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What works, who works? The impact of active labour market programmes on the employment prospects of young people in Ireland

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discussion paper

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What Works, Who Works?

The Impact of Active Labour Market Programmes
on the Employment Prospects of Young People
in Ireland

Philip O'Connel and Fran McGinnity

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Abstract

The international literature on active labour market programmes has generated inconsistent and confusing, but generally pessimistic, conclusions regarding their impact on the employment prospects of participants. This paper argues that much of this confusion is due to a general lack of attention to qualitative differences between programmes. The paper develops a typology of active labour market programmes, differentiating between training and employment measures on the basis of their orientation to the labour market and argues that programmes with a strong orientation to the market are more likely to improve the job prospects of participants than those characterised by weak market linkages. That hypothesis is tested using the results of a survey of young participants in labour market programmes in Ireland. The analysis shows that programmes with strong linkages to the labour market both enhance the employment prospects of their participants and increase their earnings, even when we take account of relevant individual characteristics such as education and previous labour market experience.

Zusammenfassung

Die internationale Literatur hat bisher inkonsistente und verwirrende, aber in der Regel pessimistische Schlußfolgerungen hinsichtlich der Beschäftigungswirkung für Teilnehmer in arbeitsmarktpolitischen Maßnahmen gezogen. In diesem Beitrag wird argumentiert, daß ein Großteil dieser Konfusion darauf zurückzuführen ist, daß den qualitativen Differenzen von Maßnahmen zu wenig Aufmerksamkeit geschenkt wurde. Es wird daher eine Typologie aktiver Arbeitsmarktpolitik entwickelt, bei der die Weiterbildungs- und Beschäftigungsmaßnahmen nach ihren Marktbezügen unterschieden werden. Maßnahmen, die sich an den Bedürfnissen des Marktes orientieren, verbessern die Beschäftigungsperspektiven der Teilnehmer deutlich mehr als Maßnahmen mit schwacher Marktorientierung. Diese These wird - unter Verwendung von Kontrollgruppen - durch eine ökonometrische Analyse von jungen Teilnehmern in Arbeitsmarktmaßnahmen in Irland getestet und bestätigt: Maßnahmen mit starker Marktorientierung erhöhen sowohl die Beschäftigungschancen als auch die Löhne der Teilnehmer, selbst wenn man die relevanten individuellen Merkmale wie Bildung und Arbeitsmarkterfahrung in Betracht zieht.

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1. Introduction: Active Labour Market Policies

With persistent unemployment throughout the advanced industrial countries there has been a marked shift in labour market policies from passive support for unemployed workers to active measures providing training and temporary employment subsidies. In Europe active labour market policies have moved to centre stage in the European Commission's strategy to combat unemployment, and such policies now account for very sizeable and growing expenditures in most European countries. This strategy stems from the belief that high unemployment and other labour market problems are neither temporary nor simply due to insufficient demand, but reflect underlying structural problems. This shift in emphasis is reflected in the policy recommendations of the OECD (1990) to shift labour market expenditures from passive to active measures which mobilise labour supply, improve the skills and competencies of the labour force, and strengthen the search process in the labour market. In Europe, where labour market problems have been particularly intense and intractable, there has been the additional concern that education and training systems have failed to respond to rapid changes in the technology and organisation of production, leading to skill shortages and mismatches, which undermine competitiveness, leading to sluggish growth in both output and employment (European Commission, 1993). In Ireland, which has suffered from mass unemployment throughout the last two decades, labour market policy has closely followed international developments, and Ireland is one of the leading countries in the proportion of national income spent on active measures (OECD, 1996).

Despite these policy initiatives, there is some controversy about whether active labour market policies have any impact in combating unemployment or even improving the employment prospects of those who participate. The international literature suggests that the macro-economic impact of such policies in creating additional employment is limited, with the exception of direct job creation measures. Training programmes may generate additional employment under conditions of skill shortages or mismatches (see Calmfors, 1994 and OECD, 1993 for reviews of the literature on macro-economic effects).

This paper focuses on the impact of active labour market policies on the employment prospects of their participants. At this, the micro-level, the main interest is in the extent to which such schemes serve to redistribute employment opportunities, particularly to less advantaged labour market participants. A wide ranging review of 51 studies of the effectiveness of active labour market programmes in various countries conducted by the OECD (1993) suggests that their effectiveness in improving employment chances is limited.

With regard to broadly targeted training programmes for unemployed adults - the most common category of active labour market programme - the review found "remarkably meagre support for a hypothesis that such programmes are effective" (p. 58). The review did, however, suggest that training targeted specifically at disadvantaged did yield more positive results. With regard to public subsidies to employment or self-employment in the private sector, the review suggested high levels of dead-weight (where the outcome would have been obtained in the absence of the subsidy), substitution (where programme participants substituted for non-participants in recruitment or business start up), and displacement (where employed workers are displaced from their jobs by "in-coming" programme participants). The OECD concluded that there was little to justify broad targeting of such subsidies, although specific targeting could be justified if the policy objective is to redistribute employment opportunities. Finally, the review suggested that direct job creation schemes were less likely to suffer from high dead-weight than employment subsidies - since most participants would have few alternative employment opportunities - and that programmes can be designed to minimise substitution and displacement. Nevertheless, the evidence is inconclusive regarding the impact of broadly targeted public works, although as in the case of training, positive employment effects have been found for specialised schemes designed for particular groups.

The OECD review highlights the importance of differentiating between different types of training and employment schemes - not all active labour market programmes are of equal value to their participants. However, most previous empirical research has not taken account of qualitative differences between active labour market programmes, partly because many empirical studies of the effects of programmes have focused on a single scheme - e.g. the Youth Training Scheme in Britain (Dolton, Makepiece and Treble, 1994; Main and Shelly, 1994) - or on the duration of training (Torp, 1994).

