idea is that inflationary effects can be reduced by targeting the increase of labour demand on those who are unemployed instead of raising aggregate labour demand in general, which will result also in competition between employers for the already employed. This is likely to be a relevant argument if programmes are targeted on outsiders, as discussed in Section II.C. However, there are also potential risks if labour market policies are used to counteract unemployment wherever it threatens to occur, as was tried in many countries in the mid-seventies, when it was a common policy objective to try to maintain workers in their current jobs through redundancy-deferring subsidies (OECD 1990)). In fact, such selective accommodation policies are likely to weaken union incentives for wage restraint more than an increase of aggregate labour demand: in the former case, lay-offs resulting from high wage increases for the members of any individual union will be partly accommodated by placements in labour market programmes, whereas in the latter case the individual union's members will have to compete on equal terms for the new job openings created by the expansion of aggregate labour demand (Calmfors and Horn (1985), Leonard and van Audenrode (1993)). This reasoning has been used to explain why some Swedish studies have found labour market programmes to be more wage-raising than regular employment (Calmfors and Forslund (1991), Forslund (1992)).

Indeed, one may see it as a risk that too strong an emphasis on active labour market measures could lead policy makers to neglect other policies. It has, for instance, been claimed that the strong belief in the potential of labour market programmes may have been an important explanation of the restrictive demand policies in Sweden in 1990-92, which seem to have contributed strongly to the dramatic rise in unemployment (Calmfors (1993)). However, such problems need not be inherent, but may rather reflect slow learning processes.

At the same time, it is obvious that properly designed programmes can act as complements to demand policies. To the extent that these are held back because of the fear that increased labour demand will just lead to increased wage pressure, active programmes that attack various persistence mechanisms (by increasing the search effectiveness of the unemployed, by providing them with the skills in demand, or by acting as substitutes for regular work experience in the screening of job applicants by employers) may be a necessary prerequisite for a more expansionary policy stance.

The difficulties of drawing precise conclusions about the effects of active labour market policy become even greater once one allows for possible interrelationships with various structural reforms in the labour market with respect to, e.g., wage-setting practices, employment protection legislation, competition policy etc. The great uncertainty surrounding the possibility of such endogenous policy responses does not mean, of course, that these effects need be less important than the ones that are easier to quantify. Indeed, the opposite might be the case.

III. The net effect of active labour market programmes

The main conclusion from the analysis in Section II is that active labour market policies work via a number of channels. Table 1 represents an attempt to summarise the various possible effects. The discussion has made it clear that it may sometimes be difficult to sign individual effects. It is impossible to infer the net impact of active
labour market policy from theoretical reasoning only. Unfortunately, however, the available empirical evidence on the overall macro effects is still scarce.

A. Existing empirical research

The area where there exists most empirical research is aggregate wage setting. A number of studies have tried to estimate how the wage-setting schedule in our diagrams are affected by active labour market programmes. These studies can be interpreted to give estimates on the net of several of the effects on the wage-setting schedule discussed above: the matching effect (Section III.A), the competition effect (Section III.C), the reduced-welfare-loss effect (Section III.E) and possibly, also, the productivity effect (Section III.F). Although these effects do not represent the full general-equilibrium ones, they still make up an important subset.

Most wage-setting studies made so far are time series estimations for Sweden, where the traditional emphasis on active labour market policy has made it more natural than elsewhere to analyse the macroeconomic impact. The majority of these estimations, which are summarised in Calmfors (1993a), have found increased programme participation to shift the wage-setting schedule in our diagrams upward (aggregate wage pressure rises when programme participation increases at a constant rate of regular employment or, which is the same thing, when a given number of workers are transferred from open unemployment to programmes). Sometimes, the wage-raising effects of active programmes appear to be even larger than those of regular employment.15

There are also a few time-series studies of the relationship between wages and active labour market policy for other countries. For Finland, similar results as for Sweden were obtained by both Eriksson et al. (1990) and Calmfors and Nymoen (1990). The latter also found unemployment-reducing programmes to increase wage pressure in Denmark but not in Norway.

A more favourable picture of the wage-setting effects of active labour market programmes is provided in OECD (1993a), where Phillips-curve estimations covering nineteen different countries are made. For the majority of these, increased programme participation that reduces open unemployment seems to contribute to less wage pressure, although the estimates often are imprecise. A drawback is also that the number of observations on programmes is very small for each country.16

An attempt to exploit cross-country variations in the size of labour-market programmes has been made by Heylen (1993), who tries to explain differences in the responsiveness of wages to open unemployment. He finds that increased expenditures on active programmes per unemployed person (as well as a larger ratio between expenditures on active programmes and on unemployment benefits) tend to increase the wage responsiveness to changes in open unemployment. These results are not directly comparable to the ones reported above, since they cannot readily be transformed so as to indicate whether an expansion of labour market programmes that reduces open unemployment is likely to be wage-increasing or wage-reducing. On the one hand, a fall in open unemployment puts upward pressure on wages, but on the other hand the increased responsiveness of wages to unemployment tends to moderate them.17

Finally, it is possible to infer what can be regarded as estimates of the total effects of active labour market policies (excluding only some of the policy interrelationships in Section II.1) from a couple of studies also exploiting cross-country variations. Layard et al. (1991) estimates a cross-country reduced-form equation for open unemployment in the eighties, where expenditures on active programmes per unemployed as a ratio of GDP per capita is one of the explanatory variables. Zetterberg (1993) pools cross-country and time series data for 1985-91 and makes his estimations
with instead the share of expenditures on active programmes out of total labour market expenditures as the labour-market-policy variable. The two studies come up with similar results: they seem to imply that an increase of programme participation with 1 percentage point of the labour force reduces open unemployment by 1.5 (i.e., the rate of regular employment increases by 0.5 percentage points).18

B. Problems of interpretation

The limited but yet diverse empirical evidence on the net employment effects of active labour market policy suggests the need for more research. However, it appears important to point out a few problems in this context.

