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Active labour market policy vs employment tax credits: Lessons from recent UK reforms

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Summary

■ Many welfare-to-work programs in both North America and Europe are directed at making work pay for the low skilled. This paper identifies two alternative policies that are motivated by this same objective—active labour market programs that involve wage subsidies together with improved job matching; and earned income tax credits that supplement wages for working low-income families. Although sharing similar concerns over labour market incentives for low skilled workers, these alternative policies typically differ in many important ways. We present an evaluation of the impacts of two such recent programs designed to enhance the labour market attachment of low-wage workers in the UK. These programs have many features in common and are similar to many policy proposals in Europe and North America. The evaluation of the UK reforms brings empirical evidence into the debate on the effectiveness of these programs and is used to assess what aspects of their design work well and what aspects could be improved. ■

JEL Classification: C25, H31, H53, J21, J22.
Keywords: Welfare reform, tax credits, wage subsidies, labour supply.

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Active labour market policy vs employment tax credits: Lessons from recent UK reforms

Richard Blundell and Costas Meghir*

This paper reviews the effectiveness of two alternative approaches to enhancing labour market attachment and earnings among the low skilled—tax credit/in-work benefit programs and wage subsidy/job search programs. Although the former is often classed as a welfare policy and the latter as an active labour market policy, both are motivated by similar concerns and share many similar design features. By placing one alongside the other we can examine the appropriateness of the design of each and assess where improvements could be made. Although we are interested in the design of such programs our analysis is largely empirical. To evaluate each of these policies we draw on the recent experience of policy reforms in the UK.

The UK in the 1990s is, in many ways, an ideal test bed for such policies since both were introduced and enhanced over this period. These polices were targeted at two groups: (1) low income/low educated families with young children, (2) low skilled workers with repeat unemployment spells. In both cases the diagnosis is similar: relatively low hourly wages among the low skilled with little labour market experience provide little incentive for work.[1] However, the detail is different. In the first case it is the generosity of the out of work benefit system for families relative to potential earnings and child-care costs that are though to provide the disincentive. For the second group it is

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[1] There are now similar policies directed toward those on disability insurance (New Deal for Disabled People) and early exit from the labour market of low wage older workers. However, it is too early to assess these programs.

the employer matching and the low initial wages that are perceived as the central issue. Consequently, although the objective for both is to enhance net earnings in work, the first involves a long-term income related supplement to earnings, possibly with a childcare component. While the second centers on job search assistance and short term wage subsidies. But are these differences in the design appropriate and could they be improved?

The 'in-work' structure of these two approaches is similar relying on earnings credits or wage subsidies. But again they typically work rather differently. The wage subsidy is individually based, not means-tested and of limited duration. Eligibility is also typically UI (or welfare) duration dependent. The earned income tax credit is typically family income based, means-tested against family income and without a time limit. For the later, the Working Families Tax Credit (WFTC) in the UK, the Earned Income Tax Credit (EITC) in the US[2] and the In-Work Tax Credit in Belgium[3] are prime examples. For the former, the New Deal in the UK is a leading example. There are, of course, labour market policies that fall somewhere in between. The Self-Sufficiency Project in Canada[4], for example, is a time-limited earned income tax credit directed toward low-income families for which eligibility depends on overall family income, family composition, a minimum welfare duration and a minimum hours requirement. There was also job search assistance for those in the Canadian program.

So what is the best design for such policies? Does time limiting help with human capital and wage progression? If so, how long? Should family income means-testing be used to target incentives to those on low incomes? If so, at what level should the credit withdrawal rate be set? Should the wage subsidy or tax credit be tied to a specific employer? Should there be a minimum hours requirement?

To set the scene for our analysis we turn first to the labour market trends over the last two decades that have motivated these reforms. We highlight the cyclical volatility for employment for certain target groups and the secular changes in employment patterns for others. Again we focus on the UK experience. In the following section we then consider the particular design features of these programs. In Section 3 we move on to evaluate specific aspects of these reforms, fo-

[2] See Eissa and Liebman (1996).
[3] See Gradus and Jusling (2001), who also review similar schemes and proposals in Germany, the Netherlands, Ireland and Finland.
[4] See Card and Robins (1998).

cusing on the shorter run employment effects. We conclude, in Section 4, with a brief assessment of their effectiveness in achieving overall labour market objectives.

1. The changing structure and economic environment of low wage workers

This section considers the labour market trends that stimulated the two welfare- to-work reforms in the UK that are the focus of our discussion. We turn first to the labour market for the young unskilled that motivated the New Deal program.[5] We highlight the cyclical volatility of unemployment for this group and the frequency of short run transitions. We then move on to the corresponding employment trends for low-income families, which motivated the WFTC reform. Here non-employment rather than unemployment is a more relevant measure of activity and we highlight the importance of both cyclical and secular trends.

