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Creating Employment Incentives

by Dennis J. Snower

1. Introduction

This paper examines the key issues underlying the formulation of employment policies in advanced industrialised countries, and provides an assessment of these policies.

The paper begins from first principles: Its point of departure is the idea - a commonplace in economic theory, but commonly ignored in the design and implementation of policy - that the case for employment policy rests squarely on the existence of inefficiencies or inequities. In the absence of one or the other of these problems, there is no reason for the government to intervene in the labour market - regardless of what the unemployment rate is. In other words, the existence of high unemployment, by itself, is no reason for government policy to stimulate employment. It is only when such unemployment is demonstrably wasteful of the economy's resources or inequitable in the resulting distribution of income and wealth, that there is a potential case for government intervention. And this potential case becomes actual only once it can be shown that the government failures associated with corrective action are likely to fall short of the market failures and inequities to be corrected. Furthermore, examining these market failures and inequities in the labour market is an important undertaking because it provides guidelines for the appropriate policy responses. This is the subject of Section 2.

These issues are so critical in providing a basis for employment policy formulation and so frequently ignored in policy making, that they are treated at length. Perhaps the most important potential role of these issues is to suggest an appropriate overall policy stance. For example, the UK Conservative governments in the 1980s and 90s and, to a somewhat lesser degree, the current Labour government have often

tended to see many active labour market policies as superfluous - possibly even harmful - in an economic environment conducive to competition and free market incentives. Consequently these governments - particularly the Conservative ones - have often concentrated removing labour market rigidities, viz., reducing the value of unemployment benefits, tightening eligibility requirements for these benefits, reducing the power of labour unions, and dismantling labour market regulations. Thus, a reduced reliance on passive labour market policies was combined with the limited use of active labour market policies, as last resort in the face of high unemployment and considerable political pressure.

The analysis in this paper suggests that this approach is appropriate in the absence of major market failures or major inequities under free enterprise. In the presence of market failures of the sort described in the next section - particularly ones that dwarf the government failures associated with the policies to correct the market failures - this stance is seriously misguided, for then free enterprise is wasteful of the economy's resources and employment policies may reduce this waste. Besides, significant inequalities of opportunity in the labour market may call for policy intervention regardless of labour market inefficiencies.

On the other hand, the analysis here also suggests that high and persistent unemployment, by itself, is not a sufficient reason for government intervention in the labour market. Only the presence of inequities or market failures in excess of government failures are reliable criteria for this issue. It is on these accounts that the material in Section 2 provides an essential underpinning for employment policy formulation.

Section 3 then formulates the central policy problems in formulating measures to stimulate employment and create greater equality of opportunity in the labour market. On this basis, it examines the major recent reforms in the light of the underlying problems.

2. Market Failures Relevant to Employment Policies

Free enterprise in the labour market leads to efficient economic activity only when people are compensated for all the gains and losses they impose on others. Specifically, when all benefits and costs are compensated, free market activity ensures

that people engage in production and exchange until it is impossible to make anyone better off without making someone else worse off. It is clear why this is so. When people have to pay for all the costs they impose on others and when they get paid for all the benefits, then their own selfish objectives will necessarily coincide with those of society at large. After all, if you harm someone else, you yourself will then have to pay the damage; and if you benefit someone else, you yourself will be compensated. Under these circumstances, people will behave in a socially responsible way simply by pursuing their own private ends. Free enterprise will then not only permit the people who buy and sell from one another to make each other better off, but it will also ensure that there are no socially undesirable effects on third parties as result.

But this is not necessarily what happens under free enterprise in the labour market. It is instructive to examine how and why it fails to happen, for much employment policy is meant to correct the resulting inefficiencies. Clearly, the inefficiencies must be identified before sensible policies can be formulated to correct them. This point would be too obvious to deserve further attention if it were not so frequently ignored in the policy making process. In practice, glaring market failures often go unnoticed, while employment policies are frequently implemented in areas where the labour market is functioning perfectly well. The resulting social cost is undoubtedly high.

Let us begin by considering a particularly instructive unemployment problem.

2a. Viewing Unemployment in Terms of Market Failures

When the unemployment rate is high, employed workers tend to be substantially better off than their unemployed counterparts. There are many solid free-market reasons why this should be so: Employers may offer high wages to motivate their employees to work hard, to discourage them from quitting, and to attract the best candidates in the job market. Or the high wages may be the result of union activities or all sorts of pressures that the incumbent workers are able put on their employers.

Whatever the reason, when a firm hires unemployed workers, they usually experience a significant rise in their incomes. These workers will spend little, if any, of this extra income on the products of their own firm, but will buy a whole range of goods from other firms. These other firms consequently experience a rise in their sales and their profits. If the improvement is sufficiently large, they may find it worthwhile

to hire workers themselves who, in turn, will spend their incomes on the products of other firms, thereby creating a chain reaction of increases in profits and wage incomes.

There is an important moral to this story. When the initiating firm hired some unemployed workers, it conferred benefits on other firms and other workers, but the beneficiaries did not have to compensate the firm for them. There is no feasible economic or legal mechanism for withholding the gains from the beneficiaries unless they compensate the initiating firm. As result, something important doesn't get paid for.

Since the original firm is not compensated, it makes its hiring decision only with reference to the profits that it alone can achieve; it has no incentive to take the benefits to others into account. All the other firms are in the same position. Whenever the private gain from employing people is less than the overall social gain, then free enterprise leads firms - as if by an Invisible Hand - to employ fewer workers than would be socially desirable. There is, in short, a "market failure", a failure of individualistic activity in unfettered markets to make people as well off as they can be.

So what is to be done? First it must decide whether to tackle the market failure by eliminating the market, or to keep working within the system of voluntary exchange. Given the information, co-ordination, and motivation problems that I have already mentioned, the large-scale central planning that would be required to eliminate unemployment does not seem terribly attractive. The chances are that it would simply replace the market failure by an even bigger planning failure.

The alternative is to retain the advantages of voluntary exchange, but to redirect the incentives that buyers and sellers face. There are various options:

- Should unemployment benefits be raised, so as to compensate the victims of this malfunction of free enterprise?
- Or should unemployment benefits be reduced, so as to give the unemployed workers a greater incentive to seek jobs and thereby reduce the unemployment rate?
- Or should the government increase its spending on the firms' products, so as to induce the firms to hire more workers?
- Or should firms be compensated for the benefits that their hiring activity confers on others, say, by a reduction in the relevant payroll tax or by a marginal employment subsidy?

Each of these policies, and many more, have indeed been proposed at one time or another. What is particularly interesting about looking at unemployment from the vantage point of uncompensated benefits is that it suggests which policy is potentially appropriate. For the particular unemployment problem above, there is only one, namely, the last.

The reason is straightforward. In the above account, the unemployed workers aren't helping or hurting anyone else; so there is no case for either increasing or decreasing unemployment benefits. There is only one missing compensation in this unemployment problem, and that is that firms do not get compensated for the profit and wage income they generate in other firms. Both an increase in government spending and an employment subsidy could rectify this failure, one by raising the firms' revenues, the other by reducing their labour costs.

