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

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INTRODUCTION

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 faces 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 only slow results. 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 make a realistic appraisal.

There exist many different interpretations of the concept of active labour market policy. Here I shall use a narrow definition: measures in order to improve the functioning of the labour market that are directed towards the unemployed. 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, which may take the form of either public-sector employment or subsidisation of private-sector work.

Each type of labour market policy may work through several different channels. It is another aim of this paper 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 is an attempt to structure the various types of effects, whereas Section III discusses the possibilities to draw conclusions on the effect of active labour market policy from existing empirical knowledge. Section IV focuses on the importance of various design features. Section V concludes.

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.* improving the inflation-unemployment trade-off, thereby lowering the equilibrium (natural) rate of unemployment (Baily & Tobin, 1977; OECD, 1990, 1993*a*). Such an analysis relying on a standard expectations-augmented Phillips curve tends, however, to become *ad hoc* in nature, since the fundamental determinants of the equilibrium rate of unemployment are usually left unspecified. Instead active labour market policies need to be assessed in a framework that addresses explicitly the determination of labour market equilibrium.

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 Figure 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.[2] One argument is that union incentives to

Figure 1. The Layard-Nickell model
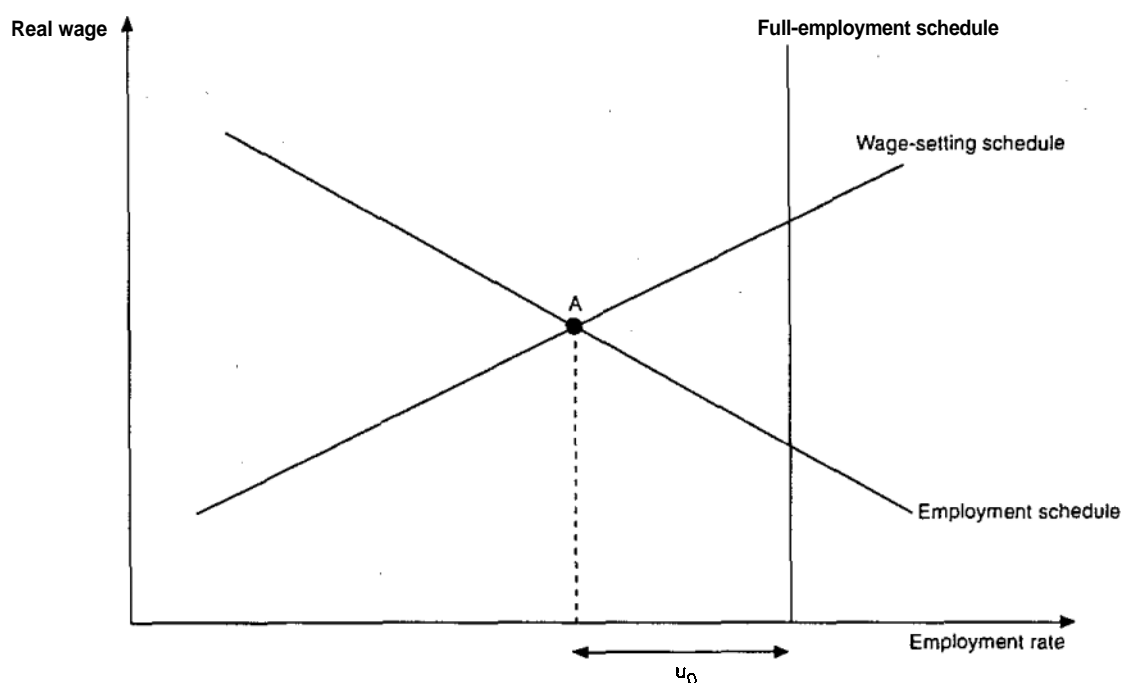
avoid wage increases causing lay-offs are weakened when employment is high and it is easy to get a new job, another that employers have to pay more to compete for labour and extract optimal effort from their work forces in such a situation. The equilibrium values of employment and the real wage are obtained as the intersection of the two curves (point **A).** Full employment of the labour force is indicated by a vertical line. 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 figure 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 Figure 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.[3] In equilibrium, the unemployment rate in Figure 2 must, of course, be the one implied by the intersection of the wage-setting and employment schedules in Figure 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