Little empirical work has been conducted, to date, to compare the effectiveness of the range of active labour market programmes in Ireland. Breen (1991) analysed the effectiveness of training and employment schemes among a cohort of young labour market participants during the mid-1980s. Breen's data, drawn from a five-year follow-up survey of a cohort of 1981-82 school leavers, allowed him to compare post-programme employment of training and employment participants with a comparison group of individuals who did not participate in such programmes. The data set did not, however, allow him to analyse the effects of programmes among adult labour market participants, and he was unable to distinguish between different types of training and employment programmes. Breen showed that the effectiveness of training and employment programmes for this group was heavily influenced by sex, education and prior labour market experience. He found that both training and employment programmes conferred a positive short-term benefit in improving the participants' chances of getting a job, and that while this effect

endured over a longer term (12 months) among participants in employment programmes, it disappeared among participants in training programmes.

The present paper attempts to remedy the gaps in our knowledge of the impact of different types of labour market programme on participants' subsequent experiences in the labour market. The paper first develops a typology of active labour market programmes, differentiating between different measures on the basis of their orientation to the labour market. It then analyses the effects of different programme types on the employment prospects of a sample of young programme participants and a comparison group of non-participants in Ireland.

A Typology of Active Labour Market Programmes

The expansion of active labour market policy, in Ireland as in other countries, has led to the development of a plethora of labour market measures for the unemployed, providing a range of training courses and employment subsidies to various target groups with differing eligibility criteria. The OECD classification of active labour market policy consists of five broad categories:

- (1) Public employment services, which include information, placement and counselling services for the unemployed, and with which the present paper is not concerned;
- (2) Labour market training, including measures to enhance the skills of both the employed and the unemployed;
- (3) Youth measures, including: (a) training and work experience to facilitate the transition from school to work, and (b) apprenticeship and other forms of continuing training;
- (4) Subsidised employment, including both direct job creation measures as well as subsidies to the recruitment of the unemployed into private sector jobs and subsidies to self-employment of the unemployed; and
- (5) Training and employment measures targeted specifically at the disabled.

This classification system, compounding different types of intervention and diverse target groups may be attractive to administrators, but it is of little use to researchers attempting to understand labour market processes. Cutting across what is, indeed, a plethora of differing programmes are two fundamental distinctions which can be related to the functioning of the labour market:

- (1) The conventional distinction between supply-side measures, those which are intended to enhance participants' skills and thus equip them to compete in the market for jobs, and demand-side measures such as direct job

creation measures or recruitment subsidies to companies which are aimed at increasing the demand for labour; and

- (2) A broad distinction based on the market orientation of programmes. Thus, training programmes with a weak orientation to the market would include general training and rehabilitative education, while more market-oriented training would be designed to meet specific skill needs in the labour market. Similarly, employment programmes with a strong labour market orientation subsidise employment in the open labour market, while employment programmes with a weak attachment to the labour market would be more akin to conventional public works programmes.

These two distinctions give rise to the fourfold typology of active labour market programmes outlined in Table 1.

Table 1
A Typology of Active Labour Market Programmes

<i>Labour Market Leverage</i>	<i>Market Orientation</i>	
	Weak	Strong
Supply - Training	General Training	Specific Skills Training
Demand - Employment	Direct Employment Schemes	Employment Subsidies

General Training includes a range of measures to provide basic or foundation level training in general skills. Most of the programmes in this category are designed for those with poor educational qualifications experiencing difficulties in the labour market. Included in this group also are second-chance education programmes; training courses designed for women seeking to return to the labour market; and community training programmes, oriented toward the development of community resources and responses to unemployment.

Specific Skills Training courses provide training in specific employable skills to meet skill needs in local labour markets. The distinction between General and Specific Skills Training is not simply a question of the level of training, although the latter may often be at a more advanced level than the former. Specific Skills Training can cover a wide range of skill levels - in the

Irish case, for example, the category includes courses in retail sales as well as advanced courses in Computer Aided Engineering. What these training courses share in common is that they are designed to meet specific skill needs in particular occupations and industries.¹

Direct Employment Schemes These programmes consist of subsidised temporary employment in the public or voluntary sectors - variants of the conventional public works programmes. Most work in this type of programme is of a nature which would not be commercially viable - e.g. environmental improvements, provision of community-based child care.

Employment Subsidies These provide subsidies to the recruitment or self-employment of unemployed workers in the private sector. Typically they are targeted on those who would otherwise be hard to place in employment - e.g. the long-term unemployed.

Our hypothesis is that programmes with a strong orientation to the open labour market are more likely to enhance the employment prospects of participants than programmes with weak market linkages. Thus skills training programmes should have a greater positive impact on subsequent employment to the extent that they provide participants with skills that meet identified needs of employers. Similarly, employment subsidies are designed to insert participants in real jobs in the marketplace, with the result that the work experience and skills learned on the job are likely to be closer to those in demand in the labour market than work experience or skills learned while participating in direct employment schemes on projects which, by their nature, are not viable in the market.

This approach to the impact of different programme types can be interpreted in terms of Thurow's (1975) job competition model, in which, with a distribution of job opportunities which is fixed at any point in time, candidates can be ranked on the basis of employers' assessments of their employability - including the perceived cost of training, wage costs, potential employment stability, and other factors likely to influence productivity. In these terms, the expected costs of training new recruits who have undertaken specific skills training should be lower than the costs of training either those who have undertaken general training or other candidates with similar backgrounds but no labour market training, with the result that specific skills training can move candidates towards the head of the labour queue. Similarly, employers would be expected to have greater confidence in the quality of work experience and

¹ Our distinction between general and specific skills training measures for the unemployed should not be confused with Becker's (1975) distinction. Becker's concept of specific training, usually applied to the training of employed workers, refers to training that is specific to a single employer, while his concept of general skills refers to broad skills which are portable between different employers. Thus, both of our training categories would be included within Becker's category of general training.

related on-the-job training gained in subsidised private sector jobs than in non-market job-creation schemes, with the result that wage subsidies should advance participants further up the labour queue.