All the studies mentioned measure unemployment and programme participation in relation to the labour force. Hence they do not take into account the possible job-creating effects of active labour market policy from increased labour-force participation, as discussed in Section II.B.

The effects of labour market programmes may very well depend on how much unemployment there is. One can find theoretical arguments why active programmes should be expected to give better results with higher unemployment (see also Section IV.C below). There is then a smaller risk of accommodating insider wage claims. The scope for targeting the long-term unemployed and strengthening their relative competitiveness increases, and the task of maintaining labour-force participation becomes more important. Hence the earlier wage-setting studies from Sweden, which refer to situations with very low unemployment (in the 1-3 percent range) may not be relevant to the typical Western European case of high unemployment (to which also Sweden has recently conformed).

There are also statistical problems of interpretation. It has been pointed out in Grubb (1993) and OECD (1993a) that the typical pattern within the OECD is that active programme expenditures seem to increase less than proportionally with unemployment. If this is taken to reflect a "government policy reaction function", the results of, e.g., Layard et al. (1991), Zetterberg (1993) and van Heylen (1993) may all be subjected to simultaneity bias that tends to give too positive a picture of active labour market programmes: the estimated negative effects on, for instance, open unemployment may reflect government reactions to unemployment as well as the response of unemployment to active programmes. The reason is that the above studies all capture the emphasis on active labour market policy by some measure of programme expenditures in relation to unemployment.19

The Swedish wage-setting studies may suffer from an opposite simultaneity problem, since the typical pattern in Sweden seems to have been that programme participation has increased more than proportionally when unemployment has risen (Calmfors and Forslund (1993)). Hence, higher real wages that have led to lower employment may also have caused programme participation to increase relative to open unemployment. Such an effect may have biased the estimated wage effects of an increase in programme participation relative to open unemployment upwards in the Swedish case.20

IV. Crucial design features

A possible approach to take may be that the question of the net effect of active labour market policy is perhaps not the most meaningful one. A more relevant issue may be how programmes should be designed and how large they should be in order to make a maximum contribution to employment performance. This Section discusses the
following crucial design features: (i) compensation levels; (ii) the extent of targeting; (iii) the type of programme; and (iv) the duration of programmes and the co-ordination with the unemployment benefit system.

A. Compensation levels

It is a standard conclusion in the theoretical literature that higher unemployment compensation increases equilibrium unemployment (see, e.g., Oswald (1986), Björklund and Holmlund (1991), Layard et al. (1991), Bean (1992)). An analogous argument can be made with respect to compensation levels in labour market programmes. The higher the compensation, the smaller will be the expected income and welfare losses for workers who are laid off or quit (Calmfors and Forslund (1990, 1991), Calmfors and Nymoen (1990)). This strengthens the tendency to wage-raising effects discussed in Section II.E. Moreover, the incentives for participants in programmes to search actively for regular work and accept job offers become weaker, the higher the compensation, with adverse Beveridge-curve effects as a consequence, as discussed in Section II.A.

In practice, compensation in programmes ranges from the equivalent of unemployment benefits (usually in training programmes) to market wages (in many job creation schemes). The above reasoning seems to suggest that there are strong macroeconomic arguments for setting compensation levels close to unemployment benefits. Indeed, the high compensation levels in public job creation schemes in the Nordic countries have been advanced as an explanation of the finding in many studies that labour market programmes there seem to have increased wage pressure (Calmfors (1993a)).

It is sometimes claimed that setting compensation levels in programmes that are in excess of unemployment benefits is necessary in order to provide incentives for participation, especially in the case of labour market training. This reasoning appears questionable, especially if unemployment benefits can be withdrawn in the case of refusal to participate in programmes, as happens in several countries. But the argument is not self-evident even in "laissez-faire systems" where programme participation is voluntary. One could argue that a prerequisite for efficient training programmes is that they should be able to attract participants on their own merits, i.e., because of their effects on future re-employment probabilities and wages, and not because they offer higher short-term compensation.

One method of reducing programme compensation levels in, e.g., public job creation schemes, may be to continue paying market hourly wages but offer only part-time work. For instance, in Sweden both working time and compensation in public-sector relief work have been cut to 90 percent of the "market levels". An earlier youth programme offered only half-time work. An additional advantage of this approach is that the spare time is freed for active job search, which can help counteract the tendency for programme participants to be locked in (see Section II.A).

B. The extent of targeting

As already discussed in Section II.B, the extent of targeting is likely to be another crucial design feature. If programmes targeted on outsiders in the labour market stimulates wage reducing competition for jobs, the likelihood of substantial positive employment effects is increased.