Figure **2. The Beveridge curve**
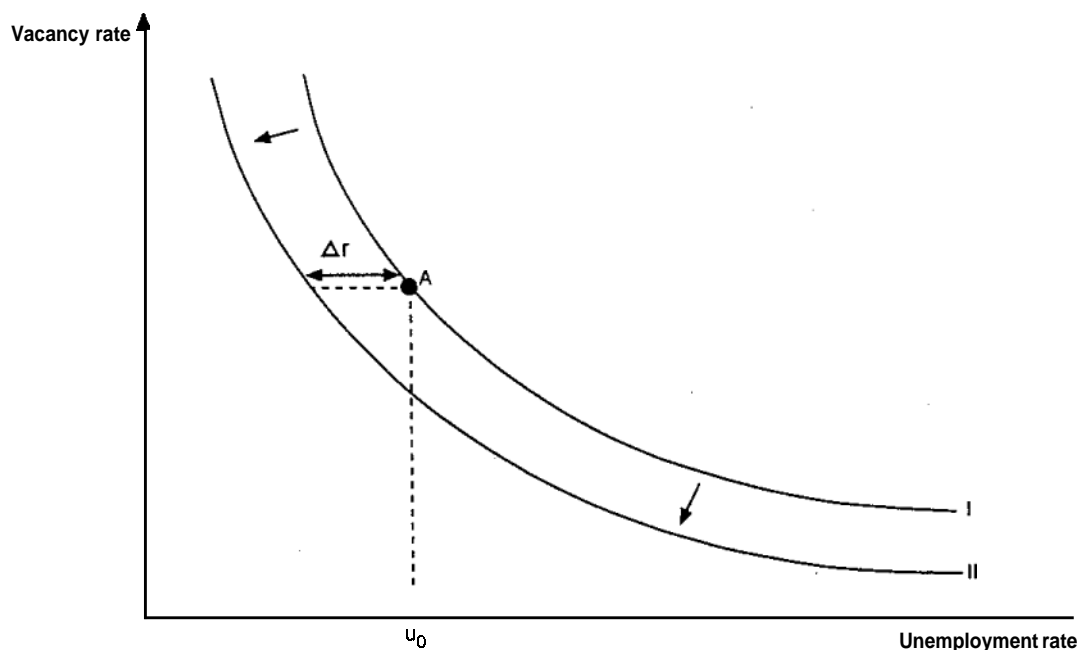
and wage-setting schedules are instead drawn with regular employment (excluding participation in programmes) on the horizontal axis in Figure 3.[4] Participation in training and job creation programmes (as a fraction of the labour force) is measured by the horizontal distance r_0 between the full-employment 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.[5]

The Beveridge curve also needs to be modified (Figure **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.[6] 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

Figure **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**

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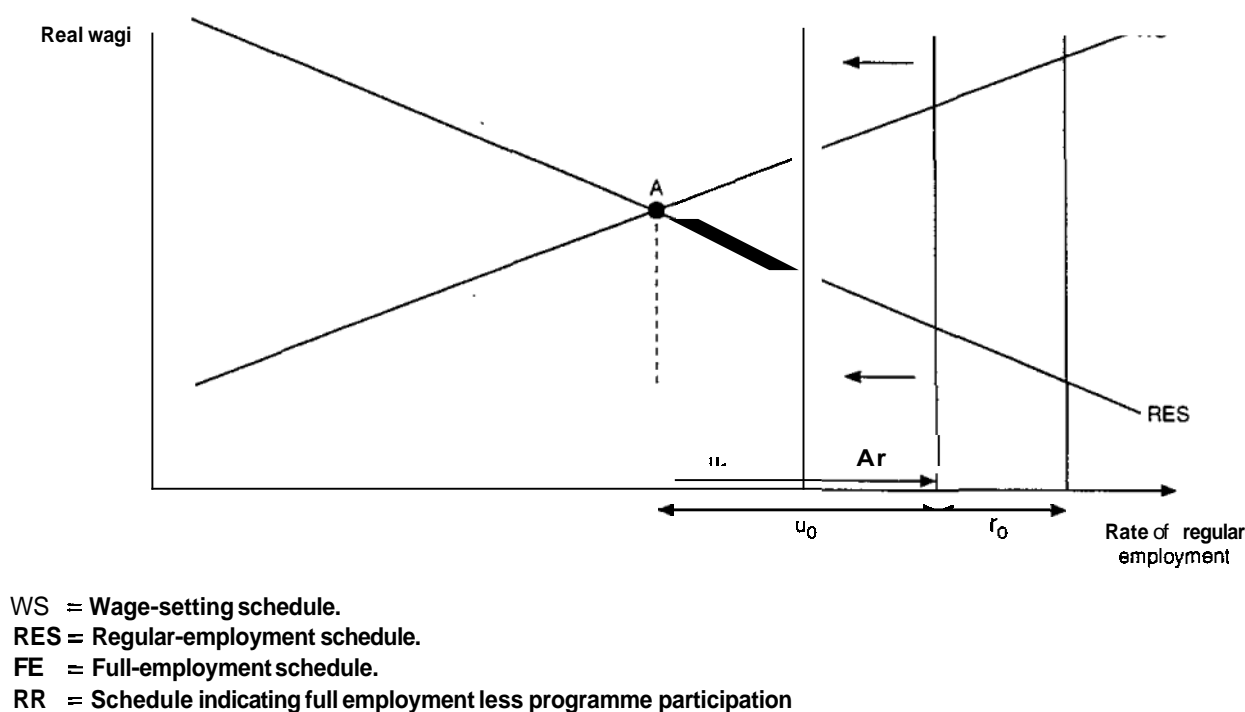
Figure 4. A revised Beveridge curve
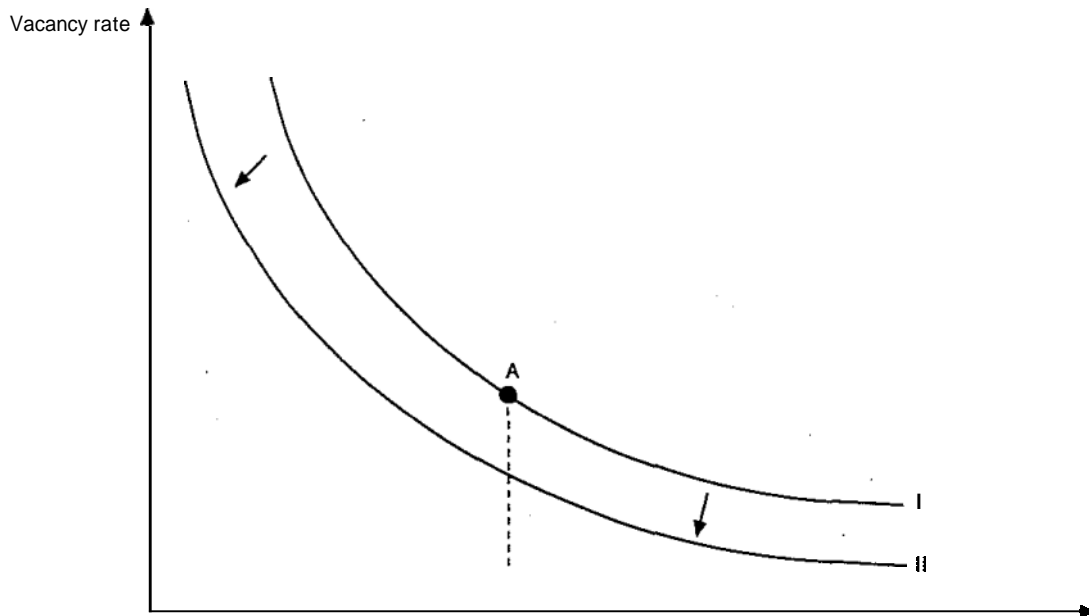
authorities do not usually have to post vacancies but can directly place unemployed workers in various programmes.