But the proposal to increase government spending (the standard Keynesian prescription) has major weaknesses: What is the government spending for? If this spending is needed to provide the optimal mix of public- versus private-sector goods and services, then it should have been undertaken regardless of the unemployment rate; and if it is not needed, then resources are being wasted. Moreover, it may be possible for firms to respond to the increased government spending by simply using their labour and capital more fully, rather than by hiring more workers. In that event, the policy compensates firms for something they haven't done.

And so we are left with the last policy proposal: to reimburse firms for uncompensated benefits by making it cheaper for them to hire new workers.

This policy is "potentially appropriate", and not just simply "desirable", because the case for government intervention does not just depend on the existence of market failures. It also depends on whether political and bureaucratic processes would permit the government to intervene in the appropriate way and, if so, what the costs of such government intervention would be. If the intervention is likely to be particularly inappropriate or costly, the best thing to do is to do nothing at all.

In practice there is, needless to say, much more to unemployment and its policy treatment than this tale brings to light. Unemployment may have many causes: it may be generated by many different market failures. In principle, different market failures may call for different policy responses. But many of the unemployment

problems that economists have been able to analyse do involve uncompensated benefits of the sort described above, calling for policies that reduce firms' labour costs.

2b. Market Failures Relevant to Training and Unemployment

In most advanced industrialised market economies skilled workers have significantly lower unemployment rates than their unskilled counterparts. There are two conceivable reasons why this should be so: (i) the demand for skilled workers (relative to their supply) is greater than the demand for unskilled workers (relative to their supply), and (ii) skilled workers have longer employment spans and consequently make fewer transitions through the unemployment pool. The explosion of economic literature on the labour market effects of skilled-biased technological change and globalisation (manifesting itself, in the West, as an expansion of skilled-biased international trade) has concentrated on the first reason. But that is not likely to tell the full story, for the empirical relation between the relative unemployment rates of skilled and unskilled workers (on the one hand) and measured skill shortages is weak in many advanced industrialised countries. The second reason above undoubtedly has a significant role to play as well.

On both accounts, it is useful to examine the market failures associated with skill acquisition, particularly those that are also likely to generate unemployment. Since unemployment is concentrated so heavily on the unskilled, there is good reason to expect that policies addressing market failures in education and training are an important ingredient in combating inefficiently high unemployment. They clearly are also an important set of instruments for creating more equitable distributions of income and wealth.

There is a surprisingly widespread belief that the costs and benefits of training fall entirely on the people demanding and supplying it. If that were so, the free market mechanism would provide an efficient amount of training. If the benefits from training fall exclusively on the trainer and trainee and if the trainer and trainee share the costs of training in proportion to the benefits they each receive, then training will be provided as long as the associated benefits exceed the associated costs. Then the free market would allow training to proceed up to the point at which it is impossible to make some demanders or suppliers of training better off without making others worse off.

If that were the whole story, all waste in the provision of training would clearly be eliminated, and the case for government intervention would be weak. The only problem that might remain is one of equity. There may be serious inequalities in the acquisition of skills because there are serious inequalities in income and wealth. But an appropriate way for the government to address this problem may be by redistributing the income and wealth through taxes and transfers, rather than by intervening in the market for training.

This conventional wisdom received lavish intellectual support from Gary Becker's path-breaking and influential analysis of investment in human capital. Becker divides on-the-job training into "general" and "specific" components. "General training", which is useful to all employers in the economy, is to be financed exclusively by the employees. The reason is straightforward. Since all employers value this training, there is perfect competition for general skills. Thus general training raises not only workers' productivity, but their wages by the same amount. In this way, workers are able to recoup fully the benefits from their investment in training. Since employers reap none of the benefits from general training, they have no incentive to bear any of the costs; but since workers reap all the benefits, they will be prepared to accept wage reductions sufficient to cover all the cost of this training.¹ The upshot is that workers have just the right incentives to acquire general training; there are no market failures here.²

Off-the-job training (for example, education in universities and vocational training colleges) also tends to be of the "general" variety. Thus here, too, it is appropriate for the trainees to pay for their training.

¹ It is not admissible to argue that workers may not be willing to do so, since they may not wish to accept deferred consumption associated with current training cost and future income increases. The reason is that the wage reductions that they are willing to accept are the same in present value terms as the cost of the training, taking into account their time discount factors and risk premia. Nor is it admissible to argue that barriers to mobility may prevent workers from reaping the full returns from training, for in the presence of such barriers, the training would no longer be "general" in Becker's sense.

² This argument of course presupposes that there are no market failures in the market for general training, e.g. no credit constraints that could prevent workers from acquiring as much training as they would wish.

At the other end of the spectrum is "specific training" which is useful only to a specific employer. The costs of such training are to be shared by firms and workers, so that workers internalise the cost of quitting to their firms, and the firms - in turn - internalise the cost of dismissals to their trained workers. In either case, the firms and workers get compensated for the training, and thus there are no market failures here either.

In practice, it is tacitly assumed that all training can be divided into general and specific components. And since the free market provides adequate incentives for each of these types of training, it must do so for any combination of them as well.

There is, however, a fundamental flaw in this argument. It is that all training cannot be divided into general and specific components. Hardly any training is useful to all firms in the economy. Nor is there much training that is useful only to one specific firm. Most training, rather, is useful to a limited number of firms, and usually not to an equal degree. This straightforward observation has several dramatic implications, to be spelled out in what follows.

2c. Market Failures Associated with Market Power

2c(1). Market Failures from the Market Power of Firms

When a limited number of firms are competing for employees, they generally have some market power. They use this power to drive wages down. In the process, they rob their employees of the incentive to acquire sufficient skills.

To see how this works, observe that it is socially efficient (in the absence of other market failures) to set the wage so that it is equal to the marginal worker's productivity minus her training cost. Specifically, the real wage (the wage deflated by the firm's product price) must be set equal to the marginal product of labour, net of the marginal training cost (i.e. the output produced by the last employee minus the training cost of that employee). The reason why this is efficient is that then labour is compensated for the benefit it confers in producing goods and services: what the firm pays for the labour is equal to the value of the marginal unit of output produced. At the margin, in other words, there are no uncompensated costs or benefits.

But when firms have market power - and, in particular, when they have more market power than their employees - they are able to drive the wage beneath the marginal product of labour net of the marginal training cost. In other words, they off-load too much of the cost of training onto their employees; or put the other way around, the employees may in effect be viewed as paying for too much of their training in terms of reduced wages. This, in turn, implies that the employees will have insufficient incentives to acquire skills. By implication, they will also have insufficient incentives to seek skilled employment and - insofar as skilled vacancies are not perfectly elastic with respect to skilled job searchers - thereby the skilled unemployment rate is driven suboptimally low while the unskilled unemployment rate is pushed suboptimally high.