One issue in this context is whether one should delay labour-market-policy interventions until people have actually become long-term unemployed, or if one should try to identify the difficult-to-place early and intervene before they become long-term
unemployed. This problem relates to the general question of to which extent the reduction of re-employment probabilities for categories with long unemployment duration is caused by heterogeneity (i.e., the fact that the least employable are gradually sorted out and therefore make up a larger proportion of the categories of unemployed the longer they have been out of work) or by state dependence (i.e., the fact that a given individual's chance of re-employment decreases over time). Although there is an ongoing discussion on the relative importance of these two mechanisms, there appears to be a consensus that heterogeneity is important (see, e.g., Jackman and Layard (1991) or van den Berg and van Ours (1993a,b)). This provides an argument for targeting easily identifiable groups of difficult-to-place, such as immigrants, disabled, and those with long earlier unemployment spells. However, a necessary requirement is that the programmes are reasonably effective in raising the competitiveness of the difficult-to-place. Here the results are somewhat mixed. On the one hand, Haveman and Hollister (1991) conclude that targeting seriously disadvantaged groups seems to be the most effective (although the impact does not appear very strong). On the other hand, a few of the studies surveyed in OECD (1993a) seem to indicate that the best results are obtained by targeting groups with "moderately severe, easily identifiable" problems (such as women re-entering the labour market).

There are, however, also likely to be limits to the degree of targeting on those that are regarded as difficult to place. Exclusive targeting on this group is not likely to be appropriate, since programmes then run the risk of stigmatising the participants as problem cases and hence signal to employers that hiring them should be avoided (Burtless (1985)). This would seem to be a strong argument against focusing programmes only on disadvantaged groups.

From a theoretical point of view, young entrants to the labour market clearly form a group of outsiders that compete with the current insiders. Youth programmes, such as are common in many countries, would therefore be expected to reduce wage pressure (Calmfors and Lang (1993)). Surprisingly, however, according to some Swedish studies, programmes targeting young people seem to have been less successful than one would expect from theoretical reasoning. Skedinger (1991) finds that active labour market programmes for this group appear to have been more wage-raising than programmes for other age groups. Wadenljö (1987) also points to large crowding-out effects on regular employment for young people. Calmfors and Skedinger (1994) find that the extent of targeting on this group does not influence the overall employment impact of active labour market programmes.

As concerns targeting according to the duration of unemployment, i.e., the issue of optimal timing of labour-market-policy interventions during a typical unemployment career, there has, somewhat surprisingly, been almost no empirical research. It is, however, easy to outline the main trade-offs involved.

There are a number of advantages with programme placements late in an unemployment spell. Deadweight losses will be smaller to the extent that one avoids programme participation by many of those who will anyway find a new job. This tends to hold down costs so that unfavourable tax repercussions with possible adverse employment effects, as discussed in Section II.H, are reduced. A smaller number of job applicants are locked in by programmes. One is also more certain to target outsiders. Finally, the benefits of programme participation for the individual will be discounted more heavily, which decreases the risks of accommodating insider wage demands, as stressed in Section II.E (see also Calmfors and Lang (1993)).

The above benefits, must however, be traded off against the disadvantages. The later programme placements occur, the smaller is the potential number of outsiders who can compete more effectively with insiders. It is also likely to be more difficult to
restore lost competitiveness on the part of the unemployed, the more it has been allowed to deteriorate. This has led, e.g., Layard et al. (1991) to recommend targeting the "medium-term unemployed" (those having been unemployed around six months) rather than the really long-term unemployed.

To analyse the appropriate timing of labour-market-policy interventions, one would need more knowledge on the duration dependence of both re-employment probabilities and the effects of active programmes. On the latter point research is almost non-existent. On the former, there is a fair amount of evidence on negative duration dependence, i.e., that re-employment probabilities fall over time, but there is also material that does not support this conclusion (see, e.g., Björklund (1990), Steiner (1990), Layard et al. (1991), OECD (1991) and van der Berg and van Ours (1993a,b)). Also, to the extent that there is negative duration dependence, the speed of deterioration of re-employment chances is very important, e.g., if there are "jumps" in the development at certain points of time. Here we have only circumstantial evidence. For instance, a Norwegian study indicated only minor changes in employer attitudes toward hiring an unemployed during the first half-year of unemployment, but significant changes when duration exceeded six and twelve months, respectively (Colbjørnsen et al. (1992)). Macroeconomic studies of wage-setting that have found a higher proportion of long-term unemployed to increase wage pressure -- given the total rate of unemployment -- have drawn the dividing line between short-term and long-term unemployment at twelve months (see, e.g., Layard and Nickell (1986), Franz (1987) or OECD (1993a)). In contrast, Calmfors and Nymoen (1990) found no evidence on differential effects of short-term and long-term unemployment on wage formation in the Nordic countries when six months was used as the dividing line.

When analysing the impact of targeting, one should in general be careful when drawing conclusions from wage equations with the proportion of long-term unemployment as an explanatory variable. Although this variable has been shown to be negatively related to the ratio between active expenditures and unemployment benefits across countries (OECD (1993a)), earlier estimated wage equations reflect labour-market processes where active programmes have been of limited importance. Variations in measured long-term unemployment are likely to have come about mainly through variations in regular employment and outflows from the labour force. Hence the equations may provide little information on the extent to which wage pressure can be reduced by a large-scale expansion of active programmes in order to cut long-term unemployment. This may be seen as an example of the general Lucas critique: the statistical relationships that hold under one policy regime may not be relevant under another when variations in the explanatory variables arise from different policies.