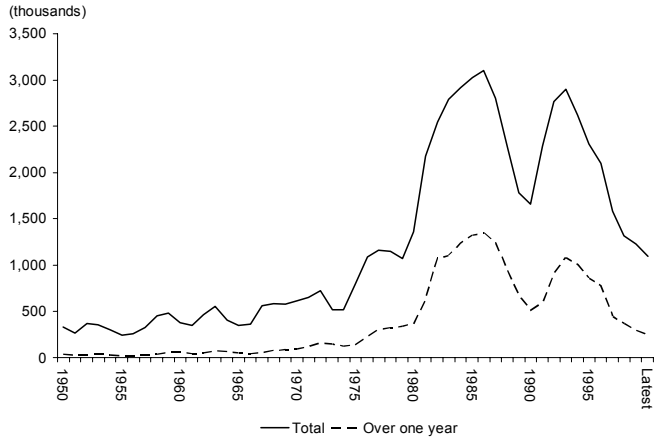
1.1. The labour market background for the new deal reform

In many respects the UK pattern of unemployment is similar to other European countries. Figure 1 displays the total unemployed claimant count since 1960 and Figure 2 shows the standard ILO unemployment rates from 1978 onwards.[6] There has been a steady upward drift of unemployment since 1960, with a very large increase post 1979. Until the 1990s, the trough of each recession was associated with higher unemployment than the previous downturn. The current expansion has pushed the number of unemployed below that of the previous cycle. Another feature of UK unemployment is its volatility. The UK has experienced sharp boom-bust cycles. There were deep recessions in the early 1980s and early 1990s and a fast boom in the mid-late 1980s. There was a similar boom in the late 1990s/early 2000s.

[5] See DfEE (1997).

[6] The International Labour Organisation (ILO) measure of unemployment based on the labour force surveys.

Figure 1. UK claimant unemployment—total and long-term



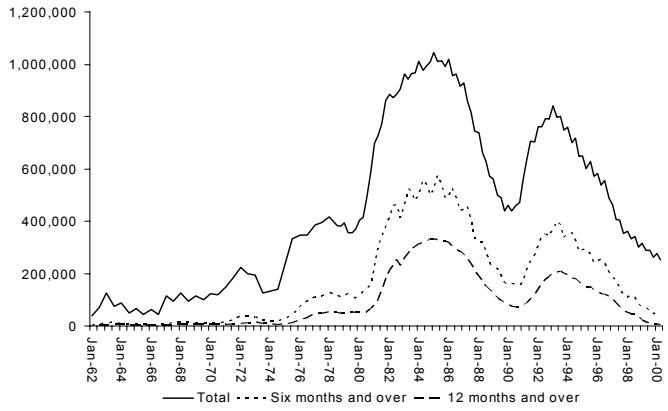
Source: Labour Market Trends and Employment Gazette, various issues.

Figure 2. Unemployment—claimant and ILO measures

Source: Labour Market Trends and Employment Gazette, various issues.

By the end of the 1990s UK unemployment was relatively low by OECD standards. This has been a relatively recent phenomenon, however. Over the 1983-96 period UK unemployment rates have been above the OECD average, certainly higher than Germany's (which has never fully recovered from the shock of re-unification in 1989) although lower than France's.[7] Over 1973-1984 UK unemployment was worse than the OECD average. In terms of its long-term unemployment rates, the UK appears much closer to a European country than to the US.[8]

Figure 3. Claimant unemployment amongst 18-24 year olds



Source: Labour Market Trends and Employment Gazette, various issues.

Across all countries youth unemployment is higher than unemployment for prime age individuals. There is a relatively high proportion of young Britons in jobs and a low proportion of young people in school. There is also a large proportion of British youth that are neither in school nor in the labour force. The UK has the highest numbers of 18-year-old men in this category and is second (after Italy) for 22-year-old men.[9] Moreover, the UK has had the largest in-

[7] Between 1983-96 OECD average unemployment was 8.2 per cent, 9.7 per cent in the UK 6.2 per cent in West Germany and 10.4 per cent in France (Nickell, 1997).
[8] See Van Reenen (2001) for further details.
[9] The proportion idle was 8.4 per cent in the UK in 1997 compared to 2.3 per cent in 1984. In 1997 the figure was 1.8 per cent, with 5.6 per cent in the US, 4.2 per

crease in the proportion of this group of youth since 1984. Another feature of the youth labour market is its sensitivity to the business cycle. The unemployment rates of the younger group, displayed in Figure 3, broadly mirror the overall picture, but are more cyclically sensitive. This is also true for the employment rates (see Bell, Blundell and Van Reenen, 1999).

1.2. The labour market background for the WFTC reform

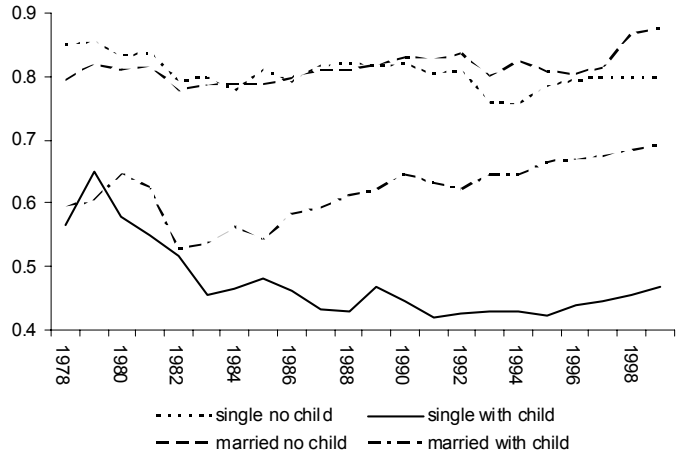
The levels of non-employment among certain specific groups have also been the motivation for earned income tax credit reforms—or in-work benefit reforms. For example, one central motivation for the introduction and subsequent expansion of the Working Families Tax Credit in the UK was the persistence in the low levels of attachment to the labour market by single mothers—at a time when for other groups of similar women attachment has generally been increasing. Figure 4 shows the secular change in female employment across four household types in the UK. The growth in the attachment by married women with children is as noticeable as is the fall for single women with children.[10] This is even more pronounced for those who left school at age 16 or before (age 16 being the minimum school leaving age for those born after 1960). Not only has attachment of lone mothers fallen but, at the same time, the size of this group has risen by more that twofold over the last twenty years.