In addition, the firms will fail to internalise enough of the cost of dismissing trained workers: since they did not pay enough for training them, they have too little incentive to retain them. Consequently too few workers are retained. A low retention rate, in turn, means that workers have insufficient chances to remain at the jobs for which they trained and thereby capture the return from training. This further reduces employees' incentives to train, driving skilled unemployment down and unskilled unemployment up.

2c(2). Market Failures from the Market Power of Workers

On the other hand, when employees have more power than their employers, they are able to push their wage above their marginal product net of their marginal training cost. In that event, too much of the cost of training gets off-loaded onto the employers. This means that the employers will have insufficient incentives to provide training.

Furthermore, the employees will then fail to internalise enough of the cost of quitting to their employers: since they did not pay enough for their training, they have too great an incentive to quit. When workers have an excessive incentive to quit, they once again do not expect to capture sufficient return from their training. So they, on their part, will have insufficient incentives to acquire training. Furthermore, since some quits take workers from employment through temporary periods of unemployment, excessive quitting is associated with excessive unemployment.

2c(3). Market Failures from the Joint Market Power of Firms and Workers

Of course it is conceivable that the relative market power of employers and their employees could be such that the resulting wage provides precisely the socially efficient incentive to train. But this could clearly only happen by accident. In practice, the presumption must be that this does not occur.

But in that event, what is striking about the discussion above is this: regardless of whether employers have too much or too little market power relative to their employees, the resulting incentives to train will be suboptimally low. In this sense, then, imperfect competition in the labour market may be expected to lead to deficient provision and acquisition of skills, together with deficient skilled employment and (frequently) excessive skilled unemployment.

2c(4). Market Failures from the Interaction between Market Power and Imperfect Information

The degree to which incumbent employees, possibly working through their unions, choose to use their market power will depend, in part, on the amount of training they expect to receive from their employers in response to their wage claims. They will, for instance, exercise restraint in negotiating the wages of their employers' new recruits if they anticipate that this restraint would encourage the employers to provide ample training for these recruits, thereby raising their productivity and wages in the future.

But the incumbent employees have imperfect information about their employers' training responses to their wage claims. Training activities - particularly on-the-job training - are often difficult to monitor objectively. For this reason it is often infeasible for employees to conclude formal contracts with their employers whereby the new recruits settle for comparatively low wages during their training period in return for a specified amount of training to be provided by the employers. If the employees do not expect the employers to deliver sufficient training in response to low entrant wages, they will choose to use their market power to drive these entrant wages up. The underlying reasoning is that if the new recruits would not receive much training in any case, there is no reason to exercise wage restraint.

But in the absence of such wage restraint, of course, the employers have no incentive to give the new recruits much training. The reason is that the employers are then unable to appropriate a sufficiently large share of the returns from this training. In that event, the employees' expectation of deficient training provision by their employers becomes self-fulfilling. This problem may be termed the "high-wage, low-skill trap". There is some evidence that it has plagued Great Britain over the 1980s. This trap not only leads to deficient training, but the excessive wages also give rise to inefficiently high unemployment among unskilled workers.

The argument underlying the high-wage, low-skill trap is not consistent with the traditional human capital theory about agents' incentives to acquire skills. In that theory, as noted, the trainee appropriates all the gains from general training and split the gains from specific training with the trainer in such a way that the social benefits from training are internalised. In that event, the employer either pays a share of the training or pays a wage that fully rewards productivity resulting from the training. However, in the market failure above, the amount of training provided by the employer depends on the entrant wages and the entrant wages, in turn, depend on the amount of training that workers anticipate to receive. If workers anticipate little training, they have little incentive to keep the entrants' wages at moderate levels; and the relatively high entrant wages, in turn, prevent the firms from capturing enough return from training and thus induce the firms to provide little training. In this way, the workers' anticipations become self-fulfilling.

2d. Market Failures from Poaching

When employees' skills are transferable among a limited number of firms, the potential benefits from training accrue not only to the firm providing it and the worker acquiring it, but also to other firms that could make use of it. Since the number of firms that can benefit from the training is limited, the market for these skills is not perfectly competitive. Instead, firms have some market power. When they do, they can prevent wages from rising sufficiently for the trainees to appropriate all the return from the training.

But not only are the trainees unable to appropriate all the returns. The trainer and trainee, between them cannot do so either. The reason is that some of the return, on average, fall on third parties, namely, other firms that poach the employees once

they have been trained. Thus, typically no arrangement whereby the costs of training are shared between the training firms and the trainee will provide sufficient incentives for training. This is the essence of the poaching externality.

The greater is the mobility of workers among firms, the greater will be the likelihood of poaching and the lower the incentives for training. Furthermore, the greater is the firms' market power in the wage setting process, the smaller will be share of the returns from training that the employees can appropriate, and consequently the more serious, once again, this problem becomes.

These considerations are particularly important with respect to workers who are long-term unemployed and/or have a low level of education. The reason is that the training they require - basic literacy, numeracy, adoption of effective work habits - is likely to be transferable among a far wider set of potential employers than the training of more specialised, educated, employed workers. Thus the poaching externality helps explain why unskilled unemployment may turn out to be excessive in free market economies.

2e. Market Failures Associated with Imperfect Information

The market failures associated with imperfect information may be divided into two broad categories: (i) those arising when both sides of the market - the demanders and the suppliers of training - are poorly informed and (ii) those characterised by an asymmetry of information, where one side of the market is better informed than the other, so that the party with superior information may be able to exploit its advantageous position. Market failures in the job matching process commonly fall into the first category. In this case, skilled workers have imperfect information about the availability of skilled vacancies, and the firms offering the skilled vacancies likewise have imperfect information about the availability of skilled workers. This symmetry of imperfect information is also a feature of the "low-skill, bad-job trap" (described in Section 2e(3)).

By contrast, market failures arising from imperfect information about the content of training (described in Section 2e(1)) belong to the second category. In this case, employers have more information about the type of training they provide - and consequently about the nature of their employees' skills - than do other firms that could potentially make use of the same skills. As discussed below, the current

employers may be able to exploit their favourable position by capturing a greater share of the returns from training than they would capture under symmetrically imperfect information.

2e(1). Market Failures from Imperfect Information about the Content of Training

When firms are poorly informed about the attributes of the training provided by their competitors, workers' skills - that may be potentially applicable to many alternative jobs - become poorly transferable. In the process, workers lose some of their incentive to bear the cost of on-the-job training by accepting lower wages during their training period, since they have difficulty capturing the reward for this training when they switch firms. But if workers do not accept lower wages during training, then the firms will have little incentive to train them. In effect, this failure is a high-wage, low-skill trap initiated by imperfect information about the content of training. The excessive wages, in turn, lead to excessively high unemployment among the less-skilled workers.