The figures can be used to illustrate the various effects of labour market programmes. Increased placement in training or job creation schemes can be depicted in Figure 3 as a leftward shift of the RR-line (programme participation increases by Δr). If nothing else were to happen, the effect would simply be to reduce open unemployment by a corresponding amount (from u_0 to u_1). 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 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 the 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 (a screening function).

The impact of improved matching is to reduce the number of job searchers associated with a given number of vacancies in equilibrium, *i.e.* to shift the Beveridge curve in Figure 4 to the left. This is likely to affect both the employment and the wage-setting schedules in the Layard-Nickell diagram (Figure *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 are 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). Both effects work in the direction of increasing regular employment (from A to **B)**, although the sign of the real-wage effect is unclear.[7]

One should expect intensified placement services that help increase the search effectiveness of job seekers to have an unambiguously positive impact on the matching process. 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 less intensively than the regularly employed, and that the re-employment chances for those still participating in programmes appear lower than for the openly unemployed.

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Figure 5. **Various effects of labour market policy on wages and regular employment**

Real wage

WS

G

E F

A B

C D

RES

Rate of regular employment
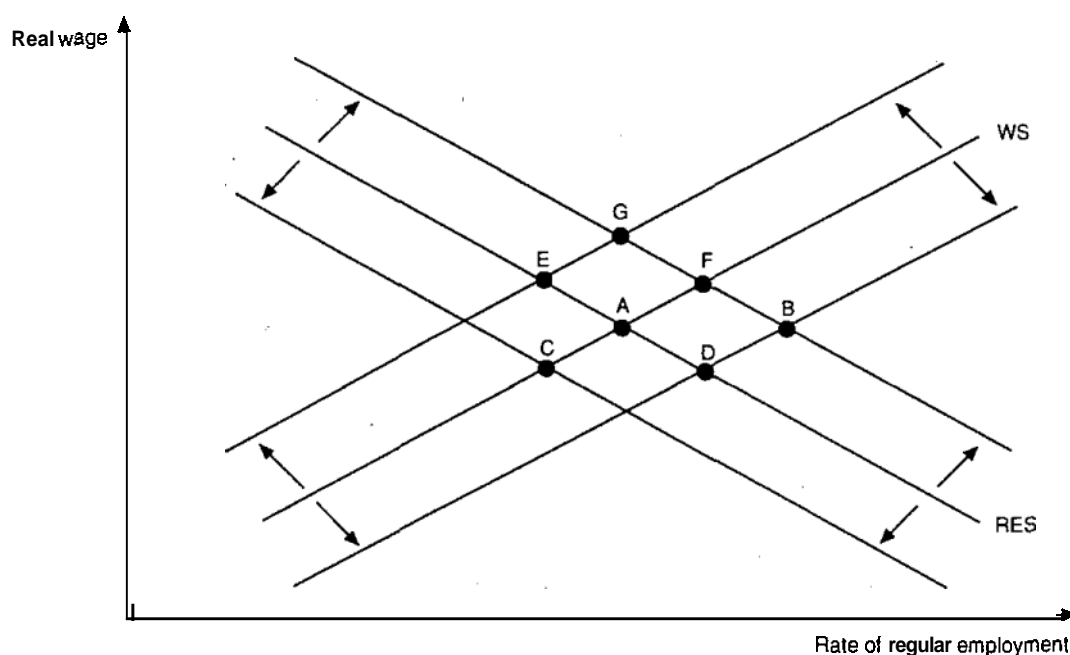
WS = Wage-setting **schedule.**
RES = Regular-employment **schedule.**