Unfortunately, the data necessary to test whether a reduction of long-term unemployment through labour market programmes are likely to have the desired effects do not exist today. The reason is that in most countries no statistics are readily available on the proportion of job seekers -- including both the openly unemployed and programme participants -- who have been out of a regular job more than a certain period of time and on how large shares of the outflows from long-term unemployment are into programmes. The collection of such data on an international scale ought to receive high priority if active labour market policy is to be evaluated properly.

C. Types of programmes

Another crucial issue is how to best allocate resources between the various types of programmes discussed here, i.e., placement services and job search assistance, labour-market training, public-sector job creation and subsidised work in the business sector. Put differently, how does the optimal labour-market-policy portfolio look?
The sad answer is that we, despite an impressive amount of research, know very little. Already to go through only existing micro studies or surveys of such micro studies is a very distressing experience, because of the difficulties to generalise (see, e.g., Haveman and Hollister (1991), Björklund (1993), Dolton (1993), Johannesson and Zetterberg (1993) or OECD (1993a)). There seem to be as large differences in results within programme categories as between them. Sometimes one finds substantial effects on both future earnings and employment, sometimes one does not. It is often not possible to explain variations in results by the differences in programme design. Nor can one usually judge to which extent resource costs have differed between programmes that appear to have produced different results. It also happens frequently that various evaluations of the same programme, made with different methods or for different time periods, give widely diverging results. Still, a few general comments can be made.

As discussed in Section II.C, there appears to be a broad consensus between most studies that intensified counselling and job search assistance do raise re-employment probabilities substantially for the target group in question, and especially so for the long-term unemployed. It is not surprising that the studies also indicate large substitution effects of such measures. One may indeed consider this to be exactly the point, i.e., to contribute to lower wage pressure by subjecting insiders to more competition. This does, of course, presuppose careful targeting.

Unlike other programmes, intensified counselling and job search assistance do not involve any risks that participants are locked into programmes with reduced search activity as a consequence. On the contrary, the whole idea is to put the unemployed involved at the immediate disposal of the labour market. There will, however, be no "book-keeping" reduction of open unemployment as with placements in training or job creation schemes (see Diagram 3). Nevertheless, there may still be welfare increases to the extent that demotivation and discouragement of long-term unemployed and other outsiders are counteracted, although these effects are perhaps smaller than with the other programmes.

Although much of the recent labour-market-policy discussion has stressed the merits of training as opposed to direct job creation (e.g., OECD (1990)), few systematic comparisons of the macroeconomic effects seem to have been made. For Sweden, there exists some evidence that participation in training programmes -- in contrast to direct job creation -- exerts downward pressure on wages (Forslund (1992), Edin et al. (1993)). Heylen (1993) reports a similar result for the wage responsiveness to unemployment from cross-country regressions. When trying to explain regular employment in pooled cross-region and time series regression for Sweden, Calmfors and Skedinger (1994) also find training programmes to give consistently better results. So did Jans (1992) in an aggregate time series analysis. Although these results provide some support for the view that training programmes may be more beneficial than job creation schemes, one can still raise some caveats:

(i) One possible explanation of the findings may be that compensation in training programmes is usually lower than in job creation schemes rather than the fact that the former are intrinsically more effective.

(ii) Micro evaluations of various training programmes have produced mixed results (e.g., Haveman and Holister (1991), Björklund (1989, 1990), OECD (1991, 1993a)). In general, there appears to be a tendency for narrowly targeted programmes that provide specific skills to groups with identifiable training needs to perform better than broad programmes and those providing more general education (OECD (1993a)). The US experience seems to be that programmes for women have been the most successful, whereas the results for young people appear the most uncertain (Lalonde (1992), Forslund and Krueger (1993)).
(iii) Training is likely to be more efficient under "normal business conditions" than in a situation with persistently high unemployment. In the former case, it may play an important role in eliminating skill mismatches and hence increase allocative efficiency, as discussed in Section II.F. When unemployment is high and job prospects after completion of the programmes are bad, the motivation of the participants is likely to be low. It may then be more important to use labour market programmes as a substitute for the screening function that earlier work experience may play for employers, as discussed in Section II.A. Also, it has been pointed out that the long-term unemployed do not exhibit markedly lower general educational achievement than the unemployed in general (OECD (1993a). Against this background, it is not surprising that there is some empirical support for the view that on-the-job training, especially of young people, may be the most effective form of training in order to improve employment prospects (OECD (1991b, 1993a). A frequently quoted example is the British youth training scheme (YTS) introduced in the early 1980s, which has been claimed to have given employers the opportunity to screen job applicants and thus to reduce the uncertainty associated with hirings, especially, long-term unemployed (Dolton (1993)).

(iv) Even if training schemes in general were to be more effective than other programmes, there are always groups for which they are not suitable. These will include both elderly unemployed close to retirement age as well as young people who are hard to motivate (e.g., school drop-outs).