Another form of this market failure arises when individuals lack information about the available vocational training opportunities and about the jobs to which these opportunities lead.³ The amount of information people have in this regard may be less than the socially optimal amount, even after the costs of information acquisition and dissemination have been taken into account. The reason is that information is a public good (possibly an "impure" one, if the above costs are significant). For this reason, the free market price of such information is likely to be low and the resulting private-sector incentives to collect are likely to be correspondingly low. In this case there is a potential case for government provision or finance of such information so that, in making people better informed about their training opportunities, their incentives to acquire skills rise accordingly, stimulating skilled employment and reducing unskilled employment.

³ Imperfect information of this sort can turn training that would otherwise have been "general" into the firm-specific variety. The reason is that when individuals cannot identify the degree to which training provides transferable skills, they cannot locate the potential demanders of their skills and are consequently lose market power and, with it, the ability to appropriate the returns from training.

In view of the rapidly changing nature of jobs, as technological change and international trade continue to transform the labour market, these problems may have become particularly serious in recent times and the corresponding need to empower people to respond appropriately to their ever-changing job choices in the development of their skills may be correspondingly great.

2e(2). Market Failures through the Market Power Generated in the Job Matching Process

The process of job matching gives rise to a wide variety of uncompensated costs and benefits that are relevant to the decisions to provide and acquire skills. For example, as the number of skilled workers in the economy rises, firms find it easier to replace the skilled workers whom they currently employ. This gives them a stronger bargaining position when wages are negotiated. As they drive wages of skilled workers down relative to the wages of unskilled workers, the employees lose some of their incentive to acquire skills. This problem is analogous to the market failure arising firms' market power; here, in fact, their market power is generated by the availability of skilled workers.⁴

Conversely, as the number of skilled vacancies in the economy rises, skilled workers find it easier to switch firms. As a result, the skilled workers' bargaining position improves, permitting them to drive their wages up, thereby reducing the firms' incentives to provide training. In this case, the market power of workers is generated by the availability of skilled vacancies.⁵

As in the case of the market failures associated with market power, it is conceivable that the relative availability of skilled workers and skilled vacancies could be such that the resulting relative market power of the employers and employees gives rise to wages that provide exactly the appropriate incentives. This, however, would be a mere coincidence. In practice, there is no reason to believe relative availability of skilled workers and skilled vacancies should generate the socially optimal relative

⁴ As noted below, this creation of market power gives rise to a market failure only if the resulting wage is greater than the level necessary to ensure that the relevant costs and benefits from training are internalised by trainer and trainee.

bargaining strength between employers and employees and then - regardless of whether the resulting wage is too high or too low - there will be deficient incentives to provide and acquire training in the economy, leading - along the lines outlined above - to excessive unskilled unemployment.

2e(3). The Low-Skill, Bad-Job Trap

In sectors of the economy where there is a small proportion of skilled workers, firms have little incentive to provide good jobs (that command relatively high wages and require relatively high skills), since such positions would be difficult to fill. However, if few good jobs are available, workers have little incentive to acquire skills, since such skills would be likely to remain under-utilised and consequently insufficiently remunerated.⁶

The source of this problem is the interaction between two mutually reinforcing externalities: a "vacancy supply externality" and a "training supply externality". The former arises when an increase in the number of skilled vacancies raises the probability that skilled workers find good jobs and thereby raises the expected return from training. Thus when a firm creates new vacancies, its private return falls short of the social return, since the latter also includes the rise in the workers' expected return from training.

The "training supply externality" arises when an increase in the number of skilled workers raises the probability that firms with good jobs find skilled workers and thereby raises the expected return from supplying vacancies. Thus when a worker

⁵ Once again, the workers' market power generates a market failure only if the resulting wage is less than the level necessary to ensure that the relevant costs and benefits from training are internalised by trainer and trainee.

⁶ This market failure is not to be confused with the previous one, discussed in Section 5b. The previous market failure works through the effect of skills and skilled vacancies on the market power of the employers and employees, thereby on the negotiated wages, and thereby back on the availability of skills and skilled vacancies. The low-skill, bad-job trap, by contrast, works even if wages are invariant to changes in the availability of skills and skilled vacancies. The problem in the latter case is simply that, in acquiring skills, employees raise their employers' returns from creating skilled vacancies and, similarly, in creating skilled vacancies, employers raise their potential employees' returns from acquiring skills. Neither the employers nor the employees are able to internalise these externalities.

acquires training, his private return falls short of the social return, which also includes the increase in the firms' expected gain from supplying vacancies.

Each of these externalities in isolation would lead the market mechanism to provide insufficient training. When both externalities are present simultaneously, the market failure is considerably amplified, thereby making a potential case for the government to provide additional incentives for the acquisition of skills. Moreover, since unskilled jobs are generally associated with higher separation rates, the low-skill, bad-job trap gives rise to excessive unskilled unemployment.

2f. Credit Constraints

The free market may give people insufficient incentives to provide and acquire skills on account of credit constraints. These credit constraints arise because it is difficult for individuals - both employers and employees - to insure themselves against the risk associated with training. The reasons are what economists call "moral hazard" and "adverse selection".

The moral hazard problem facing the lenders (e.g. banks) that provide funds for R&D-related training is this: The greater the risk premia that the lenders require, the greater is the incentive for the borrowers to take greater risks. The reason is that the adverse outcomes to the borrower are at worst that of losing the collateral, whereas the favourable outcomes are essentially unlimited (since the borrower keeps all the returns from the project, after having paid back the principal of the loan plus interest). Consequently, the higher the risk premium the borrower is required to pay, the more worthwhile it becomes to bear greater risks.

The adverse selection problem facing the lenders is similar: The risk premium not only affects the borrower's willingness to bear risks on any particular project, it also influences the nature of the project itself. The higher the risk premium, the greater the incentive the borrower has to choose risky projects. In fact, high risk premia also affect the identity of the borrowers. The higher the premia, the more risk-prone the borrowers become.

Since lenders are generally in a poor position to assess the degree of risk taken on a particular project, the riskiness of different projects, and the risk-proneness of the borrowers, the lenders have an incentive to use the interest rates on their loans as a way of influencing the amount of risk that their loans involve. This often means

keeping the interest rates lower than would be required to clear the market for loans, and thereby inducing the borrower to limit their risk exposure. As result, some potential borrowers will be unable to find funds for their projects. In fact, the markets for certain types of loans may be absent altogether, i.e. no funds are available at any interest rate for these projects at all. Vocational training often falls into this category. Tapping the credit markets to finance training is particularly difficult because human capital - the stock of acquired skills - generally cannot be used as collateral against loan default.⁷ Insofar as the unemployed tend to be relatively bad credit risks and thus relatively likely to face credit constraints, this market failure implies the existence of excessive unskilled unemployment.

2g. Market Failures Generated by Labour Market Institutions

2g(1). Market Failures from the Unemployment Benefit System and Welfare Programmes

Since unskilled workers are prone to low earning and comparatively long spells of unemployment, they tend to impose significant uncompensated costs on others via the unemployment benefit system and various welfare programmes. An unintended by-product of these institutions is to take earnings from the skilled, employed people and give them to the unskilled, unemployed ones. This turns out to be a two-pronged attack on the incentive to acquire skills; this incentive is diminished both because the skilled, employed people are not fully rewarded for the increased productivity generated through their skills, and because the unskilled, unemployed people are inadvertently rewarded for remaining unskilled and unemployed.