To get the net effect on job matching, one 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. (This may not only be a question of the compensation level offered: an important feature of most labour market programmes is low requirements on geographical mobility on the part of the participants as compared to what may be the case with many regular job offers.) These adverse effects on search effectiveness 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 very helpful. The reason is that they have usually focused on the relationship between **open** unemployment and vacancies

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(Jackman *et al.*, 1990; Bourdet & Persson, 1990; Layard *et al.*, 1991; OECD, 1992, 1993*a*). It is not surprising that one finds an inward shift of the open unemployment-vacancy relationship, as depicted in Figure 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 Figure 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 Figure 4).[8]

In the Swedish case, there is some – but unfortunately conflicting – evidence on how the total Beveridge curve in Figure **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, which is in contrast to other countries, such as France, with less emphasis on active labour market measures. On the other hand, the time-series estimations in both Jackman et *a/.* (1990) and Calmfors (1993*a*) fail to disclose any relationship between the variations of programmes and the movements of the total Beveridge curve.[9] 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 there, which they interpret as the consequence of a weakening of incentives for labour to move to high-employment regions.

An alternative way of studying the matching effects of active labour market policies is to focus on the various flows in the labour market. For instance, the impact on the flows out of open unemployment have been studied for the United Kingdom, Finland and Germany. Both Jackman & Lehmann (1990) and Lehmann (1993) found the Restart Programme in the United Kingdom, offering intensified counselling to the long-term unemployed, to increase the flow out of unemployment. In contrast, the former could not detect any significant effect on outflow from open unemployment from the job-creating activities within the British Community Programme. Positive effects on the outflows from unemployment from public-sector job creation were, however, found by Bellmann & Lehmann (1990) for Germany and by Eriksson for Finland (1993). The results in the studies quoted are difficult to judge though, since they do not specify whether the flow from open unemployment is into regular jobs or into labour market programmes (or whether those that leave the unemployment register also leave the labour force). This criticism is similar to that above of the studies of the open unemployment-vacancy relationship.

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 the largest 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 Wadensjo (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 *ceteris paribus* a shift to the left of the employment schedule in Figure 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.[10] But since the wage rate has fallen, the labour-market situation has **improved** in the sense that more jobs have been created and 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, for example, 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). The increase of the com-

petitiveness of outsiders may occur through several channels: by increasing their productivity, by substituting participation in 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 Figure 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 in *e.g.* the United Kingdom, France, the Netherlands, Sweden and the United States, already 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 (Bjorklund, 1990; Haveman & Hollister, 1991; Jackman & Lehmann, 1990; Elmeskov, 1993; OECD, 1993a; Lehmann, 1993).[12] 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 (Haveman & Hollister, 1991; Layard et *al.*, 1991; Bjorklund & 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 also 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 Figure 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 are usually organised in the municipalities, there is a risk that the latter 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 seems to indicate 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 effects of the order of magnitude of 70-90 per cent of the gross number of jobs created. For Sweden, Vlachos (1985) found that the majority of firms receiving recruitment subsidies would have made the new hirings anyway, whereas subsidies in order to prevent lay-offs achieved a net impact of around 40 per cent 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 such effects in a programme offering long-term unemployed permanent municipal work. For Sweden there exist at least three studies. In an aggregate analysis, Ohlsson (1993) estimated public-sector relief works to have a net impact in the first quarter of around half the gross effect, but in subsequent quarters no significant effects on open unemployment could be found. (Incidentally, a similar result was obtained for labour market training.) Gramlich & Ysander (1979) and Forslund & Krueger (1993) instead looked at individual sectors. For road building, Gramlich & Ysander found the regular work force to be reduced by more than the increase in the number of relief workers, whereas Forslund & Krueger estimated that total deadweight and substitution effects amount to 60-70 per cent 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 differences between sectors. 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 especially in the Scandinavian discussion (Calmfors & Fors-