In general, one should expect all types of active labour market programmes to be subject to decreasing marginal returns. As intensified placement services and job search assistance are extended to more groups, the scope for improving the relative competitiveness of individual groups obviously falls and the deadweight losses increase. An expansion of job-creation measures -- whether in the form of direct job creation or subsidised work in the business sector -- implies greater risks of accommodating insider wage claims and locking large groups into programmes as well as rising substitution and deadweight effects. To the extent that one tries to avoid the latter by job creation in the public sector or non-profit organisations based on the additionality principle (Grubb (1993)), i.e., when the projects undertaken are confined to such that would not otherwise have taken place, the result is instead likely to be a low marginal value of the output produced.

Decreasing returns to scale are likely to be a serious problem also with training programmes (see, e.g., Calmfors (1993b) or Grubb (1993)). The larger the programmes, the more difficult it will be to tailor them to the specific needs of the participants (see point (ii) above). The possibilities of identifying and increasing the supply of those categories of labour that are likely to be in short supply (and thus serve as bottlenecks) in the coming upswings may soon be exhausted. The supply of high-quality training capacity is limited, and the difficulties of monitoring the effectiveness of the programmes increase as they expand. There will be more participants who are poorly motivated, and who are likely also to have negative external effects on the more motivated ones.

Usually, the methods used for evaluating the effects of various programmes do not allow average and marginal effects to be distinguished. An attempt to make such a distinction was, however made by Björklund and Moffit (1987) in their study of Swedish training programmes in the early 1980s. They found negative marginal effects on future wages with a programme size of around 1 percent of the labour force. Forslund and Krueger (1993) use information on the earnings effects of Swedish training programmes from a number of studies and seem to be able to reject the hypothesis that they have been socially profitable.21
The obvious conclusion is that the optimal mix of programmes should be a "balanced portfolio". This may need emphasising, since there is always a risk that changing fashions due to earlier disappointments lead to excessive swings in policies. Today, the generally favourable attitude towards education and training might involve such a danger. The greatest risks of decreasing returns to scale for these programmes are likely to be associated with rapid expansions before the necessary investments in training capacity have been made. Since these will largely involve investment in human capital through acquiring organisational knowledge, the process of expanding capacity may very well be a slow one. Another risk to be avoided is that large placements in training -- as well as job creation schemes -- are allowed to strain the resources of the labour-market-administration to the point that basic placement services and job-search assistance are crowded out.

D. The co-ordination with unemployment insurance and programme duration

Although there has been an extensive discussion about the duration of unemployment benefits (see Section II.1 above), much less interest has been devoted to the co-ordination between active labour market policy and the unemployment insurance system as well as the appropriate length of programmes.

There appears to be a general tendency in much of the policy discussion to view unemployment insurance and active labour market programmes as distinctly different systems, where "passive" unemployment benefits are regarded as "bad" and active measures as "good". However, a more fruitful approach may be to analyse the whole system of support for the unemployed, and to recognise that the incentives for lower unemployment depend to a large extent on the co-ordination of its various parts.

The most obvious aspect of co-ordination between unemployment insurance and active programmes concerns benefit eligibility. It is common that programme participation qualifies the participants for new benefit periods. In Denmark, for example, this has been one of the main aims of labour-market programmes: a job offer guarantee -- later on combined with an education offer -- has been in effect for the unemployed approaching the termination of benefits (after 2½ years; see OECD (1991a, 1993d) or Grubb (1993)). Such a use of programmes should be expected to lead to similar problems as long duration of unemployment benefits, the main difference being that the long-term unemployed will instead be permanently going back and forth between programmes and open unemployment. Indeed, this way of co-ordinating unemployment insurance and programmes may be an important explanation of why long-term unemployment in Denmark has been considerably lower than in other Western European countries with similar rates of unemployment.

If programmes come to be regarded mainly as a means of prolonging the duration of benefits, there is likely to be a serious weakening -- among placement officers, among organisers and among participants -- of the incentives to strive for maximum efficiency in terms of enhanced re-employment probabilities. Although there are few evaluations of Danish labour market programmes, there is some evidence that this may indeed have occurred. Spells in job-offer schemes have often been recurrent -- 60 percent of the participants in 1984-88 had more than one placement up to 1991 (and around 25 percent more than two) according to Langager (1992). Among the unemployed, the education offer seems widely to have been seen as a method for benefit renewal -- as an "unemployment benefit generator" to use the Danish term -- rather than as a step to a regular job (Rapport om arbejdsmarkedets strukturproblemer (1992)). The effects on hiring probabilities have been found to be negligible (Aarkrog et al. (1991) and Pilegaard et al. (1991)). The finding by Thaulow and Anker (1992) that the participants'
evaluation of the job and education offer schemes was not related to the subsequent employment situation, might be considered indirect evidence of the risks involved.

In a recent study for Sweden, Rååger (1993) found significantly lower future incomes for participants in labour market training than for those that were openly unemployed in the 1989-91 period. This is in contrast to some studies of earlier periods (see Politik mot arbetslöshet (1993)). The suggested explanation is that training programmes had increasingly come to be used as a means of renewing benefit eligibility.