2g(2). Market Failures from Tax and Regulatory Distortions

A closely related problem is that of market failures arising from tax and regulatory distortions. Taxes obviously often lead to uncompensated benefits from

⁷ This market failure can be augmented through institutional failures in the capital market, such as the practice of basing loans on collateral rather than on potential return. Such institutional failures may, in turn, be due to imperfect competition that permits incumbent financial enterprises to be more risk averse in their lending practices than is in the public interest.

training. When income taxes, for example, appropriate a slice of workers' and firms' returns from training, they inevitably make these agents less willing to bear the costs of training or search sufficiently hard for the available jobs.

Taxes on profits, capital gains, and wealth, as well as tax deductions for capital formation, affect the returns to training by influencing the returns to investment in physical capital. The more complementary labour and capital are in the process of production and the more responsive is product demand to the price rises occasioned by these taxes, the more will these taxes reduce firms' incentives to provide on-the-job or off-the-job training.

Regulations restricting the entry of new firms to the economy will also reduce workers' incentives to acquire skills and raise the unemployment rate, since they reduce the potential pool of employers competing for these workers and skills.

2g(3). The Interaction between Education and Vocational Training

Then there are market failures arising from the interaction between education and vocational training. Education and vocational training are generally complements. Thus public support for education will influence employers' and employees' returns from vocational training. If the support is inappropriate or the education is insufficiently relevant to the available jobs, the free market may generate insufficient vocational training.

Another market failure that can arise in this context is a mismatch between the skills required by employers and the available vocational training. Inappropriate support for vocational education would lead to the acquisition of skills that are insufficiently complementary with employers' skill requirements, or ones that are complementary with skills for which there is inadequate market demand. Of course, this would encourage the supply of inappropriate goods and services and this supply, in turn, would further raise the demand for inappropriate vocational education.

3. Central Policy Problems and Policy Responses

Implicit in the market failures discussed above are guidelines for the appropriate policy responses. This section briefly examines a broad range of such responses in this light.

3a. Demand-management Policies

These policies are appropriate when there are significant market failures of the sort described in Section 2a. The important point of that analysis is that the externalities associated with the Keynesian co-ordination failures do not arise solely in connection with the nominal wage-price rigidities that are commonly used to motivate the Keynesian macroeconomic theory. Observe that any market failure that makes the employed workers better off than the unemployed ones - regardless of whether it is generated by the informational asymmetry underlying the efficiency wage theory, the labour turnover costs underlying the insider-outsider theory, or the market power underlying the theories of union behaviour - will mean that a newly hired worker will experience a rise in income, that will be spent predominantly on the products of other firms, thereby initiating the Keynesian chain-reaction of externalities.

The most direct way of dealing with these externalities are through demand management policies, provided that the associated costs in terms of budget deficits and change in the relative size of the private and public sectors are sufficiently small. These policies fall into two broad categories: (i) government employment policies, whereby the government stimulates employment directly by hiring people into the public sector, and (ii) product demand policies, which stimulate employment by raising aggregate product demand (e.g. through tax reductions, increases in government spending on goods and services, or increases in the money supply).

The policy challenge here lies in assessing when these externalities are sufficiently large to justify a demand-management policy response. In this regard, it is important to observe that when these externalities are dominant, recessions will be characterised by deficient labour and product demand reinforcing one another: workers are unemployed because firms are not producing enough goods and services; firms are not doing so because there is too little demand; and demand is deficient because people are unemployed. In short, deficient demand in the labour market originates in the product market and deficient demand in the product market originates in the labour market. Activity in these two markets goes up and down together.

This, however, is not always the case. In fact, for most of the 1980s, European labour and product markets did not move together at all. Product demand started to pick up towards the end of 1982, but employment did not start to improve until 1986

in the United Kingdom and even later in most other EC countries. This gap is simply too large to be explained by inventory dynamics or lags between inputs and outputs in production processes. The Keynesian vision of tightly linked labour and product demand is called into question here.

A microeconomic problem associated with Keynesian job creation schemes is that they are commonly confined to project which would not otherwise have been undertaken, in order to avoid displacing private-sector employment. The result, however, is that these jobs provide poor training for subsequent employment in the private sector. When the people placed on the job creation schemes recognise this deficiency, they lose their motivation, which further impedes their prospects of using their jobs to find private-sector employment. The Community Programme in the UK is a good example of this problem.

3b. Search-promoting Policies

The market failures associated with imperfect information and the labour market matching process - discussed in Section 2e - may be addressed by job search support and dissemination of labour market information. This policy includes such measures as counselling the unemployed, assisting them with personal problems such as alcoholism and drug addiction, and alerting them to available training opportunities.⁸ This approach also involves disseminating information about available labour services to firms and about available vacancies to workers.

The market failures identified by the efficiency-wage theory provide another rationale for this policy. In this context, firms use wages as an incentive device to discourage shirking or quitting or to attract high-productivity employees. Clearly policies that improve the dissemination of information about workers' ability, motivation, and quit behaviour would enable firms to base their wage offers more closely on workers' individual productivities and potential labour turnover costs,

⁸ The EC Commission has laid stress on these measures in combating European unemployment. For example, the Council Resolution of 29 May 1990 recommended that counselling interviews be made available to all long-term unemployed people. There is also wide recognition that these measures are have a chance of being particularly effective only if they are combined with other active labour market policies, such as training programs.

thereby reducing the role of wages as an incentive mechanism and bringing down the associated level of unemployment.

There is a considerable body of practical evidence pointing to the efficacy of this policy approach, if appropriately designed. A good example is the Restart Programme in the UK. Under this scheme, the unemployed are interviewed every 6 months and given advice and assistance. Aside from promoting job search, there is also evidence that this scheme has significantly reduced the number of fraudulent unemployment benefit claims, for initially about 10% of those invited to Restart interviews did not attend and their benefits were stopped. There is little in the Restart Programme that makes its effectiveness depend on labour market institutions that are specific to the UK and, by implication, this programme seems suitable for export to other European countries.

3c. Mobility-Promoting Policies

The market failures stemming from credit constraints (discussed in Section 2f) and regulatory distortions (Section 2g(2)) may call for mobility-promoting policies, particularly those that are meant to reduce the burden of housing costs to the poor - such as rent control or low-cost public housing - reduce worker mobility and, by inhibiting workers from moving to the available jobs, create unemployment. This is a potentially significant problem in a number of OECD countries containing both booming and slumping regions and large house-price and rent differentials across these regions.