Another distinguishing feature of the UK has been the growth in workless couples with children. This is documented in Figure 5 and provided a strong argument in the debate for the WFTC. Indeed, for married women with unemployed husbands employment rates have stayed no higher than 30 per cent over the past two decades—even lower than employment rates for the single parent group (see Blundell, 2001a). The (non-) employment rates for these two groups show clearly why they have been singled out as two target groups for tax and benefit reform.

cent in Germany, 3.3 per cent in France and 9.1 per cent in Italy (see Blanchflower and Freeman, 2000).

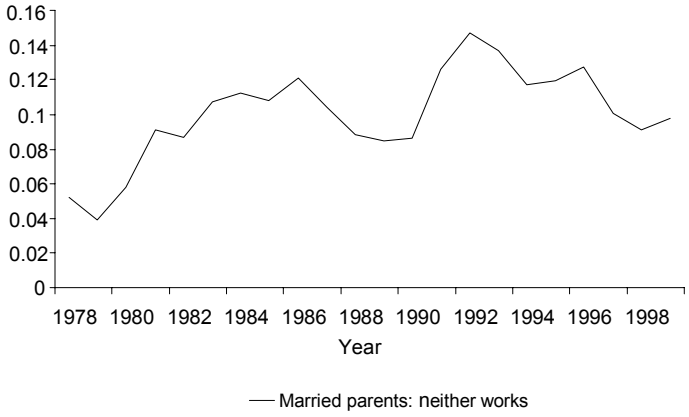
[10] These figures are drawn from the repeated cross-sections of the British Family Expenditure Survey. As such they refer to different people over time and will therefore exhibit systematic composition changes according to birth cohort, education and other factors. Blundell and Hoynes (2001) provide further discussion and also a direct comparison with similar trends in the US.

Figure 4. Employment trends for women in the UK



Notes: FES Data, working age.

Figure 5. Workless couples in the UK



Notes: FES Data, head of working age.

But it is not just the low employment rates that have attracted attention. So have the low real wages for the low skilled and the relatively low growth in these wages over the past two decades. Indeed,

there have been remarkable shifts in returns to education and skill in many countries (see Gosling et. al., 2000, for the UK and Katz and Autor, 1999, for a cross country survey). For example, in the U.S. real earnings for the lowest education groups have fallen yearly since the late 1970s. This characteristic is quite exaggerated in the U.S., but it is nonetheless common to most developed countries.

It is these simple labour market facts that focussed policy attention in the UK on "in-work" benefits and wage subsidies for the low-skilled. The aim being to make work more attractive for those whose current labour market opportunities are not sufficient to induce work.

2. The New Deal and WFTC reforms in context

2.1. The design of the New Deal

The New Deal for Young People in the UK is targeted at the 18 to 24 years old with at least six months unemployment. Participation is compulsory, so that every eligible individual who refuses to participate risks loosing their entitlement to benefits. The criteria for eligibility are simple: every individual aged between 18 and 24 by the time of completion of the sixth month on Job Seekers' Allowance (JSA)—the standard flat rate Unemployment Insurance in the UK—is assigned to the program and starts receiving treatment. Given the stated rules, the program can be classified as one of "global implementation", being administered to everyone in the UK meeting the eligibility criteria. Indirect effects that spill over to other groups than the treatment group may occur. The nature of these effects will be discussed below.

The path of a participant through the New Deal is composed of three main steps (see Figure 6). On assignment to the program, the individual starts the first stage of the treatment called the *Gateway*. This is the part of the program being evaluated in the present study. It lasts for up to 4 months and is composed of intensive job-search assistance and small basic skills' courses. Each individual is assigned a "Personal advisor", a mentor who they meet at least once every two weeks to encourage/enforce job search.

The second stage is composed of four possible options. First, there is the employer option—a six-month spell on a subsidized employment. For the subsidized employment option, the employer receives a GBP 60 a week wage subsidy during the first six months of employment plus an additional GBP 750 payment for a required

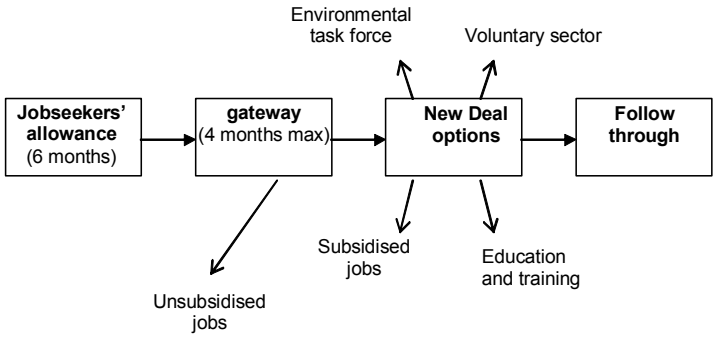
minimum amount of job training equivalent to one day a week[11]. Second, an individual can enrol in a stipulated full-time education or training course and receive an equivalent amount to the JSA payment for up to twelve months (and may be eligible for special grants in order to cover exceptional expenses). Third, individuals can work in the voluntary sector for up to six months (paid a wage or allowance at least equal to JSA plus GBP 400 spread over the six months). Finally, they may take a job on the Environmental Task Force (essentially government jobs) and be paid a wage or allowance at least equal to JSA plus GBP 400 (spread over the six months).[12]

The program was launched in the whole UK in April 1998. There was, however, a previous Pilot three months' period, from January to March 1998, when the program was implemented in 12 areas, called the *Pathfinder* Pilots (see Anderson, Riley and Young, 1999). Clearly, identification of the treatment effect under these conditions requires stronger assumptions than when an experiment is run within regions using random assignment. The problem relates with the fact that the counterfactual must either be drawn from a different labour market or from a group with different characteristics operating in the same labour market. These evaluation issues are discussed in detail in Blundell et al. (2001), below we simply summarise the results of that evaluation study.