Leaving the co-ordination with unemployment benefits aside, the duration of programmes is an important issue in itself, about which the empirical knowledge is scant. On the one hand, programmes of long duration are a risk from the point of view that participants may be locked in and therefore search less actively for regular jobs. On the other hand, a certain length of programmes may be necessary in order to achieve substantial results. An indication of this may be that a recent cross-country study found higher programme expenditures per participant -- which is likely to be correlated with programme duration -- to contribute to lower aggregate wage pressure (OECD (1993a)). Somewhat surprisingly, however, Axelsson (1989) and Axelsson and Löfgren (1992) were not able to confirm any relationship between duration of training programmes and their social return in the case of Sweden. Korpi (1992), however, found that the probability of finding a permanent regular job seems to increase with programme duration, but to decrease with the number of programme placements.

A specific issue concerns temporary versus permanent job creation measures. Temporary job creation is the prevailing pattern in most OECD countries. But in some countries, notably Belgium, the Netherlands and Spain, permanent jobs -- usually in the public sector -- are created for long-term unemployed. A serious drawback of such a policy is that the workers concerned are likely to withdraw permanently from active search from regular jobs. Such permanent job creation schemes seem hard to justify except possibly for elderly and disabled workers, where early retirement may be the main alternative.

In e.g., Belgium, Denmark and Sweden, job offers for the long-term unemployed take the form of explicit job guarantees. One should expect these to have more adverse effects on search intensities than when discretionary decisions are taken about placements in job creation schemes.

V. What can we expect from active labour market policy?

The main conclusion from this analysis is that active labour market policy may give rise to a diverse set of effects, some of which are favourable and some of which are not. One cannot from a theoretical analysis evaluate the net impact of these policies. There are also severe problems of interpretation with much of the empirical macroeconomic research and a lot of conflicting evidence from the microeconomic studies. There are crucial areas such as the optimal timing of labour-market-policy interventions as well as the optimal mix and size of programmes that appear more or less unexplored.

Still one can draw some tentative conclusions on how active labour market programmes should be designed so as to maximise the chances of success. Obviously one must try to strike a balance between providing the unemployed with better opportunities and at the same time maintaining sufficient incentives for individual job search as well as for responsible collective wage-setting behaviour. A tentative list of requirements would be as follows.
Compensation levels ought to be set well below market wages. Programmes should be carefully targeted so as to provide insiders with more competition for the available jobs. This is not, however, likely to mean exclusive targeting on the most long-term unemployed and on the otherwise-most-difficult to place, since this may give programmes a bad reputation, making it impossible to substitute them for regular work experience as a screening mechanism for employers. Targeting medium-term unemployed in order to prevent them drifting into long-term unemployment may also be more efficient than trying to counteract the negative effects of long-term unemployment once it has occurred. At the same time, it is obvious that the very concept of targeting in order to redistribute employment opportunities puts severe restrictions on the overall size of programmes.

It seems to be important that programmes are not of too long a duration in order to avoid locking-in effects. Programme placements -- especially in the form of guarantees -- in order to make the participants eligible for prolonged unemployment benefits are likely to have detrimental effects on the effectiveness of the programmes. To avoid such risks, limits may have to be imposed on the extent to which programmes may qualify the participants for extensions of unemployment benefits. It may also be wise in many countries to combine an increased emphasis on active labour market programmes with a reduction of the maximum duration of unemployment benefits in order to avoid undesired incentive effects.

As to the type of programmes, one should expect the optimal mix to be a balanced portfolio involving all forms of active labour market policy. Although an expansion of labour-market training may be appropriate in most countries, there may be a risk that the current discussion overemphasises the benefits and neglects the importance of decreasing returns to scale. These risks are, however, likely to be smaller with on-the-job-training than with other training schemes. It appears important that the administration of large training and job creation schemes is not allowed to crowd out counselling activities and job search assistance for the long-term unemployed, which have often proved to be quite effective.

What contribution can active labour market policy make to fighting unemployment? On the basis of this exposition, my guess would be that most countries in Western Europe could do better with more active programmes -- if carefully designed -- but not a lot better. The proper perspective appears to be to view active labour market policy as only one ingredient of many in a general programme against unemployment.
Diagram 1: The Layard-Nickell Model

Diagram 2: The Beveridge Curve
**Diagram 3: A revised Layard-Nickell framework**

WS = Wage-setting schedule  
RES = Regular-employment schedule  
FE = Full-employment schedule  
RR = Schedule indicating full employment less programme participation

Rate of regular employment
Diagram 4: A revised Beveridge curve

Diagram 5: Various effects of labour market policy on wages and regular employment
Diagram 6: Reallocation of labour
Table 1: Various effects of active labour market policy

<table>
<thead>
<tr>
<th>EFFECT</th>
<th>Real wage</th>
<th>Regular employment as proportion of labour force</th>
<th>Regular employment as proportion of population</th>
<th>Effective labour force</th>
<th>Measured labour force</th>
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<tr>
<td>MATCHING</td>
<td>?</td>
<td>+ (?)</td>
<td>+ (?)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>LABOUR FORCE</td>
<td>-</td>
<td>- (0)</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>COMPETITION FOR INSIDERS</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SUBSTITUTION AND DEADWEIGHT LOSSES</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>REDUCED WELFARE LOSS</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>PRODUCTIVITY</td>
<td>+ (0)</td>
<td>? (+)</td>
<td>? (+)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>WORK TEST</td>
<td>0 (-)</td>
<td>0 (+)</td>
<td>0 (+)</td>
<td>0 (+)</td>
<td>-</td>
</tr>
<tr>
<td>TAXES</td>
<td>?</td>
<td>? (0)</td>
<td>? (0)</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>OTHER POLICIES</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>? (+)</td>
<td>? (+)</td>
</tr>
</tbody>
</table>

Parentheses indicate possible but uncertain effects. The last columns do not take into account the secondary labour-force effects that may occur because of the induced wage and employment changes according to the first three columns.
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Footnotes

1 The employment schedule is negatively sloped provided that the ordinary labour-supply curve is not more backward-bending than the ordinary labour-demand schedule. The employment schedule can also be thought of as indicating excess demand in the labour market, measured as the ratio between demand and supply.