It is not clear *a priori* whether supply or demand side measures are more likely to enhance participants' employment prospects. Within market oriented programmes, human capital theory would suggest that training in skills to meet identified market needs, in enhancing the skills and competencies of participants, should render them more productive, and therefore, more employable. On the other hand, wage subsidies could be regarded by employers as a more flexible means to offset both training and wage costs of new recruits. The relative advantages of supply *versus* demand side measures may depend on the particular features of labour market segments, and in the, at best, semi-skilled segment of the labour market - with which we are mainly concerned when we are dealing with active labour market policies - the advantages of wage subsidies may well outweigh those of skills training.

Many of the inconclusive and inconsistent results in the international literature discussed above may be due to a general lack of attention to qualitative differences between programmes. Much of the existing research has tended to treat active labour market policies as a "black box", without enquiring too deeply into what happens on schemes. Differentiating between programmes on the basis of their orientation to the labour market represents one strategy to take account of qualitative differences between programmes.

While this approach has not, to our knowledge, been investigated previously, it is possible, nevertheless, to find some support for the hypothesis that market oriented programmes are more effective in enhancing their participants' employment prospects in studies which have included variables intended to measure what goes on within programmes in explaining why some programmes work better than others. Thus, in the British case, Payne, Lissenburgh, White and Payne (1996) found that participation in Employment Training, a programme combining work placement with training - improved the chances of getting a job, while the effects of Employment Action, in which the emphasis is on placement, mainly on voluntary projects, were very small. They found that the time spent on employer placements was one of the most important factors in increasing the probability of getting a job. Both of these effects are consistent with the idea that market orientated programmes are more effective. In the Netherlands de Koning (1993) found that receipt of training while participating in a wage subsidy scheme (therefore, market related training) increased the probability of being employed subsequently.

2. The Labour Market Context

Ireland suffered from acute and persistent labour market problems throughout the 1980s and into the 1990s. Unemployment increased from 7% of the labour force in 1980 to almost 17% in 1987, and has never fallen below 13% since 1983 (O'Connell and Sexton, 1994). Two features of Irish unemployment are of particular concern. First, the labour market for young people was particularly unfavourable over the last decade, with the result that the unemployment rate for those aged 15-24 years was almost 28% in 1993, double the rate for those aged over 25. Second, as unemployment soared over the course of the 1980s, so also did long-term unemployment. *Labour Force Survey* data show that in 1983 just under 35% of the unemployed had been out of work for at least one year. This proportion had increased to over 60% by 1994 (Sexton and O'Connell, forthcoming).

The main response of the Irish state to the emergence of mass unemployment has been the development and expansion of active labour market policies. Ireland is one of the leading countries in the OECD in the share of national income spent on active labour market policies. In 1994 expenditure on such schemes accounted for almost 1.4% of Gross National Product, compared to an OECD average of 1% (Sexton and O'Connell, forthcoming). In that year, a total of almost 93,000 individuals participated in such programmes, equivalent to 6.6% of the labour force, or to almost 43% of the total number unemployed in 1994.² Ireland is, therefore, a particularly good test case in which to examine the impact of such policies and to assess the efficacy of the policy prescriptions which dominate the official response of the European Union to unemployment.

3. The Data

The Post-Programme Follow-up Survey of participants was commissioned by the Department of Enterprise and Employment and the Commission of the European Union with the objective of assessing the impact of active labour market programmes on their participants. The European Commission is the source of a very significant share of funding for most training and employment schemes in Ireland. The population for the survey was defined as all those leaving training and employment programmes in the period from April 1 to July

² These proportions are simply indicative of the scale of provision: a substantial proportion of participants in active labour market programmes are drawn from among those not actively participating in the labour force, including young labour market entrants, particularly early school leavers, and women returning to the labour force after an interruption in labour force participation.

31, 1992. This ensured that all respondents had left their programmes at about the same point in time, and therefore experienced similar labour market conditions.

The sample of 4,654 programme participants was drawn from administrative records of the population of almost 20,000 individuals who left programmes during the target period in 1992. The sample was stratified by programme and target group to allow comparison between 17 different programmes and it included both those who completed programmes and drop-outs who left programmes prior to their scheduled completion date. Fieldwork was conducted between April and September 1994 by face-to-face interview. A total of 3,267 interviews were completed, representing a response rate of about 70%.

To assess the net effectiveness of programmes, we need more than just the placement rates of participants - we also need to estimate the extent to which, if any, participation in a programme improves participants' post-programme labour market outcomes - e.g. probabilities of getting jobs - above what they would have been if the participants had not participated. For younger participants, we were able to compare post-programme outcomes with a comparison group of unemployed young people who had not participated in a training or employment programme. Our sample of nonparticipants was drawn from two cohorts of school leavers who left school in the academic years 1990-91 and 1991-92. The original source of the sample was the annual *School Leavers Surveys* conducted in spring 1992 and spring 1993, respectively, of those who had left second-level education in the previous academic years. From the two *School Leavers Survey* samples were selected those who had not, by the time of the surveys, participated in any state-run training or employment schemes. This generated a sample of 600 school leavers, and of these, 485 were re-interviewed in Summer 1994 to collect a record of labour market and training experiences over the entire period since they left school. From this sample were selected the 246 individuals who were unemployed in July 1992, one month after the last of them would have left school. This constitutes the "risk set" among the comparison group, comparable with programme participants, all of whom were at risk of unemployment immediately after leaving their programmes. Virtually all of the school leavers sample were aged under 23 years, so the analysis in this paper is confined to a comparison of 1296 young programme participants (all aged under 23) with the 246 nonparticipants in the risk set.

4. The Effects of Programme Participation

The Probability of Employment

The survey recorded employment status for each month intervening between the time the participant left the programme and the time of the interview. For the participant group we timed their labour market experiences from the month they left their programmes. Defining a starting point for participants is more problematic, but, for this analysis, we timed their labour market experience from July 1992 - towards the end of the exit period for the participant sample, and one month after the last of the 1992 school leavers left school.