House-price and rent differentials can become an especially serious source of "mismatch" in the labour market, since they often expand when the degree of sectoral imbalance rises. In particular, the greater is the discrepancy between (a) the excess of vacancies over unemployment in the booming regions and (b) the excess of unemployment over vacancies in the slumping ones, the greater these differentials are likely to be. The reason, of course, is that the greater is the discrepancy in excess demand across regions, the greater will the house-price and rent differentials across these regions be as well. Thus, as the degree of mismatch rises, the impediments to matching may rise in tandem.

Rent control and housing subsidies that are tied to the current place of residence give leverage to this obstacle to matching. Replacing these policy

interventions by more efficient ways of redistributing income (such as conditional negative income taxes) could therefore help reduce unemployment. A similar argument can be made for policies that increase the portability of health insurance and pensions between firms.

3d. Policies Promoting Training

In most advanced industrialised countries these policies are characteristically targeted at young people (such as Youth Training or Employment Training in the UK, or the French apprenticeship programmes and working and training programmes), although adult training schemes (such as the Training Opportunities Scheme in the UK) are broadly available as well. These policies are required to address a wide variety of market failures leading to unemployment of unskilled people, e.g. the poaching externality (discussed in Section 2d) and the matching externality and the low-skill, bad-job trap (Sections 2e(1,2)).

Some of the rise in European unemployment over the past two decades might arguably be due to the interaction between the market failures above (on the one hand) and the joint pull of skill-biased technological change and international trade (on the other). Both technological developments that raise the productivity of the skilled relative to the unskilled workers, as well as rising trade with countries that have a comparative advantage in producing goods which are relatively intensive in unskilled labour, pull in the same direction, in that they reduce the demand for unskilled labour relative to the demand for skilled labour. And if the market failures above are responsible for a deficiency in the acquisition of skills and an excessive number of unskilled workers without jobs, then that technological change and trade could lead to a rise in unemployment.

In addition, an expansion of trade or an increased rate of technological change could generate unemployment by raising the amount of labour market "turbulence", particularly by increasing the rate of job creation and destruction.⁹ This, of course, is not an argument for policies limiting the degree of technological change or trade, for - as is well-known - the latter generally permit a given amount of goods and services to

⁹ As noted, however, there is little evidence that this has actually happened in advanced industrialised countries over the past two decades.

be produced with less labour input, and thereby could improve everyone's material standard of living, provided that the appropriate redistributions from the winners to the losers can be made without substantial loss of efficiency. Rather, the above diagnosis is an argument for job search support in order to improve the effectiveness of the matching process.

In response to the problems above, government training programs or training subsidies to the unemployed - particularly the long-term unemployed - may have a role to play in combating unemployment. Many government training programs, however, are ill-suited to firms' needs. This is scarcely surprising, since these needs are extremely diverse while government training programs are inevitably standardised and limited in variety. In this regard, training subsidies granted to firms appear preferable, for the firms then have the incentive to make the resulting training maximally appropriate to their available jobs. To keep firms from illicitly diverting the training funds to other purposes, it may be necessary to provide the training subsidies only for programs leading to nationally recognised qualifications, granted by institutions independent of the firms receiving the subsidies.¹⁰

3e. Low-Wage Subsidies and Payroll Tax Reductions

These set of policies - implemented in minor ways in both France and the UK - are meant to address the problem that, in many OECD countries, the relative position of workers at the bottom of the earnings distribution has worsened over the past two decades. This deterioration has taken the form of lower relative real wages in the US (and, to a lesser degree, in the UK) and higher relative unemployment rates in many continental European countries. Providing subsidies or payroll tax reductions to low-wage workers is meant to raise firms' demand for these workers, thereby reducing their unemployment rates and raising their take-home pay.¹¹

Since these policies reduce unemployment by reducing employers' labour costs at the bottom of the wage spectrum, their effectiveness does not appear to be very sensitive to the precise underlying cause of the unemployment (in contrast to

¹⁰ The German apprenticeship system has both of these ingredients.

¹¹ The effectiveness of these policies on these variables clearly depends on the elasticity of labour demand. The greater the elasticity, the more the unemployment rates of the low-wage workers will fall and the less their take-home pay will rise.

profit-sharing subsidies). For example, regardless of whether the unemployment is generated by union pressures, efficiency wage considerations, or insider-outsider conflict, a drop in labour costs is bound to raise employment, since it permits firms to substitute labour for capital and enables them to reduce product prices and thereby create more demand.

A drawback of these policies is that, by raising the take-home pay of unskilled workers relative to skilled workers, they reduce the returns to training. Insofar as labour and capital are complementary in production, the resulting fall in human capital acquisition may also lead to a fall in physical capital formation. For this reason, it appears desirable that these policies be supplemented by subsidies to education and training. This additional element, however, would substantially increase the cost of the intervention. Another drawback is that these policies may encourage excessive creation of unsatisfying, dead-end jobs, providing little potential for advancement. In that event, the unemployment trap would be replaced by the "trap of the working poor". But even in that event, workers would experience a rise in their living standards: since the take-up is voluntary, workers and firms will avail themselves of these policy measures only if it is to their advantage.

3f. Reforming the Unemployment Benefit System

Among the West European countries, the UK has experienced relatively thorough attempts to reform the unemployment benefit system, largely by reducing the value of the benefits and raising eligibility requirements. These reforms may be rationalised as addressing a market failure generated by unemployment benefits themselves (discussed in Section 2g(1)). Specifically, unemployment benefits discourage job search (because when an unemployed person finds a job, the unemployment benefits are withdrawn and taxes are imposed) and put upward pressure on wages (by improving incumbent workers' negotiating positions).

The critical question in reforming the unemployment benefit system is how to provide a safety net for the disadvantaged and the poor without severely reducing people's incentives to fend for themselves. As a rule, European policy makers have felt that, given their equity objectives, people at the low end of the wage distribution need welfare state assistance. The same consideration also applies to the unemployed, whose unemployment benefit is consequently made comparable to the net income of

the low-wage employed people. The upshot is that the unemployed have little remaining incentive to move into low-wage employment. Since that is the type of employment most commonly available to the unemployed - particularly the long-term unemployed - the disincentive to work becomes severe.

This disincentive is masked by replacement ratios. The conventional measure of these ratios is the average unemployment benefit divided by the average wage. Thus unemployed people may have no incentive to return to work even when the replacement ratio is low. The reason, of course, is that the "replacement ratio" relevant to most of the unemployed is the ratio of the unemployment benefit to the average wage at the low end of the wage distribution (e.g. the bottom decile), rather than the average wage overall.

Moreover, labour market deregulation of the UK variety, for any given level of unemployment benefits, is likely to make this problem worse. For deregulation may be expected to lead to a widening of the wage distribution and consequently to a fall in the unemployment benefit relative to the new average wage at the bottom decile of the wage distribution.

Tightening the eligibility requirement for unemployment benefits (as in the Netherlands and the UK) may be also expected to aggravate this problem. The more stringent is the test of willingness for work, the lower will be the wage that people exiting from unemployment will on average receive (*ceteris paribus*). For example, when the UK introduced a new work criterion in 1989, requiring the unemployed to seek work outside their previous occupation and pay range, these people were given an increased direct incentive to find work, but a reduced indirect incentive. The reason is that the average wage received by people exiting from unemployment fell relative to a variety of welfare state benefits guaranteeing a minimum standard of living.