2 If \( w = \) the real wage, \( s = \) the re-employment probability of an unemployed worker, and \( a = \) other factors, we have in most wage-setting models that \( w = w(s,a) \) with \( \partial w/\partial s > 0 \). The re-employment probability can be expressed as the ratio between the number of job openings and the number of unemployed job-seekers. If \( q = \) the probability of a quit, \( N = \) employment, \( U = \) unemployment, \( L = \) the labour force, \( n = N/L = \) the employment rate (as a fraction of the labour force), \( u = 1-n = U/L = \) the unemployment rate (as a fraction of the labour force), we have \( s = qN/U = qn/u = qn/(1-n) \).

3 If, in addition to the symbols in footnote 1, \( H = \) the number of hirings and \( V = \) the number of vacancies, the usual assumption is that \( H = H(V,U) \) with \( \partial H/\partial V > 0 \) and \( \partial H/\partial U > 0 \). For employment to stay constant, hirings must equal quits, i.e., \( H(V,U) = qN \). If the hiring function exhibits constant returns to scale, and \( v = V/L = \) the vacancy rate, one obtains \( H(v,u) = qn = q(1-u) \), which implicitly defines the Beveridge curve in Diagram 2.

4 As shown in Calmfors & Lang (1993), one can under certain conditions derive that \( w = w(s,a) \) also in a model where participation in a labour market programme is an alternative to open unemployment, if \( s \) is interpreted as the expected probability to find a regular job for a representative worker without one. Let, in addition to the symbols in footnote 1, \( c \) indicate the search effectiveness of a programme participant relative to an openly unemployed person, \( s_u \) the re-employment probability of the latter, and \( R \) the number of programme participants. We then have \( s_u = qN/(cR+U) \). Suppose that the proportions of those without a regular job in programmes and open unemployment are \( \gamma \) and \( (1-\gamma) \), respectively, i.e., \( \gamma = R/(R+U) \) and \( (1-\gamma) = U/(R+U) \). Then it holds that \( s_u = qN/[\gamma c + (1-\gamma)](R+U) \) or \( s = c s_u + (1-c) s_u = qN/(R+U) \). Letting \( r = R/L = \) the share of the labour force in programmes, and remembering that now \( r+u = 1-n \), it follows that \( s = qn/(r+u) = qn/(1-n) \) in this case as well.

5 Note that I have implicitly assumed that all programme participants belong to the labour force.

6 Using the notation of the earlier footnotes, the hiring function for regular jobs is now assumed to be \( H(V,cR+U) \), where \( c \) again measures the relative search effectiveness of a programme participant. From \( H(V,cR+U) = qN \), it is straightforward to derive the equation for
the Beveridge curve as \( H(v, r(c-1) + (r+u)) = q[1-(r+u)] \), where \( r \) will be a shift parameter if \( c \neq 1 \).

7 To the extent that the real wage increases, this is, however, warranted because of the increased efficiency of the matching process, which is tantamount to a productivity increase (see Pissarides (1990) or Calmfors & Lang (1993)).

8 This case corresponds to \( c > 1 \) in footnote 6. With \( c = 1 \), the revised Beveridge curve will not shift, although \( du = dr \) for a given \( v \).

9 This cannot be seen directly in Jackman et al. (1990). A recalculation is done in Calmfors (1993a).

10 In the special case of a vertical wage-setting schedule, the proportion of the labour force that is regularly employed remains unchanged (Layard et al. (1991)). So does the sum of open unemployment and programme participation as a proportion of the labour force. But since the labour force has increased, both regular employment and the sum of open unemployment and programme participation rise in relation to the population.

11 This case requires a more complex model of wage setting than in the earlier examples which introduces heterogeneity in the labour force and thus distinguishes between the re-employment probabilities for laid-off insiders and outsiders (Calmfors & Lang (1993)).

12 For Sweden, a few recent studies from the second half of the eighties have found less favourable results of intensified placement services than earlier studies (Ölander & Niklasson (1987) and Bchrenz (1993)). One interpretation is that such policy measures contribute less in situations of low unemployment in general, such as was the case in Sweden in these years (Politik mot arbetslöshet (1993)).

13 Suppose that the production function is \( Y = F(eN, K) \), where \( Y \) = output, \( N \) = the number of employed workers, \( e \) = the efficiency of an individual worker and \( K \) = the capital stock. The profit-maximising level of employment is then given by \( w = eF'(eN, K) \), where \( w \) = the real wage. Only if the implicit labour demand function implied by this condition has an elasticity with respect to the real wage exceeding unity, will a rise in \( e \) increase the number of employed persons.