lund, 1990, 1991; Calmfors & Nymoen, 1990; Holmlund, 1990; 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 (McDonald & Solow, 1981; Oswald, 1986; 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 without regular work is higher (Shapiro & Stiglitz, 1984; Johnson & 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 the unemployment benefit. If so, an expansion of labour market programmes will have effects similar to a rise of the unemployment benefit (Calmfors & Forslund, 1990, 1991; Calmfors & Nymoen, 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 & Lang, 1993; Calmfors, 1993*a*). Unfortunately, these desired effects of labour market programmes always involve the risk of weakening incentives for wage restraint. In Figure *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 (Haveman & Hollister, 1991; Layard *ef al.,* 1991; OECD, 1993*a*). 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 Figure *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 (1972), 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 (Layard *et al.,* 1991; Pissarides, 1992; 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 Figure 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.[13] 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 slowdown 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 & 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 & 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 Figure 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 and industries. 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 *(Fackföreningsrörelsen och den fulla sysselsattningen,* 1951). With the help of Figure 6, the argument can be cast in terms of the analytical framework used here. The figure 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 increase. This effect will be reinforced to the extent that the two types of labour are complements in demand, since then 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, for example, Blanchflower & Oswald (1994). This case is also illustrated in the figure. However, the scope for such employment-increasing re-allocations for labour is

Figure 6. Reallocation of labour

Rate of regular employment

WS = Wage-sening schedule.

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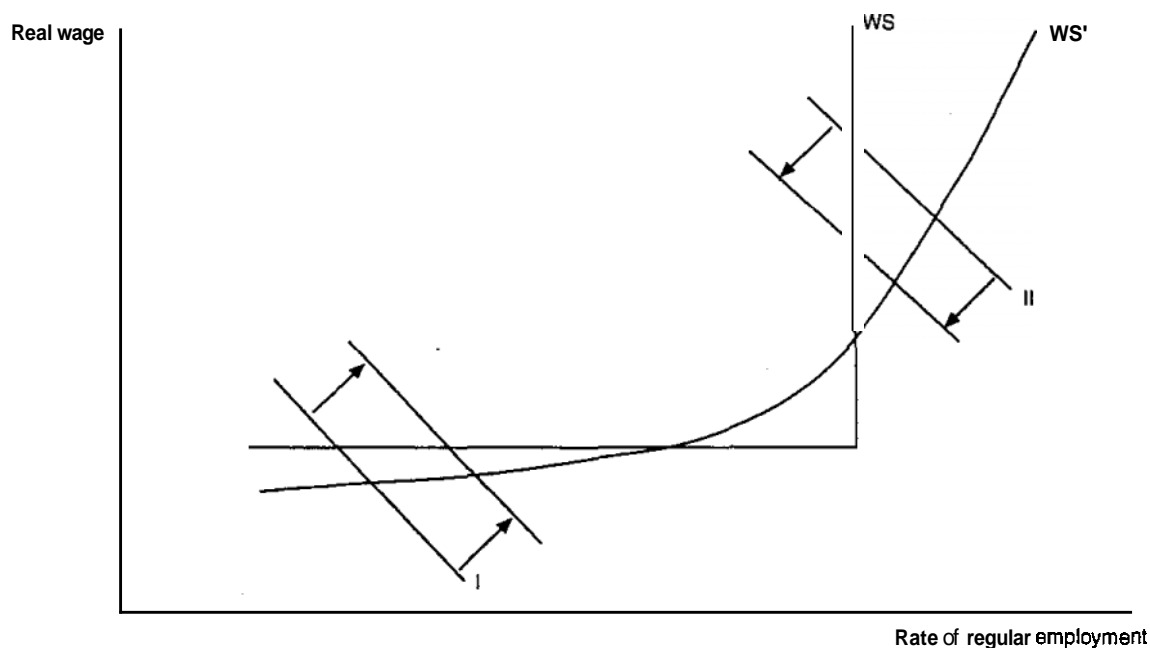
much smaller in a situation of **general** excess supply of labour – which would seem to characterise Western Europe at present – when most sectors will find themselves clustered close together on the flat part of their wage-setting schedules. The Swedish re-allocation model was not designed to solve 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 will be ambiguous: on the one hand the unemployment rates become higher for both types of labour, on the other hand a larger fraction of workers find themselves in the low-unemployment category.

G. Work-test effects

There will always be a certain fraction of those who 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 presupposes, of course, that to obtain benefits it is compulsory 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 known about the magnitude of this effect. One would perhaps not expect it to be very large. According to some studies, however, more intensive counselling of the unemployed has, led to 5-10 per cent of the target group leaving the register (OECD, 1991). These figures could 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 are not actively seeking work in the first place. If there is any impact on the effective

supply of labour, it ought to be positive by making it less attractive to try to live only on unemployment benefits.