[11] This is quite generous. The mean starting wage for those on a subsidized job is GBP 3.78 an hour, implying a 40 per cent level of subsidy for a 37 hour week.

[12] Once the option period is over, if the individual has not managed to keep/find a job or leave the claimant count for any other reason, the third stage of the program is initiated, the Follow Through. This is a process similar to the Gateway, taking up to 13 weeks, where job-search assistance is the main treatment being provided (see Van Reenen, 2001).

Figure 6. A simplified flow diagram of the New Deal program



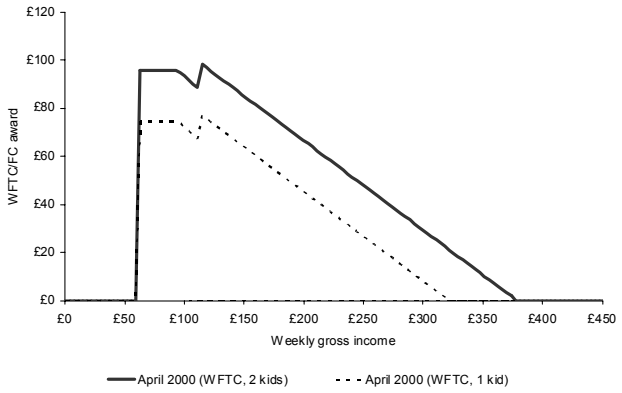
2.2. The design of the WFTC

In-work benefits have existed in the UK in various forms since the 1970s. However, the current Working Families Tax Credit has its antecedents in the Family Credit system introduced in the late 1980s. This was designed to provide support for low wage working families. In this system each eligible family was paid a credit up to a maximum amount which depended on the number of children. There was also a small addition if in full time work. Eligibility depended on family net income being lower than some threshold (GBP 79.00 per week in 1998-99). As incomes rose the credit was withdrawn at a rate of 70 per cent. In 1996 average payments were around GBP 57 a week and take-up rates stand at 69 per cent of eligible individuals and 82 per cent of the potential expenditure.

An unusual feature of the Family Credit system, retained in the WFTC reform, is a minimum weekly hours eligibility criterion. A family with children required one adult working 16 hours or more per week to qualify. At its introduction in 1988 this hours cut off was set at 24 hours but then reduced in 1992 to encourage part-time work by lone parents with young children (see Blundell, Duncan, McCrae and Meghir, 1999).

The WFTC reform increased the generosity of in-work support relative to the FC system in four ways: It increased the credit for younger children. It increased the threshold. It reduced the benefit reduction rate from 70 per cent to 55 per cent. The largest cash gains went to those people were currently just at the end of the benefit reduction taper. The childcare credit increased the maximum amount of WFTC by 70 per cent of childcare costs up to a maximum of GBP 100 per week for those with one child or GBP 150 per week for those with two or more children. The credit was available to lone parents and couples where both partners work more than 16 hours per week. The transfers underlying the WFTC are illustrated in Figure 7.

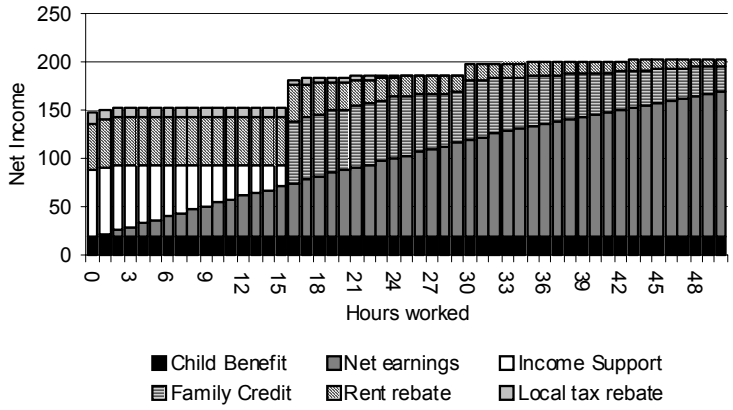
Figure 7. WFTC weekly award, June 2000



Source: Brewer (2001).