Figure 1
Proportion at Work by Programme Type

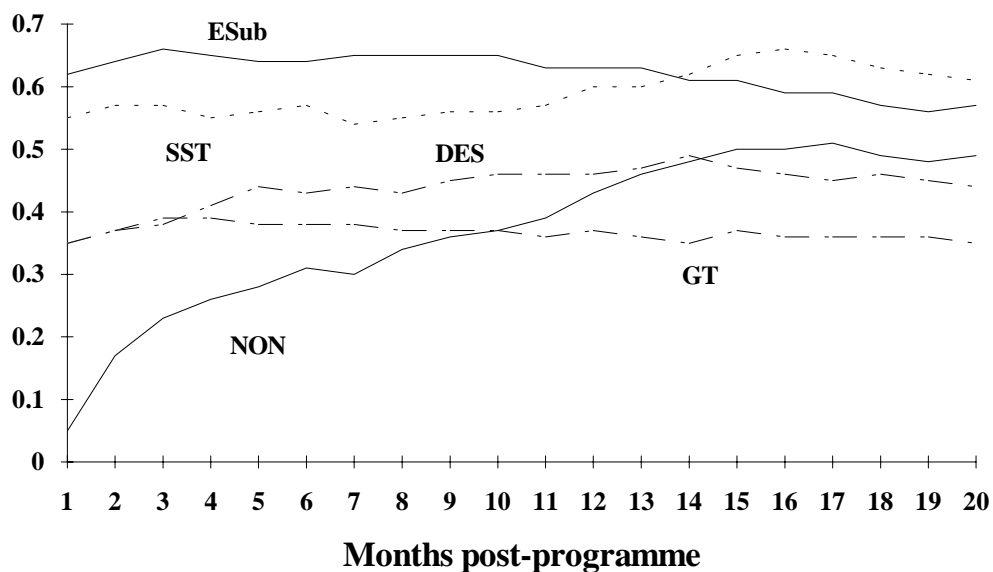


Figure 1 shows the proportion of participants and non-participants at work for each of the first 20 months post-programme in the case of participants, and from July 1992 to April 1994 in the case of non-participants. For ease of reference we will designate this the “post-programme” period throughout this paper. Among participants the proportion at work remained relatively stable throughout the period. Among non-participants, however, the rate of employment increased steadily, from about 5% in July 1992 to just under 50% after 15 months, and then levelled off at about that rate for the remainder of the period under consideration. The steady increase in employment among the non-participant group over the first 15 months reflects the “natural” absorption

rate of young people into the labour market in the absence of training or employment initiatives.

Participants in Skills Training and Employment Subsidy schemes achieved substantially higher rates of placement in employment over the entire period than those in General Training and Direct Employment Subsidies. Participants in Skills Training and Employment Subsidy schemes also achieved consistently higher placement rates than the non-participant group. One of the interesting features revealed by the graph is that although in the first few months participants in any programme fared better in employment terms than the comparison group, after 12-15 months this general advantage disappears. After 18 months a higher proportion of participants in Employment Subsidies and Skills Training were in employment than non-participants, but a higher proportion of non-participants were at work than participants in either General Training or Direct Employment Schemes.

Table 2
Post Programme Labour Market Performances -
Comparing Programme Participants and Non-Participants

	<i>Short-term Effect: At Work within 2 mths</i>	<i>Long-term Effect: At Work after 18 mths</i>	N of Cases
General Training	.38	.36	551
Specific Skills Training	.59	.63	446
Employment Subsidies	.64	.57	115
Direct Employment Schemes	.38	.46	164
All Participants	.48	.49	1296
Non-Participants	.17	.49	246

To summarise the profile of post-programme labour market outcomes, Table 2 presents the proportion at work of participants and non-participants at two different points in time. We regard the proportion at work within 2 months as the short-term employment effect, and the proportion at work after 18 months as the long-term employment effect. The table presents similar findings to the graph above - whereas all programmes seem to have improved employment chances in the short-term, only those who participated in Employment

Subsidies and Specific Skills Training maintained this advantage in the longer term.

Up to this point we have focused on the chances of being at work at particular points in time. Dolton, Makepiece and Treble (1994) argue that measuring the probability of employment at a single point in time does not preclude the possibility of differing effects at other post-programme durations, and that even analysis of observations at multiple durations, as in Card and Sullivan (1988) and the present study, does not address the question of how one interpolates the remaining distribution of outcomes. Korpi (1994) argues that employment instability is associated with precarious jobs in the secondary labour market - the labour market segment for which many young participants in active labour market programmes are destined - and he finds that programme participation increases the duration of subsequent employment. While Figure 1 suggests that the programme differentials are sustained over time, we are, nevertheless, interested in other aspects of participants' post programme labour market experience, and we introduce two additional measures designed as proxy measures to capture the quality of that experience. The first of these measures - the proportion of time at work - is the proportion of time elapsed between leaving a programme and being interviewed for the survey (about 20-24 months) that was spent in employment (i.e. number of months in all post-programme jobs, divided by the number of months elapsed since leaving a programme). We know that some participants may have obtained a job after leaving a programme but lost it again after a short period, while others may have obtained a job and retained it throughout the observed post programme period. Our measure of the proportion post-programme time in employment is designed to capture such important differences in the stability of post programme employment. Second, we expect substantial variation in the quality of jobs obtained, and take account of this variation by measuring total income from each job held during the post-programme period, again standardised by the number of months elapsed between leaving a programme and being interviewed for the survey (i.e. monthly income multiplied by duration of job(s), divided by number of months elapsed after leaving a programme).

Table 3
Post-Programme Labour Market Employment and Earnings -
Comparing Programme Participants and Non-Participants

	Proportion of Time in Employment	Income from Employment
General Training Specific Skills Training	.33	£137.87
Employment Subsidies	.55	£261.02
Direct Employment Schemes	.56	£218.17
All Participants	.40	£179.75
Non-Participants	.44	£192.90
	.35	£145.32

Table 3 shows the proportion of time in employment and income from employment for participants and non-participants. Compared to the participants group as a whole, non-participants spent less time in employment, and had a lower income from employment than non-participants. This was partly due to a slower take-up of employment, as shown in Figure 1 above - for example, 6 months post-programme 48% participants were at work, compared to 31% of non-participants. Participants on General Training, however, scored below the average for both participants and non-participants in terms of proportion of time worked and income from employment. Outcomes for participants on Direct Employment Schemes fell between the averages for participants and non-participants.