14 Let \( w_c \) = the real consumption wage, \( w_p \) = the real product wage, \( \theta \) = the tax wedge, \( W \) = the nominal wage, \( P \) = the price level, \( t \) = the income tax rate and \( r \) = the pay-roll tax rate. Then \( w_c = W(1-t)/P \), \( w_p = W(1+r)/P \) and \( \theta = (1+r)/(1-t) \). Hence \( w_p = \partial w_c \) and a reduction of the tax wedge lowers the real product wage for a given real consumption wage.

15 If \( w \) = the real wage, \( r \) = the share of the labour force in programmes, and \( u \) = the unemployment rate, a transfer of openly unemployed to programmes (\( dr = -du \)) increases the
wage if \( \alpha_1 > \alpha_2 \) in a wage equation written as \( w = \alpha_0 - \alpha_1 u - \alpha_2 r + \ldots \). Alternatively, since \( u = 1 - n - r \), where \( n \) = regular employment as a share of the labour force, the equation can be written \( w = (\alpha_0 - \alpha_1) + \alpha_1 n + (\alpha_1 - \alpha_2) r + \ldots \). It follows that \( \alpha_1 > \alpha_2 \) is also the condition for the wage-setting schedule in our diagrams to be shifted upwards. If \( \alpha_1 < 0, \alpha_2 < 0 \) means that programmes create more wage pressure than regular employment. Two later studies, not summarised in Calmfors (1993a) are OECD (1993a) and Ohlsson (1993). The former conforms to the majority of earlier Swedish studies, whereas the latter does not find any significant wage effect of increased programme participation.

16 The estimations are of the form \( \Delta \ln w = \beta_0 - \beta_1 u - \beta_2 k + \ldots \), where \( w \) = the real wage, \( u = \) the unemployment rate, \( k = b_r R/wN = \) expenditures on active programmes relative to the wage bill, \( b_r = \) expenditures on programmes per participant, \( R = \) the number of programme participants and \( N = \) regular employment. If we let \( b_r/w = 1 \) and \( R/N \approx R/L = r \), where \( L = \) labour force, and \( r = \) the share of the labour force in programmes, the equation can be reformulated as \( \Delta \ln w \approx \beta_0 - \beta_1 u - \beta_2 r + \ldots \). The equation is estimated on pooled time series and cross-country data for the 1985-90 period, but separate \( \beta_2 \) coefficients are estimated for each country. For most countries, the point estimates indicate that \( \beta_2 > \beta_1 \).

17 Heylen starts out from a wage equation like \( w = \alpha_0 - \alpha_1 u - \alpha_2 r + \ldots \), as in foot-note 15, but where \( \alpha_2 = 0 \). It is then assumed that \( \alpha_1 \) depends upon, \( i.e., \) the size of labour market programmes. For instance, in one equation he lets \( \alpha_1 = e_0 + e_1 \gamma + e_2 A \), where \( \gamma = b_r/b_u u \), is the ratio between active and passive expenditures, \( b_r = \) programme expenditure per participant, \( b_u = \) unemployment compensation, and \( A = \) a vector of other explanatory variables. Hence \( w = \alpha_0 - (e_0 + e_1 \gamma + e_2 A) u + \ldots \). This can be rewritten with \( w = \alpha_0 - (e_0 + e_1 A)(1 + u) + (e_0 + e_2 A - e_0 b_r/b_u) r \). The wage effect of a transfer of openly unemployed to programmes \( (du = -dr) \) depends upon whether \( e_0 + e_2 A \approx e_0 b_r/b_u \). Since van Heylen transforms the wage responsiveness parameter \( \gamma \) to a variable giving the rank of different countries, it is not straightforward to calculate \( \Delta w/\Delta r \) from his regressions.

18 A typical estimate by Zetterberg is \( u = -0.13 \gamma \cdot 100 + \ldots \), where in addition to the symbols in the earlier footnotes \( \gamma = b_r/(b_r + b_u u) \). If we let \( b_r = b_u, u = 7.0 \) percentage points and \( r = 3.0 \) percentage points, we can derive \( du/\Delta r = -0.15 \) or \( du/\Delta r = d(1 - u - r) \approx 0.5, i.e., \) open unemployment falls by 1.5 percentage points and regular employment increases by 0.5 percentage points when programme participation is increased by 1 percentage point of the labour force. \( b_r/b_u > 1 \) gives even more favourable employment effects. Layard et al. instead estimate \( u = -0.13 \gamma \cdot 100 + \ldots \), where \( \gamma = b_r/r_y y \) and \( y = \) GDP/capita. Letting \( b_r/y = 0.5 \) and \( u = 7.0 \) and \( r = 3.0 \) as above gives \( du/\Delta r \approx -0.67 \) and \( du/\Delta r = d(1 - u - r)/\Delta r \approx -0.33 \).
See footnotes 17 and 18. The point is well illustrated in OECD (1993a), where it is shown that the unemployment-reducing effect found by Layard et al. (1991) is no longer significant, if active expenditures as a proportion of the wage bill is substituted for the Layard et al. measure of policy activism. However, since programme expenditures do seem to increase with unemployment, this alternative measure is likely to introduce a simultaneity bias in the opposite direction.

In general, to the extent that employment reacts only with a lag to wages, the simultaneity bias is likely to be less severe in wage than in un(employment) regressions. Unfortunately, there appears to be no early way of handling the simultaneity problem, since this requires finding instruments that shift the government policy reaction function but not the employment (or wage-setting) schedule.

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