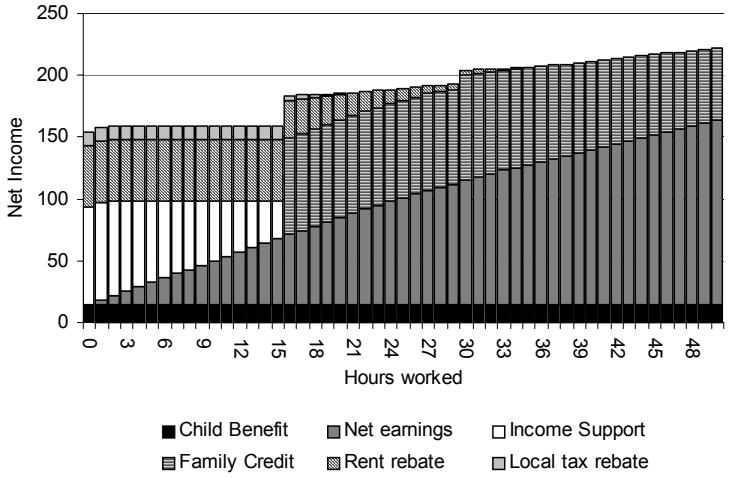
The impact of the WFTC reform relative to existing Family Credit is shown in the budget constraint for a 'typical' single parent presented in Figures 8 and 9. These highlight the similarity of the FC and WFTC systems and also the importance of interactions between the in-work tax credit system and other means tested benefits. In particular income support and housing benefit seriously reduce the underlying incentive in the system (see Blundell, 2001a, for further discussion). Nonetheless, a look at the histogram of weekly hours worked for single parents presented in Figure 10 shows a strong peak in hours worked at 16 hours. This is not evident for ineligible groups such as single childless working women.

Figure 8. Single mother before WFTC



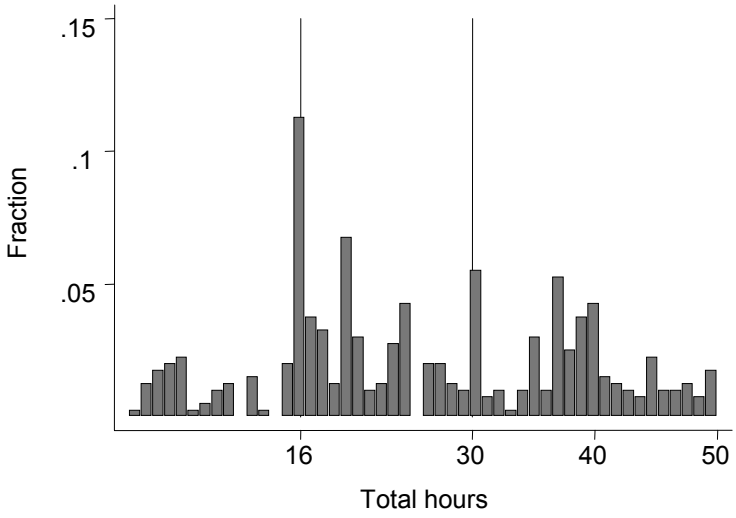
Notes: Single parent, April 1997, earning GBP 3.50 per hour (2000 prices).

Figure 9. Single mother after WFTC (the April 2000 system)



Notes: Single parent, April 2000, earning GBP 3.50 per hour (2000 prices).

Figure 10. Weekly hours worked, low education single parents in the UK



Notes: Family Resources Survey, 1999.

3. Evaluating the labour market impact of the reforms

3.1. The New Deal program

Given that, at this time of writing, this program had not been running for a long period, we focus here on an evaluation of the Gateway. In particular, we are concerned with the degree to which enhanced job assistance has lead to more outflows to jobs. The evaluation is based on data provided by the Pathfinder areas before the National Roll Out of the program, as well as on data available following the National Roll Out. There are two main issues that need to be considered in evaluating the impact of the program: the precise nature of the comparison group, and hence the definition of what is being measured, and the set of assumptions that underlie the interpretation of the parameter we estimate in each case. The clear understanding of these issues is an important input in an eventual cost-benefit analysis of the program since they determine the outcome from the program. There are some important aspects covered within this discussion.[13]

[13] See Heckman, Lalonde and Smith (1999) and references therein.

One of them concerns the extent to which we can estimate the overall impact of the program on employment as opposed to the impact on the eligible individuals. Potential differences in the two outcomes may result from two main factors. First, the impact of the program on eligible individuals may be at the expense of worsened labour market opportunities for similar but ineligible individuals. Second, the wider implementation of the program and the opportunities it offers to participants may affect the equilibrium level of wages and employment, affecting all workers.

We focus on the impact of the program on the proportion leaving unemployment within four months of entering the "Gateway"—see Figure 6 above. The choice is mainly dictated by the desire to focus on the stated government targets and the paucity of data on individuals after they have finished the options.[14] We pay special attention to the *outflows into employment*, but we also examine total outflows from unemployment to all destinations.[15]

Our approach to estimate the impact of the New Deal program relies on using information from the pilot period as well as information from the *National Roll out*. The New Deal can affect employment of both eligible and ineligible individuals in a number of ways. First the eligible individuals receive job search assistance, which may enhance their ability to find a job. Second, some of the individuals in the Gateway program receive wage subsidies, reducing the cost of employing them for an initial period of six months. This wage subsidy will expand the employment of such workers but may also lead to a substitution of other workers for these cheaper ones, if labour markets are not competitive. However, under competition the worker would retain all the subsidy except for any shortfall of his/her productivity relative to pay. The extent to which this may happen will depend on a number of factors. If the subsidy just covers the deficit in productivity and the reservation wage of the workers as well as the costs of training, we would not expect any substitution; these workers are no cheaper than anyone else. Second, it will depend on the extent

[14] Our data currently ends in July 1999. Individuals entering the Gateway in April 1998 and joining the year-long education and training option after four months will only start job search in August 1999.