Finally, reducing the coverage of unemployment benefits after short employment spells (as in France), further reduces work incentives. If unemployed people no longer receive benefits after brief periods in a job, then they gain the incentive to "invest" in longer-term unemployment.

3g. Equity-Efficiency Trade-offs

In most European countries, a person is entitled to unemployment benefits for only a limited span of time. But once this span is over, the person is entitled to a

variety of welfare state benefits. The combination of these two policies means that people - particularly if they are poor - are granted, within limits, universal, unconditional and unlimited benefits. For example, in the UK the Unemployment Benefit is available for a year and is followed by Income Support. These two payments are of about the same order of magnitude, except that Income Support is means-tested whereas the Unemployment Benefit is not. Analogous conditions prevail in France, where unemployment benefits are succeeded and supplemented by RMI (the Minimum Integration Income). Consequently, poor unemployed people frequently face severe disincentives to seek work. This is the source of an important trade-off between equity (assuring that people's standard of living does not fall below a specified minimum level) and efficiency (preserving people's incentives to seek work).

A different variant of this problem appears in the presence of generous disability benefits, such as those in the Netherlands and the UK. Since disability benefits are higher than unemployment benefits in these countries, people who lose employment in their 40s or 50s and who perceive themselves as having little prospect of finding further jobs, have a strong incentive to exit from the labour force and join the ranks of the disabled. The rapid rise in the number of disabled in the Netherlands and the UK over the past decade and a half, without evidence of a comparable rise in health problems, indicates that this attempt to preserve the living standards of the disadvantaged has a high efficiency cost.

Another equity-efficiency trade-off arises through the behaviour of the spouses or partners of the unemployed. Insofar as unemployment benefits are means-tested (as in the case of the Job Seekers Allowance that is to be introduced in the UK in October 1996) or the subsequent welfare state benefits are means-tested (which is the case in most European countries), the job loss of one person affects the job search incentives of that person's partner. Since the receipt of benefits depends inversely on the partner's income, it is clear that when one adult member of a household becomes unemployed, the partner gains an incentive to become unemployed as well. Once both people are unemployed, the incentives to return to work become strong only if both receive job offers simultaneously. But the probability of that happening are, clearly, far lower than the probability that either of them would find a job individually.

3h. Benefit Transfers

Over the past few years, a number of advanced market economies - Australia, Belgium, France, Germany, and the UK - have experimented with diverse variants of the "Benefit Transfer Programme" (BTP). The underlying idea is to give the long-term unemployed people the opportunity to use part of their unemployment benefits to provide vouchers for firms that hire them. The longer a person is unemployed, the greater is the voucher. Larger vouchers are also granted to firms that use them entirely on training. Once the worker finds a job, the voucher gradually falls as the period of employment proceeds.

The BTP is designed to address a wide variety of market failures that lead to excessive real product wages and hence to deficient employment. These market failures, for example, include those generated by asymmetric information as in the efficiency wage theory or by market power as in the insider-outsider or union theories.

Although various existing policies, such as the UK Workstart pilots or the French co-operation agreements (which give an allowance to employers of previously unemployed people), are superficially similar to this proposal, none of them fulfils all of its critical provisions. Neither the French nor the British variants have explicit sanctions against displacement of incumbent employees, making this policy approach socially divisive and thus robbing it of significant political support. In the French variant, the allowance to the enterprise is equal to the remaining amount of benefit for the worker in question. Thus the scheme is biased toward the short-term unemployed (for whom the amount of remaining benefits is relatively high) and against the long-term unemployed. Thereby the scheme aggravates, rather than mitigates serious labour market inequities. In the UK the scheme is restricted only to the very long-term unemployed (i.e. those unemployed for over two years). Here people become eligible for subsidy only after they have become significantly dissociated from the labour force.

Needless to say, the effectiveness of the BTP depends critically on how it is designed, specifically, on how many of its provisions are adopted. To date, the various attempts to implement it have all omitted several important provisions and thus are seriously misdesigned. The design errors all magnify the factors that limit the effectiveness of the BTP (or any other recruitment subsidies): (i) "deadweight"

(subsidies or tax reductions received by workers who would have become employed anyway), (ii) "displacement" (incumbent employees displaced by the subsidised new recruits), and (iii) "substitution" (firms that benefit from the policies driving firms that don't benefit out of business).

An evaluation of the underlying idea awaits a more determined effort to capture the underlying spirit of the programme.

3i. Unemployment and Training Accounts

My proposal is to create *unemployment and training accounts* (UTAs). Under this programme, every employable person would have an unemployment account to provide support against job loss and a training account to provide funding to acquire new skills. Instead of paying taxes to finance unemployment support, further education and training, employed people would be required to make regular contributions to their UTAs. The mandatory contributions would rise with their incomes. To maintain the living standards of the poor, the government would pay contributions of the lowest income groups, and tax the contributions of the higher income groups. People could also make voluntary contributions in excess of these amounts.

If people become unemployed, they could make limited withdrawals from their unemployment accounts instead of receiving unemployment benefits. If they wished to acquire skills, they could draw on their training accounts instead of receiving government grants, subsidies, and loans. If their UTA balances fell below a specified limit, they would receive public assistance on the same basis as under our current system. If their UTA balances became sufficiently high, they could use the surplus funds for other purposes. At the end of their working lives, their remaining UTA balances could be used to top up their pensions.

People would be able to borrow money on favourable terms for their training accounts, enabling them to finance their training through their future incomes. Unemployed people who develop promising job market strategies at their Restart interviews could receive government loan guarantees when they borrowed training account money. Employers' contributions to training accounts would receive favourable tax treatment.

People would be free to make withdrawals from their training accounts at any point in their working lifetimes. Those who identify their preferred careers early in their working lives may draw substantially on their accounts soon after leaving secondary school. Those who take longer to find their niche in the labour market, or those who require retraining upon changing occupations, would make significant withdrawals much later in their careers. In this way, the training accounts would enable people to remain employable and adaptable throughout their working lives.

The UTAs would initially be managed largely on a Pay-As-You-Go basis (similar to saving accounts, from which people can make withdrawals even though the banks use most of the money for other purposes). With the passage of time, the UTAs would eventually be turned into a fully funded system, where individuals would have discretion over who could manage their UTAs. To guard against bankruptcy, the financial activities of the private-sector UTA fund managers would be regulated, along lines similar to the regulation of commercial banks.

Adopting the UTA system could substantially reduce the level of long-term unemployment and promote skills. In particular, moving from unemployment benefits to unemployment accounts would give people greater incentives to avoid long periods of unemployment. For the longer people remain unemployed, the lower will be their unemployment account balances and consequently the smaller the funds available to them later on. And since the unemployment accounts generate more employment than unemployment benefits, the unemployment account contributions necessary to finance a given level of unemployment support would be lower than the taxes necessary to finance the same level of unemployment benefits.