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 & 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 Figure 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 (OECD, 1990; Calmfors & 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 arrangement costs (from which one has to deduct the value added produced in job creation schemes). If this is the case, there will be a tendency for tax rates to increase. This works in the direction of raising product wages and hence reducing regular employment. There will be similar effects if participation rates increase so that more people claim unemployment benefits. However, larger labour-force participation may also reduce costs for early retirement pensions, which would tend to reduce tax rates and thus also real product wages. In addition, the work-test effects discussed above will contribute to lower costs for unemployment compensation to the extent that the number of benefit claimants is reduced.

1. interactions with 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 (Layard, 1991). It is well known

from a number of studies that unemployment in general – and long-term unemployment in particular – is positively correlated with the duration of unemployment benefits (Burda, 1988; Layard, 1990; Layard *et al.*, 1991; Layard & 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 in a true general equilibrium, which takes all policy interrelationships into account, is that the "partial" effect without policy responses – *i.e.* the net of the employment effects discussed in Sections II.A-II.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 (Baily & Tobin, 1977). The basic idea is that inflationary effects can be reduced by targeting an increase of labour demand on those who are unemployed instead of raising aggregate labour demand in general, which will also result in competition between employers about 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 in aggregate labour demand: in the former case, lay-offs resulting from high wage increases for the members of any individual union will partly be 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 & Horn, 1985; Leonard & 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 & Forslund, 1991; Forslund, 1992).

However, it is also obvious that properly designed programmes can act as **complements** to demand policies. If these are held back because of the fear that increased labour demand will only 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 lay the ground 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 interrela-

tionships with various structural reforms in the labour market with respect to *e.g.* legislated minimum wages, wage-setting practices of employers and unions, employment protection legislation, competition policy, etc. There might be a risk that an increased emphasis on active labour market policy could weaken the incentives for such more thorough-going institutional changes, especially when these are regarded as politically controversial. The big 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.

III. THE NET EFFECT OF ACTIVE LABOUR MARKET PROGRAMMES

The main conclusion from the analysis in Section II is that active labour market policies have a number of different effects. These are summarised in Table 1. 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, the empirical evidence on the overall macro effects is still scarce.

Table 1. **Various effects of active labour market policy**

Effect	Real wage	Regular employment as proportion of labour force	Regular employment as proportion of population	Effective labour force	Measured labour force
Matching	?	+ (?)	+ (?)	0	0
Labour force	–	– (0)	+	+	+
Competition for insiders	–	+	+	0	0
Substitution and deadweight losses	–	–	–	0	0
Reduced welfare loss	+	–	–	0	0
Productivity	+ (0)	? (+)	? (+)	0	0
Work test	0 (–)	0 (+)	0 (+)	0 (+)	–
Taxes	?	? (0)	? (0)	?	?
Other policies	?	?	?	? (+)	? (+)

Note: 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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A. Existing empirical research on macro effects

The area where there exists most empirical research of a macroeconomic character is aggregate wage setting. A number of studies have tried to estimate how the wage-setting schedule in our figures 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 II.A), the competition effect (Section II.C), the reduced-welfare-loss effect (Section II.E) and possibly, also, the productivity effect (Section II.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 (1993*a*), have found increased programme participation to shift the wage-setting schedule in our figures upward (aggregate wage pressure rises when programme participation increases at a constant rate of regular employment or, which is equivalent, 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 & Nymoen (1990). The latter also found unemployment-reducing programmes to increase wage pressure in Denmark but not in Norway.

A favourable picture of the wage-setting effects of active labour market programmes is provided in OECD (1993*a*), where Phillips-curve estimations covering nineteen different countries are made. For the majority of these, increased programme participation that reduces open unemployment seems to **moderate** wages although the estimates are often 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 expenditures 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 to tell whether an expansion in 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 has a moderating influence.[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 11.1) from a couple of studies also exploiting cross-country variations. Layard *et al.* (1991) estimate 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 instead makes his estimations with the share of expenditures on active programmes out of total labour market expenditures as the labour-market-policy variable. The two studies yield 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 percentage points. The implied effect on the rate of regular employment is hence an increase of 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 above mentioned studies 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 per cent range) may not be relevant to the typical Western European case of high unemployment (to which Sweden has also 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 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 Heylen (1993) may all be subjected to simultaneity bias that tends to give too positive a picture of active labour market programmes: for instance, the estimated unemployment-reducing effects of an expansion of programmes 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 a simultaneity bias in the opposite direction since the typical pattern in Sweden seems to have been that programme participation has increased **more** than proportionally when unemployment has risen (Calrnfors & 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 caused an upward bias in the estimated wage effects of an increase in programme participation relative to open unemployment in the Swedish case.[20]

IV. CRUCIAL DESIGN FEATURES

A possible approach to take is that the question of the net effect of active labour market policy is not the most meaningful one. It may well be more worthwhile to focus on the issues of 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 (Oswald, 1986; Björklund & 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 & Forslund, 1990, 1991; Calmfors & 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 to 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, 1993*a*).