[15] Blundell, Costa-Dias, Meghir and Van Reenen (2001) assess the importance of the estimated effects and interpret them in an historical perspective. They provide some lower and upper bounds for the treatment effect by using other pre-program time periods. This can be done for total outflow for all years since 1982.

that these workers are substitutable in production for existing workers and on the extent that it is easy to churn workers. The latter is an important point, since the subsidy only lasts six months. Moreover the agencies implementing the New Deal are supposed to be monitoring the behaviour of firms using wage subsidies and employing individuals on the New Deal. Of course if job durations are generally short, firms will be able to use subsidized workers instead of the non-subsidized ones, without any extra effort.

An additional effect of the New Deal may be to decrease wage pressure through the increase in labour supply and through the presence of wage subsidies. This will tend to increase employment for all types of workers and will counteract the effects of substitution on the non-treatment group.

Assessing the importance of substitution and of general equilibrium effects through wages or other channels is of central importance. Using the comparison between the pilot and control areas as described below, and assuming these areas are sufficiently separate labour markets from each other, we will be able to assess the extent to which substitution and other General Equilibrium effects combined are likely to be important "side-effects" of the program, at least in the short run.[16]

The available options for the choice of the comparison group depend on the type of evaluation being performed. When assessing the program from data on its National Roll Out, we are constrained to use ineligible individuals within the same area, for which we have chosen the age rule to define (in)eligibility. For the Pilot Study, however, the regional rule provides an additional instrument in the definition of the comparison group. We have used it in two ways, constructing two possible comparison groups: The first takes all eligible individuals living in all non-Pathfinder areas; The second selects all eligible individuals in the set of non-Pathfinder areas that most closely resemble the Pathfinder areas in a way detailed below. The goal of a careful choice of the comparison group is to satisfy a central assumption in non-experimental evaluation, which requires that the time trend evolve in the same way for treatments and controls.[17]

The aim of matching the areas is to achieve a match as close as possible with respect to labour market characteristics. The procedure

[16] See Heckman, Lochner and Taber (1998).
[17] See Blundell and Costa-Dias (2000), for example.

followed to match on labour market characteristics makes use of a quarterly time-series of the outcome variable from 1982 to just before the introduction of the New Deal, in January 1998. A measure of distance was then computed for each possible pair of Pathfinder and non-Pathfinder areas and the two nearest neighbours were chosen. Once the two nearest neighbouring areas have been chosen based on similarity of the labour market trends, we carry out our estimation (see Blundell, Costa-Dias, Meghir and Van Reenen, 2001, for details of these procedures).

The results from the New Deal pilot areas

To evaluate the impact of the New Deal we considered a number of different possible comparison groups, providing some insight on the possible size of indirect effects. These comparison groups were constructed either using older and hence ineligible individuals (25-30 mostly) in the pilot areas or individuals of the same age residing in the non-pilot areas. In addition we controlled for labour market history variables, age (when similar age groups are being compared), marital status, region and sought occupation.

The results, reported in Blundell, Costa-Dias, Meghir and Van Reenen (2001), indicate that after 4 months of treatment, the Gateway improved participants' exits into employment very significantly—all the estimators point to an impact of about 10-11 percentage points, with a standard error of 4-5 percentage points This effect is even more impressive if compared with the outflow rates of about 24 per cent of individuals in the treatment group over the similar four months period. However, this result is best placed in context when contrasted with the information from the New Deal Evaluation Database (NDED) concerning outflows into the subsidized employment option. It is estimated that the outflows into an employment option after 4 months of treatment sum up to 5.7 per cent of men joining the Gateway. Hence, what was supposed to be a period of pure job search assistance and counselling, in practice also involved offering wage subsidies to certain individuals. Subtracting this off the overall New Deal effect would give a "pure" Gateway impact (on outflows to unsubsidised employment) of about 4 per cent. This is likely to be a lower bound. The calculation assumes that there is essentially no deadweight of the employer subsidy and that the employment subsidy was targeted to the individuals who would not benefit from the job search assistance. If, on the other extreme, it is believed that the sub-

sidized jobs are being allocated to the most employable participants (and hence those who would have benefited from the job search assistance), then the amount of scaling down required might be small. Furthermore, the NDED will tend to find larger job outflows because of fewer missing values. Thus 4 per cent is a lower bound for the pure Gateway/job assistance effect. The method used to estimate the impact of treatment does not seem to substantially influence the results, reflecting some robustness of the estimates to the functional form assumptions.[18]

Finally the results obtained are very similar across different plausible comparison groups. These results should differ substantially if substitution of eligible for ineligible workers was a major factor. For example the results of comparing the 19-24 year olds to the 25-30 year olds within a pilot area would have been much larger than those obtained by comparing the 19-24 year olds in pilot and control areas. This did not happen, which we interpret to imply little or no substitution at the beginning of the programme. Of course substitution may well occur later. Moreover, substitution may have been masked by the effects of pressure on wages which could boost employment for both groups—although this is probably unlikely in such a short period of time when the programme was piloted in a limited set of areas.

Thus all results confirm that, during the Pilot period, the program had a significant positive impact on outflows to employment on the markets it has been implemented.

Results from the New Deal national roll out

Results from the National Roll Out show an implied effect of around 5.3 per cent on a pre-program base outflow of 25.8 per cent, and once more, the method used does not seem the affect the result significantly. Although this is still a substantial impact, it is about half the magnitude estimated for the Pilot period and should be compared to an outflow to the subsidized employment option of 3.9 per cent. These differences in size can be accounted for by a "program introduction" effect. In the first few months the program is operating, a very large increase in the flows to employment is observed, which then falls as the program matures.

[18] For robustness checks and the details of the evaluation methodology see Blundell et al. (2001).