5. The Net Effects of Programme Participation

5.1 The Probability of Employment

Up to this point we have simply looked at average outcome indicators for different programme types. Outcomes for individuals are expected to vary not only by programme type but also on the basis of personal characteristics of individuals - in particular, educational qualifications and prior labour market

experiences, including the duration of unemployment prior to programme participation. Thus, some of the differences in outcomes between different programme types, and between participants and non-participants are due to differences in the personal characteristics of individuals - i.e. to compositional differences between groups. To take account of these differences in individual characteristics we modelled employment probabilities with a logistic regression analysis of the short and long-term probability of employment for participants and non-participants. We specified the following variables:

<i>Programme</i>	Four dummy variables, coded 1, respectively for programme participation in <i>General Training</i> , <i>Specific Skills Training</i> , <i>Employment Subsidies</i> and <i>Direct Employment Schemes</i> . The reference category is the control group, non-participants.
<i>Sex</i>	A dummy variable, coded 1 for Female, 0 for Male
<i>Age</i>	A continuous variable measured when the participants left the programme or at July 1992 in the case of non-participants.
<i>Unemployment</i>	Unemployment duration is measured as the number of months continuously unemployed prior to programme participation, or prior to July 1992 in the case of non-participants.
<i>Education:</i>	Two dummy variables: <i>Junior Cert</i> , coded 1 for those who had taken Junior Certificate level examinations, and <i>Leaving Cert</i> for those who had taken Leaving Certificate examinations (including those who had attended Third Level). The reference category is those with no qualifications.
<i>Drop-outs</i>	Two dummy variables: <i>Drop-out to job</i> was coded 1 for those who dropped out of a programme to take a job; <i>Drop-out - other</i> was coded 1 for those who had dropped out for any other reason.

Our first logistic regression model addresses the question of whether participation in any active labour market programme has an impact on subsequent employment chances by simply comparing the entire group of

participants with the comparison group, controlling for individual characteristics and labour market experiences. Equation (1) is a model of short-term effects, equation (2) of long-term effects.

Table 4
Log-Odds of Obtaining a Job:
Comparing Programme Participants with Non-Participants

Equation:	(1) Short-Term		(2) Long-Term	
	Coefficient	Standard Error [t-ratio]	Coefficient	Standard Error [t-ratio]
Constant	-3.156***	0.748 [-4.22]	-2.915***	0.719 [-4.05]
Participation	1.685***	0.191 [8.82]	0.302	0.157 [1.92]
Female	-0.373**	0.119 [-3.13]	-0.118	0.114 [-1.04]
Age	0.045	0.043 [1.05]	0.101*	0.041 [2.43]
Junior Cert.	0.798***	0.181 [4.40]	0.744***	0.175 [4.24]
Leaving Cert.	1.187***	0.200 [5.95]	1.471***	0.191 [7.70]
Unemployment Duration	-0.035***	0.010 [-3.42]	-0.043***	0.010 [-4.29]
Dropout to job	2.445***	0.363 [6.73]	0.862***	0.242 [3.56]
Dropout - other	-0.940***	0.229 [-4.11]	-0.835***	0.225 [-3.71]
-2 Log-likelihood	1734.999		1862.825	
Chi Squared	289.121		204.071	
N of Cases	1692		1703	

* => P < .05, ** => P < .01, *** => P < .001

In the short term, participation in any programme had a positive and significant effect on the probability of employment. The effects of the individual level variables are largely as expected. Women were less likely to find work than men. Age had no significant effect. Duration of unemployment (or before July 1992 in the case of non-participants) had a negative and significant effect on post-programme employment probability, as did dropping out of a programme for reasons other than to take a job. Both measures of educational attainment had positive and significant effects, as did dropping out of a programme to take a job.

In Equation (2), however, the effect of participation is non-significant, suggesting that, over the longer term, there was no significant difference between the employment probabilities of participants and non-participants. The results also show that the effect education and prior unemployment duration were maintained. The effect of gender was eliminated over the long-term, while age had a small positive effect on employment chances. The results of this simple comparison of all participants with non-participants would lend credence

to the view that participation in active labour market programmes does not improve the employment prospects of participants, particularly over the long term. However, the models presented in Table 4 effectively average out the effects of different programme types and, therefore, take no account of the differing outcomes from different programmes that we have seen above.

Table 5
Log-Odds of Obtaining a Job:
Comparing Supply and Demand-side Measures

Equation:	(3) Short-Term		(4) Long-Term	
	Coefficient	Standard Error [t-ratio]	Coefficient	Standard Error [t-ratio]
Constant	-3.060***	0.751 [-4.07]	-2.870***	0.722 [-3.98]
Training	1.645***	0.193 [8.51]	0.279	0.160 [1.75]
Employment Schemes	1.856***	0.227 [8.19]	0.393*	0.197 [1.99]
Female	-0.395**	0.120 [-3.29]	-0.129	0.115 [-1.12]
Age	0.040	0.043 [0.92]	0.098*	0.042 [2.36]
Junior Cert.	0.801***	0.182 [4.41]	0.745***	0.176 [4.24]
Leaving Cert.	1.201***	0.200 [6.00]	1.477***	0.191 [7.72]
Unemployment Duration	-0.035***	0.010 [-3.45]	-0.043***	0.010 [-4.30]
Dropout to job	2.463***	0.364 [6.77]	0.870***	0.242 [3.60]
Dropout - other	-0.947***	0.229 [-4.13]	-0.839***	0.225 [-3.72]
-2 Log-likelihood	1688.576		1824.560	
Chi Squared	335.543		242.336	
N of Cases	1692		1703	

* => P < .05, ** => P < .01, *** => P < .001

We argued in Section I that there are important qualitative differences between programmes, and that any attempt to measure the effectiveness of programmes must take those qualitative differences into account. Table 5 shows the results of a pair of logistic equations estimating short- and long-term employment chances, but distinguishing between training and temporary employment schemes. Equation (3) shows that the short-term employment effects of both training and employment programmes are positive and significant. Equation (4), however, shows that the long-term effects of participation in training programmes, while positive, is non-significant, while participation in employment schemes is positive and significant and significant, albeit at only the P<.05 level. The effects of the other individual level variables in the model are similar to those reported in Table 4. This pattern of effects is similar to those found by Breen (1991), who analysed the effectiveness of training and employment schemes among a cohort of young labour market

participants in Ireland in the mid-1980s. Breen also found that training and employment schemes improved the short-term employment chances of getting a job, but that only employment schemes had a significant positive effect after 6 months. Breen's data did not, however, allow him to distinguish between different types of training and employment schemes. Our data does allow such distinctions, and in Table 6 we present the models for employment chances, distinguishing between programmes on the basis of the strength of their orientation to the labour market.