It is sometimes claimed that setting compensation levels in programmes in excess of unemployment benefits is necessary to provide incentives for participation, especially in the case of labour market training. This reasoning is questionable though, 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 high 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 per cent of the "market levels". An earlier youth programme offered only half-time work. An additional advantage of this approach is that it leaves more time 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 stimulate 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 already then. 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 long-term than the short-term unemployed) or by **state dependence** (*i.e.* the fact that a given individual's chance of re-employment decreases over time). Although there is an on-going discussion on the relative importance of these two mechanisms, there appears to be a consensus that heterogeneity **is** important (Jackman & Layard, 1991; van den Berg & van Ours, 1993*a*, *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 & Hollister (1991) conclude that targeting seriously disadvan-

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taged 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 such groups 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 hirings of 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 & 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 appears to have been more wage-raising than programmes for other age groups. Wadensjo (1987) also points to large crowding-out effects on regular employment for young people. Calmfors & Skedinger (1994) fail to find that the extent of targeting on this group influences 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 & Lang, 1993).

The above benefits must, however, be weighed against the disadvantages. The later programme placements occur, the smaller is the potential number of outsiders that can be activated in order to compete more effectively with insiders. It is 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 both on how re-employment probabilities develop over time for the openly unemployed and on how these probabilities can be influenced by labour-market-policy interventions at different points of time. 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 for a given individual, but there is also material that does not support this conclusion (Bjorklund, **1990;**Steiner, **1990,1993;**Layard *et al.,* **1991**; OECD, **1991;** van der Berg & van Ours, **1993**a, b). Also, to the extent that there is negative duration dependence, it is of great importance with which speed the deterioration of re-employment chances occur, and 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 increased above 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 (Layard & Nickell, **1986;** Franz, **1987;** OECD, **1993**a). In contrast, Calmfors & 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 to press down 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.

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

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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 answer is that, despite an impressive amount of research, we 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 of generalisation (Haveman & Hollister, 1991; Bjbrklund, 1993; Dolton, 1993; Johannesson & Zetterberg, 1993; 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 cost 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 very different results. Still, a few general comments can be made.

As discussed in Section II.C, there appears to be a broad consensus among most studies that intensified counselling and job search assistance 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 substantial substitution effects of such measures (Jackman & Lehmann, 1990; Lehmann, 1993). 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 Figure 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 (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 regressions for Sweden, Calmfors & Skedinger (1994) also find training programmes to give consistently better results. So did Jans (1992) in a time series analysis of Swedish employment with aggregate data. 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 (Haveman and Hollister, 1991; Bjorklund, 1989, 1990; OECD, 1991, 1993*a*). 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, 1993*a*). The US experience seems to be that programmes for women have been the most successful, whereas the results for especially young people appear the most uncertain (Lalonde, 1992; Forslund & 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, 1993*a*). Against this background, it is not surprising that there is some empirical support for the view that on-the-job training, especially for young people, may be the most effective form of training in order to improve employment prospects (OECD, 1991*b*, 1993*a*). 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 of, 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 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 exposed 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 − imply 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 (Calmfors, 1993*b*; 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 Bjorklund & 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 per cent of the labour force. Forslund & 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 changing fashions due to earlier disappointments may otherwise lead to excessive swings in policies (as seems indeed to have been the case in many countries). Today, the generally favourable attitude towards education and training may constitute 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.I 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 "passive" unemployment insurance and active labour market programmes as distinctly different, where the former are regarded as "bad" and the latter 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 the various parts of this system.

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 $2\frac{1}{2}$ years; see OECD, 1991a, 1993b; 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 registered 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 per cent of the participants in 1984-88 had more than one placement up to 1991 (and around 25 per cent 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 Jensen *et al.,* 1991).

In a recent study for Sweden, Regner (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 (*Politik mot arbetslöshet,* 1993). The suggested explanation is that training programmes had increasingly come to be used as a means of renewing benefit eligibility.

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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. This is likely to occur especially if the alternative to a prolonged placement in a programme is temporary work in the regular labour market (*Arbets-marknadspolitik,* 1993). On the other hand, a certain length of programmes may be necessary 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 positively correlated with programme duration – to contribute to lower aggregate wage pressure (OECD, 1993a). Somewhat surprisingly, however, Axelsson (1989) and Axelsson & Lofgren (1992) were not able to confirm any relationship between duration of training programmes and their social return in the case of Sweden.

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 be withdrawn 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 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 remain more or less unexplored.