In summary, the New Deal is a mandatory active labour market program affecting all young people claiming unemployment benefit for at least six months in the UK. The program offers a combination of treatments, particularly job assistance for four months and a wage subsidy paid to employers. The gateway period has been shown to have had some modest positive impacts, particularly if we are willing to believe that the outflows to the subsidised employment option should not be counted against the effects of the programme. In understanding the programme and comparing it other US programmes one should note some of its crucial properties: First, the program is mandatory. Refusal to participate results in sanctions. Mandatory, sanction-enforced schemes have often been found to be more effective than voluntary schemes. Secondly, the "disadvantaged youths" we consider are less disadvantaged than those treated in typical US programs (e.g. ex-offenders). To the extent that programs are more effective on those who are more job ready, one would expect to see more signs of a program effect in the UK than in the US.

3.2. The WFTC reform

To examine the WFTC reform we adopt an ex-ante simulation model developed in Blundell, Duncan, McCrae and Meghir (1999).[19] This is simply because the available household level data (the Family Resources Survey) is pre-reform. Some post-reform administrative figures are now available and we double check our predictions against these. The model appears to work well and the simulations point to many of the important aspects of designing and implementing an in-work credit program of this type.

The simulations focus on the two target groups for the WFTC reform: single parents and married couples with children using two samples from the British Family Resources Surveys (FRS). Nearly 50 per cent of currently working single parents were found to be in receipt of some Family Credit. For married couples with children this proportion is smaller, at around 16 per cent. However, the latter group is more than two and half times the size of the former.

[19] This work develops earlier structural labour supply simulation models by Hoynes (1996), for example. In particular, it allows for child care demands to vary with hours worked and it allows for fixed costs of work. It also accounts for take-up by incorporating welfare stigma following on from Keane and Moffitt (1998).

Table 1. WFTC reform simulations

Group	Number	Per cent
Single parents	34,000	2.20
Married women (partner not working)	11,000	1.32
Married women (partner working)	-20,000	-0.57
Married men, partner not working	13,000	0.37
Married men, partner working	500	0.30
Total effect	27,500	
Decrease in workerless families	57,000	

Source: Blundell, Duncan, McCrae and Meghir (2000).

As we have seen, the WFTC reform is designed to influence the work incentives of those families with low potential returns in the labour market. It does this via the increased generosity of in-work means-tested benefits. For single parents the WFTC does unambiguously increase the incentive to work. For couples, however, income effects from a working spouse created by the WFTC, can lead to a *lower* participation in the labour market. Table 1 presents an overall impact of the reform.

One can clearly see the reason for these shifts in participation from the earlier graphs of the potential impact of the WFTC on single parents' budget constraints. At or above 16 hours per week the single parent becomes eligible for WFTC (with any childcare credit addition to which she may be entitled). For some women this extra income makes a transition to part-time employment attractive. Nevertheless, the level of the aggregate behavioural response for single parents is perhaps lower than one might have anticipated given the potential cost of the WFTC reform.[20]

For married women the simulated incentive effect is quite different. There is a significant overall *reduction* in the number of women in work. The predominant negative response is clearly not one that is intended, but from the earlier budget constraint analysis one can easily see why. There will be a proportion of non-working women whose

[20] Blundell (2001a) reports a minor offsetting reduction in labour supply through a simulated shift from full-time to part-time employment among 0.2 per cent of the sample. This is consistent with a small (negative) income effect among some full-time single women, for whom the increase in income through the WFTC encourages a reduction in labour supply. Nevertheless, the predominant incentive effect among single parents could be said do be small but positive.

low earning partners will be eligible for the WFTC. The greater generosity of the tax credit relative to the current system of Family Credit increases household income. This increase in income would be lost if the woman in the household were to work. And for those women currently in the labour market, the WFTC increases the income available to the household if she were to stop working.

For the sub-sample of women whose partners do not work there is an overall increase in participation. The reason for this is more straightforward, and stems from the increased generosity of the basic WFTC relative to the current Family Credit system for those women who choose to move into work. Note that for this group the generosity of the childcare credit component of the WFTC is not an issue, since households only qualify for the childcare credit if both household members work 16 hours or more. There is of course potential for both members of an unemployed household to move into work in order to qualify for the WFTC including the childcare credit, but a joint simulation (not reported here) shows that such an outcome is virtually non-existent.

Some recent ex-post evidence

The WFTC was introduced for all new recipients in October 1999 and fully phased in by April 2000. From recent administrative caseload data[21], the introduction of the WFTC, and the substantial increase in generosity, appears to have had a marked effect on the number of people claiming in-work benefits. Indeed the caseload has risen by 30 per cent in the 12 months since May 1999.[22]

Obviously some of the change in WFTC caseload is due to the increased numbers of already working parents who qualify for WFTC due to its increased generosity. This alone cannot be taken as a measure of success in increasing employment. We can learn a little more by looking at administrative data on cross-benefit flows. Brewer (2001) breaks down the WFTC/FC caseload by their situation 12 months ago. This analysis shows that a large component of the caseload increase (around 75 per cent, taking the last 4 quarters of FC as a base-

[21] Department of Social Security, Client Group Analysis.

[22] There has also been a large increase in take-up of the Childcare Tax Credit compared to the childcare disregard under Family Credit. 111,000 families were receiving help with childcare costs in May 2000, a 156 per cent increase over 12 months. The average amount of costs claimed was GBP 32 a week. But although a large increase, this is still only 10 per cent of the total WFTC caseload

line) since October 1999 has come from people who were not claiming any means-tested benefits or tax credits 12 months before. Both these two facts are consistent with the increased entitlement of the WFTC compared with FC.