Table 6
Log-Odds of Obtaining a Job:
Full Classification of Programme Types

Equation:	(5) Short-Term		(6) Long-Term	
	Coefficient	Standard Error [t-ratio]	Coefficient	Standard Error [t-ratio]
Constant	-2.763***	0.774 [-3.57]	-2.557***	0.740 [-3.46]
General Training	1.253***	0.212 [5.90]	-0.114	0.180 [-0.63]
Specific Skills	1.992***	0.205 [9.73]	0.648***	0.175 [3.70]
Employment				
Subsidies	2.521***	0.286 [8.83]	0.853***	0.254 [3.35]
Direct Employment				
Schemes	1.335***	0.253 [5.28]	-0.011	0.226 [-0.05]
Female	-0.275*	0.123 [-2.23]	-0.032	0.118 [-0.27]
Age	0.029	0.044 [0.67]	0.087*	0.042 [2.05]
Junior Cert.	0.620***	0.188 [3.31]	0.582**	0.181 [3.22]
Leaving Cert.	1.046***	0.209 [5.00]	1.323***	0.199 [6.67]
Unemployment				
Duration	-0.035***	0.010 [-3.40]	-0.043***	0.010 [-4.21]
Dropout to job	2.651***	0.370 [7.17]	1.042***	0.250 [4.17]
Dropout - other	-0.884***	0.235 [-3.76]	-0.750**	0.229 [-3.28]
-2 Log-likelihood	1688.576		1824.560	
Chi Squared	335.543		242.336	
N of Cases	1692		1703	

* => P < .05, ** => P < .01, *** => P < .001

Equation (5) estimates short-term employment chances. The positive and significant coefficients for the four programme types indicate that participants in any programme were more likely to find a job in the short-term than non-participants, and that participants Skills Training or Employment Subsidies enjoyed better employment prospects than those in General Training or Direct Employment Schemes, even when we control for the effects of individual characteristics and prior unemployment. These findings are consistent with the

placement rates shown in Figure 1 and Table 2. The effects of the other variables are, again, largely as expected. Women were somewhat less likely to find employment immediately after a programme, age had no significant effect. Duration of unemployment before programme participation (or before July 1992) had a negative and significant effect on employment chances, as did dropping out of a programme for reasons other than employment. Both measures of educational attainment had positive and significant effects, as did dropping out of a programme to commence employment.

Equation (6) estimates the long-term effects of participation. The effects of General Training and Direct Employment Schemes are reduced to non-significance. The long-term effects of Skills Training and Employment Subsidies are substantially reduced, but nevertheless remain positive significant. Equation 6 thus indicates that Skills Training and Employment Subsidy schemes improve the employment chances of their participants, while General Training and Direct Employment Schemes have no impact on subsequent employment.³ These findings are entirely consistent with our hypothesis that programmes with strong market linkages are more likely to enhance the job prospects of their clients.

A further problem with comparisons of the type we have just conducted is that of selection bias. Comparing the outcomes for the comparison group with what would have happened had they not participated is unproblematic if individuals are randomly assigned to a participant or comparison group. This is the usual strategy adopted in controlled experiments in, for example, medical research. However, such random assignment to participant and comparison groups raises ethical and political problems in the evaluation of active labour market programmes, and it is more usually the case that comparison and participant group members are not randomly assigned, although the experimental approach has been followed in some countries (Lalonde, 1986; Torp, 1993). Non-random assignment, as in the present study, raises two potential difficulties. First, the two groups may differ in ways which influence their job prospects. Thus, for example, the comparison group tended to have higher average educational qualifications than the participants, and we found in the multivariate analysis that education does influence the chances of obtaining a job. We took these differences in education and other relevant individual characteristics into account in the multivariate analysis of employment probabilities. The second difficulty is that we may not have measured all of the relevant differences between the comparison and participant groups, and that such unmeasured variables may be related to both the outcome (employment chances) and the probability of participation in a programme. Thus, for example, "better motivated" individuals may be more likely to participate in a programme, and such motivation may also be of help in

³ Equations (5) and (6) were replicated, dropping Travelling People' Workshops and VTOS participants from the sample to test the parameters for sensitivity to the inclusion of these poor performing programmes in General Training. We found that the relative superiority of Skills Training and Employment Subsidies were maintained.

finding a job. If we do not take account of these unobserved differences in some way then we may overestimate the effects of participation in programmes.

Overcoming this problem of selection bias has generated a great deal of debate and empirical work, and a variety of statistical techniques has been developed to correct for such bias (Heckman, 1979; Heckman and Robb, 1986; Breen, 1996). The most commonly used approach is to estimate two equations: (1) A participation equation, which models the probability of programme participation; and (2) an outcome equation, which in our case, models the probability of finding a job. If an unmeasured, and therefore omitted, variable does exist which influences both participation and employment probabilities, then the residuals from the two equations will be correlated, resulting in biased coefficients in the employment equations. The Heckman correction procedure involves the introduction to the output equation of a correction term, λ , which is derived from a Probit estimation of the probability of participation.