Still one can draw some tentative conclusions on how active labour market programmes should be designed to maximise the chances of success. The aim must be 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 from turning into long-term unemployed 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 important that programmes are not of too long a duration in order to avoid locking-in effects. Otherwise there is a serious risk that programmes are seen as a more favourable alternative than, for instance, temporary jobs in the regular job market that may serve as a stepping-stone to permanent employment. Part-time participation in programmes may be one way of preserving time for active job search. Programme placements – especially in the form of guarantees – with the aim of making the participants eligible for prolonged unemployment benefits are likely to have detrimental effects on policy effectiveness. 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 offset 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. Counselling activities and job search assistance, especially for those threatened by long-term unemployment, should probably be given a great weight in such a portfolio, since a fair amount of evidence seems to indicate a favourable impact on job-finding rates, and serious adverse side effects appear unlikely. 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. In the present situation with high long-term unemployment, there is a role for job creation schemes to help reduce employer uncertainty about the employability of job applicants. It appears important though that the administration of large training and job creation programmes is not allowed to crowd out counselling activities and placement efforts.

What contribution can active labour market policy make to fighting unemployment? On the basis of this exposition, my judgement 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. Active labour market policy can be a complement but not a substitute to other measures.

NOTES

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 2, 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 Figure 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 2, 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 γ 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 $s = \gamma c s_u + (1 - \gamma)s_u = qN/(R + U)$. 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 (1993*a*).

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 (Delander & Niklasson, 1987; Behrenz, 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 $w = eF_1(eN, K)$, where w = the real wage and the subscript indicates the partial derivative. Only if the 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, θ = the tax wedge, W = the nominal wage, P = the price level, t = the income tax rate and τ = the pay-roll tax rate. Then $w_c = W(1-t)/P$, $w_p = W(1+\tau)/P$ and $\theta = (1+\tau)/(1-t)$. Hence $w_p = \theta w_c$ 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 figures to be shifted upwards when the participation in programmes increases. If $\alpha_1 > 0$, $\alpha_2 < 0$ means that programmes create more wage pressure than regular employment. Two later studies, not summarised in Calmfors (1993*a*), are OECD (1993*a*) 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 $R/N =$

$R/L = r$, where L = labour force, and r = the share of the labour force in programmes, the equation can be reformulated as $\Delta \ln w \approx \beta_0 - \beta_1 u - \beta_2 r + ... = (\beta_0 - \beta_1) + \beta_1 n - (\beta_2 - \beta_1) r$ ... The equation is estimated on pooled time series and cross-country data for the 1985-90 period, but separate β_2 coefficients are estimated for each country. For most countries the point estimates indicate that $\beta_2 > \beta_1$, although the difference does not usually appear to be significant. If a constant equilibrium rate of wage change is assumed, the equation defines an equilibrium (natural) rate of employment n^*. If $\beta_2 > \beta_1$, the latter increases with programme participation, since $dn^*/dr = (\beta_2 - \beta_1)/\beta_1$. Such a calculation is consistent with a vertical long-run (steady-state) wage-setting schedule.

17. Heylen starts out from a wage equation like $w = \alpha_0 - \alpha_1 u - \alpha_2 r + ...$, as in footnote 15, but where $\alpha_2 = 0$. It is then assumed that α_1 depends upon, inter alia, the size of labour market programmes. For instance, in one equation he lets $\alpha_1 = \varepsilon_0 + \varepsilon_1 \gamma + \varepsilon_2 A$, 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 $w = \alpha_0 - (\varepsilon_0 + \varepsilon_1 \gamma + \varepsilon_2 A) u + ...$ This can be rewritten $w = \alpha_0 - (\varepsilon_0 + \varepsilon_2 A) u - (\varepsilon_1 b_r/b_u) r$. The wage effect of a transfer of openly unemployed to programmes $(du = -dr)$ depends upon whether $\varepsilon_0 + \varepsilon_2 A \gtreqless \varepsilon_1 b_r/b_u$. Since Heylen transforms the parameter ε_1 to a variable giving the rank of different countries, it is not straightforward to calculate dw/dr from his regressions.

18. A typical estimate by Zetterberg is $u = -0.13 \gamma * 100 + ...$, where in addition to the symbols in the earlier footnotes $\gamma = b_r r/(b_r r + b_u u)$ and u as well as r are now measured in per cent. If we let $b_r = b_u$, $u = 7.0$ and $r = 3.0$, we can derive from implicit differentiation that $du/dr \approx -1.5$ or $dn/dr = d(100 - u - r)/dr \approx 0.5$, i.e. open unemployment falls by 1.5 percentage points and regular employment increases by 0.5 percentage point 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 $u = -0.13 \bar{\gamma} * 100 + ...$, where $\bar{\gamma} = b_r r/uy$ and y = GDP/capita. If we let $b_r/y = 0.5$, $u = 7.0$ and $r = 3.0$ as above, implicit differentiation gives $du/dr = -1.5$ and $dn/dr = d(100 - u - r)/dr \approx 0.5$. Although the unemployment effects in the two studies are significant, it should be pointed out that the effects on regular employment are not (at the 5-per cent level).

19. 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 a/. (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.

20. 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 easy 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.

21. They can reject the hypothesis of a 3 per cent earnings increase (over a 20-year period), which according to a rough calculation would have been required for the social gains to balance the costs.

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