Taken together with our simulation results these administrative statistics suggest that the impact of the WFTC reform on employment among low-income families in the UK has been positive but modest. This supports our overall view that the workings of the tax and benefit system in the UK together with the increased generosity to workless families with children, mean that changes to financial work incentives from in-work benefit reforms are relatively small.[23]

4. Concluding assessment

In this paper we have identified two alternative types of labour market interventions that both attempt to enhance the labour market attachment and earnings of low skilled and low experienced workers. The first is an individually based active labour market program (ALMP) that assists in job search and provides the chance of a wage subsidy once employment is found. Eligibility typically depends on a minimum duration on unemployment insurance or welfare, the subsidy is typically individually based and time limited. The second type of labour market policy is an earned income tax credit. This provides an income supplement for those on low income or low earnings. In this case the level of the supplement is typically means tested according to family income and varies with family size and composition. It is also typically not time-limited and has no welfare or UI duration eligibility.

Both aim to enhance the earnings and labour market attachment of low-income individuals. Is one design better than another in achieving this aim? Is one more suited to a particular group? To conclude this paper we briefly consider the issues that surround the choice of design for such policies. As we have seen the appropriate design will depend on the nature of the target group and a detailed knowledge of their labour market attachment both cyclically and secularly. It will

[23] One caveat to this is the possible impact of childcare credit. Under WFTC this is a generous scheme available only to those in work (requiring both parents in a couples to work at least 16 hours) but, as we have indicated, it is currently taken up by only a small fraction of WFTC recipients. If participation in this part of the WFTC program was to expand significantly it could further encourage labour supply among those low income parents currently who are currently out of work and claiming Income Support.

require a thorough understanding of the labour supply behaviour of each group and the changing demand for the type of labour supplied by these target groups.

One principal issue that comes out of our discussion is whether to 'time limit' the programme. Most ALMPs are time limited but the large majority of earned income tax credit schemes are not.[24] For example, the British New Deal is limited to a fixed time period while receipt of the WFTC is not. This aspect of the programme design affects the incentives for self-sufficiency as well as the incentives for wage progression. For example, a time limited programme may attenuate the negative disincentives for human capital accumulation and in fact may reinforce such incentives.[25] However, as the time limit becomes exhausted it may place individual's back on low earnings or lead them to return on to welfare.[26] On the other hand an indefinite means tested/tax credit programme generates the incentive to reduce human capital accumulation and may thus create a culture of dependency on the programme.

The programmes we have discussed here have relatively complicated implications for human capital investment incentives. An earned income tax credit programme is likely to reduce the incentives for such accumulation since it provides a downward insurance on earnings. On the other hand the success of the programme depends partly on the ability of individuals to improve their earnings and hence escape low pay. This depends on the extent of passive learning by doing versus active on the job learning. There is little direct evidence on this. However, from other work (Gladden and Taber, 2000; Meghir and Whitehouse, 1996; Dustmann and Meghir, 2001, for example) we know that wage progression for low skill workers is low, making it very unlikely for people to escape low pay and hence exit a programme such as WFTC through wage progression due to enhanced experience.

A possible solution to this would be to encourage training. For example, this occurs in the New Deal programme. The question is whether training subsidies for private sector training would enhance wage growth for individuals on programmes such as WFTC. There is

[24] The Canadian SSP is an example of an earned income tax credit that is time limited (see Card and Robins, 1998).
[25] See Cossa, Heckman and Lochner (1999).
[26] Grogger and Michalopoulos (1999) and Grogger (2000) review the recent evidence.

very little experience on this. However it seems that private sector training can be quite effective.[27] The problem is that this conclusion may not carry over to those who are not selected for treatment in the absence of a subsidy. Generally Government sector programmes do not work well.[28]

Earned income tax credits, like the WFTC, are targeted via a means test. Typically ALMPs are not *means tested* but targeted to the low skilled. Means testing generates implicit tax rates. The result of which is to create work disincentives for some individuals (while by the design of WFTC) to improve incentives for others. Obviously the lack of a time limit has to go hand in hand with some eligibility criteria to reduce the potential caseload. The precise way that these aspects are designed is crucial for the eventual success of a policy. [29] The advantage of means testing is of course that the one can target the programme better; however, the resulting distortions should not be ignored. [30]

In summary, it seems that time limits and targeting have their place in the design of programmes to enhance labour market attachment and earnings. However, given the slow rate of wage progression that can be expected for lower skilled workers, the limit must be sufficiently long to ensure reasonable progression and attachment. A better understanding of how wage progression evolves for low skilled workers would be extremely informative in this respect. It also seems that privately provided but accredited on-the-job training can also be an advantage. We have stressed the drawbacks of means testing but again it is possible that a combination of means testing and time limits can achieve a reasonable balance. However, few programmes with this design exist—the Canadian Self Sufficiency Project being an interesting but rare example. Care clearly needs to be taken to understand the interactions with other social programmes and the tax system, as well as the overall impact on family income and poverty. A deeper knowledge of the magnitude of the incentives for wage progression and for labour supply and their likely magnitude among the target groups for these policies remains an urgent area for empirical research.

[27] See Blundell, Dearden and Meghir (1996).
[28] See Martin (1998), for a review.
[29] Blundell (2001b), investigates the aspects of this trade off in more detail.
[30] Blundell and MaCurdy (1999) survey the labour market distortions and their likely magnitude.

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