The standard application of the Heckman correction equation consists of (1) a Probit estimation of the selection equation, followed by an OLS model of the outcome incorporating the correction term (λ). We introduced two modifications to the conventional Heckman procedure. First, given that we are concerned with selection into four different programme types, we conducted four bilateral comparisons between non-participants and participants in each programme type separately. Second, since our outcome variable (employment probability) is more appropriately estimated with a logit procedure, we modified the standard Probit + OLS to a Probit + Logit procedure. Thus we estimated four separate logit models comparing the employment probability of participants in each programme type with the comparison group for both short and long-term employment probability. We then compared our results with a set of two-stage selection models consisting of: (1) A Probit model of the selection equation, including two additional variables - previous work experience and labour force participation - which were not included in the outcome equation; and (2) A Logit model of the outcome equation.⁴

Summary results for the models of employment probabilities from this two-stage estimation procedure are presented in Table 7. Note that the estimation of the bilateral Logit comparisons generates coefficients which differ somewhat from the single equation comparison presented in Table 6. The most serious deviation from the single equation procedure relates to the long-term effect of Skills Training, which declines in both magnitude and significance of effects. The latter is a general effect, being partly due to the reduction in the number of cases. Our principal interest in Table 7, however, is not in the coefficients for the bilateral comparisons *per se*, but in the comparison between the adjusted

⁴ We replicated our Probit + Logit estimations with a standard Probit + OLS procedure and found a virtually identical pattern (results not reported here).

and unadjusted estimates - to assess the extent of selection bias. The results suggest no substantial changes in the pattern of effects. Controlling for selection bias, the positive effects of both Skills Training and Wage Subsidies are maintained over both the short and long term.

Table 7
Effects of Possible Omitted Variables
on Estimated Coefficients for Programme Effects

	Short-Term Effect			Long-Term Effect		
	Adjusted Logit Equation			Adjusted Logit Equation		
	Logit [t-ratio]	Logit [t-ratio]	Lamda [t-ratio]	Logit [t-ratio]	Logit [t-ratio]	Lamda [t-ratio]
General Training	1.339*** [6.81]	1.016* [2.87]	0.266 [1.10]	.035 [0.21]	-0.103 [-0.32]	0.109 [0.51]
Specific Skills Training	1.889*** [7.90]	2.057*** [4.86]	-0.137 [-0.48]	0.524* [2.48]	0.894* [2.23]	-0.298 [-1.09]
Wage Subsidies	2.66*** [8.09]	2.727*** [5.17]	-0.052 [-0.15]	1.089*** [3.86]	1.193* [2.48]	-0.085 [-0.27]
Direct Employment Schemes	1.307*** [4.09]	1.322* [2.41]	-.012 [-0.03]	-0.009 [-0.03]	-0.748 [-1.42]	0.586 [1.66]

* => P < .05, ** => P < .01, *** => P < .001

Table 8 compares observed placement rates in employment for the four programme types and the comparison group with the predicted probabilities of employment derived from the multivariate logistic regression models reported in Table 6, which control for individual characteristics. Columns 2 and 4 thus “translate” the coefficients in equations (5) and (6), respectively, into changes in the probability of employment, compared to the comparison group of non-participants.

The predicted probabilities shown in the first row relate to a male, with the mean age of 18.7 years and no qualifications who had been unemployed for 4 months and had not participated in a programme. The predicted probabilities in the next four rows show the effect of each of the programme types on the employment probability of such an individual. In the final two rows we consider the change in employment probability had this individual done the Leaving Cert., or been unemployed for 18 months instead of 4. Whether or not we control for individual characteristics, that is, whether we consider placement

rates or predicted probabilities, participating in any programme significantly improved the short-term probability of employment. This is partly explained by the low “natural” absorption rate of young people into employment in the absence of training or employment interventions, as discussed above.

Table 8
Measures of Programme Effectiveness
Observed and Predicted Probability of Employment

	Short-Term Effects		Long-Term Effects	
	Placement Rate	Model Predictions*	Placement Rate	Model Predictions*
Comparison Group	.17	.08	.49	.25
General Training	+.11	+.16	-.13	.00
Specific Skills	+.42	+.32	+.14	+.14
Employment Subsidies	+.47	+.45	+.08	+.19
Direct Employment	.21	+.18	-.03	.00
Leaving Cert.	--	+.13	--	+.30
Unemployed (18 mths)	--	-.03	--	-.10

*Model predictions are based on a male, at a mean age of 18.7 years, with no qualifications, who had been unemployed for 4 months.

What is more interesting for our purposes is the effect of programme participation in the longer term. Here, the effect of controlling for individual characteristics becomes more obvious. First, in relation to General Training and Direct Employment Schemes, the raw placement rates would suggest that the employment chances of participants in these programmes were *lower* than for the comparison group. The multivariate models show, however, that there was no difference in employment probabilities between participants in these programmes and the comparison group, indicating that these apparent differences in programme effectiveness are entirely accounted for by the personal characteristics and prior unemployment of the participants. Participants in these programmes were, on average less educated and had higher average unemployment duration than the comparison group. The multivariate analysis thus shows that while there is no improvement in long-term employment chances from participation in these programmes with weak linkages to the labour market, there are no negative effects either - a conclusion which would be prompted by consideration of the raw placement rates.

In relation to Skills Training, there is virtually no difference between the raw placement rate and the predicted rate, suggesting that controlling for individual characteristics had little influence on the outcome - this is probably mainly due to the fact that the distribution of educational credentials among participants in Skills Training is very similar to that among the comparison group. In contrast, comparison of raw placement rates with model predictions Employment Subsidy schemes shows that controlling for individual characteristics had a substantial impact on the measured effectiveness of such schemes, with the placement rate differential increasing from 8% if we take the raw placement indicator to 19% if we take the model prediction. This is mainly due to the fact that participants in Employment Subsidy schemes had higher average unemployment duration than non-participants, and a greater proportion had no qualifications. Thus, if participants in Employment subsidies had similar educational credentials and prior unemployment experiences to non-participants, then the raw placement indicator would have been substantially higher than observed (about 11 percentage points).