Furthermore, the training accounts would be better suited than the current education and training programmes to ensure people's lifetime employability, since the accounts could be accessed whenever employees and their employers found it maximally worthwhile. In this way, employers and employees stand to gain from the switch to UTAs. Retired people would gain through their ability to use their UTA balances to augment their pensions. And the government would gain, since the removal of the distortions from unemployment benefit system would promote new economic activity and thereby generate increased tax revenue. Beyond that, the UTAs would be more efficient than the current system at redistributing income from rich to

poor, since unemployment benefits and training schemes are not targeted exclusively at the poor, whereas government contributions to UTAs would be.

In order to provide additional incentives to find work and acquire the relevant skills, the government would provide subsidies for long-term unemployed people who use their UTAs to provide recruitment vouchers or training vouchers for firms that hire them. The size of each person's voucher would depend on his wages earned over next two years of subsequent employment. The recruitment vouchers would reduce firms' cost of employing the long-term unemployed; the training vouchers would reduce the cost of training them. The subsidies would be set so that they could be financed through the tax revenues from people's first two years of subsequent employment and through the abolition of in-work benefits.

In short, replacing the current system by UTA would reduce unemployment and simultaneously promote equality. While people are generally resentful of their tax burden and often demeaned by the existing unemployment benefits and training programmes, they would be more willing to contribute to personalised accounts for their own purposes. The UTAs would give people more freedom to use unemployment support and training funds to meet their diverse individual needs. It would give them greater latitude to respond to changing job opportunities, finance periods of job search, acquire skills, and provide for retirement. And all this could be done without creating greater inequality or increasing government expenditure.

3j. Conditional Negative Income Taxes

The previous proposals were predominantly concerned with promoting prosperity by making the provision of state services more efficient. We now turn to proposals that are primarily aimed at promoting social cohesion through the redistribution of income. On the whole, most countries conduct such redistribution in exceedingly inefficient ways, needlessly reducing incentives for employment and production and imposing unnecessary burdens on governments' budgets.

This section considers a promising, largely untried, policy alternative: the conditional negative income tax. To put the advantages of this policy into sharp perspective and to illustrate what the negative income tax should be "conditional" on, it is useful to view it as replacing a current redistributive policy, such as the current unemployment benefit system. In this context, the conditions attached to the proposed

negative income tax would be analogous to those attached to current unemployment benefits. For instance if, under the current unemployment benefit system, people must provide evidence of serious job search in order to qualify for unemployment benefits, then they must also be required to provide such evidence under the proposed conditional negative income tax system; If unemployment benefits decline with unemployment duration under the current benefit system, then so too must the negative income taxes.

The broad argument in favour of this switch from unemployment benefits to negative income taxes is that this policy could meet the equity and efficiency objectives of current unemployment benefit systems more effectively than the unemployment benefit systems themselves. Although conditional negative income taxes would generate the same type of policy inefficiencies as unemployment benefits, the former would tend to do so to a lesser degree than the latter. For example, negative income taxes may be expected to discourage job search, but by less than unemployment benefits, for when a worker finds a job, he loses *all* his unemployment benefits, but only a *fraction* of his negative income taxes.

It is worth noting that a major criticism of the traditional negative income tax schemes - namely, that they make people's material well-being less dependent on employment and thereby discourage employment - obviously doesn't apply to *conditional* negative income taxes, since these taxes are conditional on the same things as current unemployment benefits.

Furthermore, conditional negative income taxes also tend to be more effective than unemployment benefits in overcoming labour market inefficiencies generated by credit constraints (e.g. people being unable to take enough time to find an appropriate job match or unable to acquire the appropriate amount of training on account of credit constraints), since the presence of these constraints is more closely associated with low incomes than with unemployment.

Against this, conditional negative income taxes are by their nature less effective than the economic theorists' socially optimal unemployment insurance schemes in overcoming efficiency problems in the unemployment insurance market (such as the problems of moral hazard and adverse selection). The reason, of course, is that conditional negative income taxes are designed to reduce people's risk of poverty, rather than risk of unemployment. However, the practical significance of comparing

conditional negative income taxes with socially optimal unemployment insurance schemes is generally small, since the unemployment benefit systems operative in most OECD countries do not have much in common with the central features of optimal unemployment insurance. One reason is that most of the existing unemployment insurance schemes either impose ceilings on benefits or pay these benefits as flat rates, while optimal unemployment insurance does not have either property. In many European countries, the duration of unemployment benefits is not closely tied to the previous span of employment, which optimal unemployment insurance would clearly do. Moreover, the relative contributions of employers, employees, and the government to the current unemployment insurance schemes bear little if any relation to the social costs that these agents fail to internalise.

Given that unemployment benefit systems in practice have little in common with the main features of optimal unemployment insurance, the efficiency case for the unemployment benefit systems is considerably weakened. What remains, then, is the equity case; but here - as we have noted - unemployment benefits tend to be less effective than conditional negative income taxes.

Finally, the unemployment benefit system has the well-known advantage that since it is more narrowly targeted than a conditional negative income tax system which provides a similar level of support for the target group, the unemployment benefit system tends to be less expensive. Specifically, the unemployment benefit system requires a lower level of tax revenue to finance a given level of support for its target group than does the conditional negative income tax system. This disadvantage of conditional negative income taxes versus unemployment benefits must be set against the advantages noted above. Should the disadvantage prove to be overwhelming in particular instances, policy makers may wish to target the conditional negative income taxes in the same way as the unemployment benefits are currently targeted.

4. Concluding Thoughts

This paper has argued that the appropriate way of thinking about the need for employment policies, and of formulating these policies once the need is apparent, is through the analysis of the underlying inefficiencies or inequities. If a particular policy is meant to correct an inefficiency, then it is necessary (i) to evaluate consider the

market failures that the policy is meant to correct, (ii) to evaluate the government failure associated with the implementation of the policy and (iii) to assess whether the market failure outweighs the government failure. Only if the market failure is large relative to the government failure is there a case for an efficiency-promoting employment policy. On the other hand, if a particular policy is meant to correct an inequity, we need (i) to assess the efficiency cost of this correction and (ii) to investigate whether alternative policies could achieve the same equity objective at lesser efficiency cost and (iii) to opt for the policy associated with the most favourable equity-efficiency trade-off.

Needless to say, these assessments are extremely difficult to conduct in practice, for a very simple reason. Both market failures and government failures intrinsically involve losses to which the market mechanism attaches no price. It is, in fact, because the market sets no price that the various market failures emerge and because the market the market imposes no price on the resulting government interventions that the government faces no political need to pay the cost of the government failures. And where the market sets no price, quantitative valuations of costs are necessarily problematic.

Nevertheless, the difficulty of evaluating market and government failures does not give us an excuse to stop thinking about these magnitudes, simply because the efficiency case for employment policies, as well as the equity-efficiency trade-offs they generate, cannot be made on other grounds.