The model predictions also allow us to gauge the relative importance of individual characteristics *versus* programme participation. Rows 6 and 7 of show the effects of having attempted the Leaving Certificate examination (and, therefore, of completing the senior cycle of secondary school) and of having been unemployed for 18 months prior to programme participation (or before July 1992 in the case of non-participants). Having completed secondary education increased the long-term probability of employment by 30 percentage points, while having been unemployed for 18 months reduced that probability by 10 percentage points. The fact that the difference between placement rates and model predictions is substantially greater in the long-term than in the short-term suggests that it is in the longer term that background characteristics assert their importance.

5.2 Employment Duration and Earnings

Having compared both short- and long-term employment probabilities, we now compare participants and non-participants for our two additional variables measuring aspects of the quality of post-programme employment - the proportion of time worked and income from employment. As about 40% of programme participants did not get any job after leaving their programme, both proportion of time employed and income from employment are left-censored, i.e. zero values for those unemployed but variation in the remaining cases. For this reason logistic regression analysis is inappropriate and we use a Tobit model to estimate the parameters of the models of both proportion of time in employment and income from employment. The independent variables used in this model are the same as those used in the analysis of employment probabilities above.

The results are presented in Table 9. The equations include the same independent variables used for the estimation of employment probabilities above. Compared with non-participants, participation on any programme had a positive and significant effect on the proportion of time in employment, although the effect of General Training, while positive, was of only marginal significance. This was mainly due to the fact that the rate of employment of the comparison group increased gradually over the first 15 months of the “post-programme” period, while that for programme participants was fairly stable throughout the period (Figure 1).

Table 9
Tobit Estimations of Proportion of Time Employed Post-Programme and Income from Employment

<i>Equation:</i>	23		24	
	Proportion of Time in Employment		Income from Employment	
	Coefficient	Standard Error [t-ratio]	Coefficient	Standard Error [t-ratio]
Constant	-.264	.147 [-1.80]	-.183	1.11 [-0.17]
General Training	.064	.037 [1.72]	.257	.281 [0.92]
Specific Skills	.255***	.036 [7.09]	1.564***	.273 [5.72]
Employment Subsidies	.368***	.052 [7.09]	2.097***	.391 [5.36]
Direct Employment Schemes	.115*	.047 [2.45]	.457	.360 [1.27]
Female	-.050*	.024 [-2.10]	-.471**	.181 [-2.61]
Age	.017*	.008 [1.99]	.066	.064 [1.03]
Junior Cert.	.182***	.036 [5.07]	1.447***	.265 [5.46]
Leaving Cert.	.335***	.040 [8.43]	2.560***	.297 [8.63]
Unemployment Duration	-.011***	.002 [-5.91]	-.074***	.0144 [-5.11]
Dropout to job	.298***	.046 [6.51]	2.174***	.358 [6.09]
Dropout - other	-.276***	.045 [-6.20]	-2.017***	.328 [-6.16]
<i>Sigma</i>	.505***	.010 [54.02]	3.845***	.318 [-6.75]
-2 Log-likelihood	-1163.6		-3187.9	
N of Cases	1711		1556	

* => P < .05, ** => P < .01, *** => P < .001

In the analysis of income from employment (equation (23)), Specific Skills Training and Employment Subsidies had positive and significant effects, with no evidence of any effect for either General Training or Direct Employment Schemes. We should note that if participants in Direct Employment Schemes spent a greater proportion of their post-programme time in employment, but their income from employment was not significantly different from the

comparison group, this suggests that their average weekly wage was lower than the average for non-participants.

For women both proportion of time worked and income from employment was significantly lower than for men. The effect of age was significant only for the proportion of time worked; older participants spent a higher proportion of time in employment. Educational attainment had a strong positive effect on both dependent variables, as did dropping out of a programme to take a job. As expected, duration of prior unemployment and dropping out of a programme for reasons other than to take a job both had negative effects on both proportion of time employed and income from employment.

In order to correct for possible selection bias due to omitted variables we applied an analogous procedure to that applied in the investigation of selection bias in the employment probability model presented in Table 7, above, but, in this case, with a two-stage Probit-Tobit procedure. We thus estimated eight four bilateral Tobit equations, comparing the proportion of time employed in each programme type with the comparison group and compared the results with the coefficients from the Probit + Tobit procedure. We repeated the exercise for the earnings models.

Table 10
Effects of Possible Omitted Variables on Estimated Coefficients
for Programme Effects on Proportion of Time at Work and Earnings

	Proportion of time at work			Income from employment		
	Tobit [t-ratio]	Adjusted Tobit Equation		Tobit [t-ratio]	Adjusted Tobit Equation	
		Tobit [t-ratio]	Lamda [t-ratio]		Tobit [t-ratio]	Lamda [t-ratio]
General Training	.095* [2.40]	.101 [1.32]	-.005 [.93]	.461 [1.44]	.181 [.30]	.219 [0.53]
Specific Skills Training	.220*** [5.19]	.293*** [3.77]	-.060 [-1.12]	1.366*** [4.33]	1.678** [2.81]	-.251 [-.61]
Wage Subsidies	.425*** [7.33]	.422*** [4.37]	.002 [.03]	2.497*** [5.47]	2.403** [3.11]	.077 [.51]
Direct Employment Schemes	.098* [1.60]	-.392 [-.34]	.110 [1.41]	.537 [1.03]	-1.03 [-1.05]	1.237 [1.87]

* => P < .05, ** => P < .01, *** => P < .001

Summary results of the comparison between adjusted and unadjusted Tobit estimations are presented in Table 7. As in the case of the estimation of employment probability effects, the coefficients from the bilateral equations (Columns 1 and 4) differ somewhat from the single equation procedure, and the t-ratios are generally lower, due to the reduced number of cases in the bilateral equations. Nevertheless, the pattern of effects is maintained, and as before, our principal concern is whether the two-stage adjusted estimates differ significantly from the single-stage Tobit estimates. The introduction of the Heckman correction terms does not significantly alter the pattern of effects, none of the terms themselves achieve significance, and the coefficients of the programme variables are very similar to the unadjusted estimates - with the exception that the effect of General Training on the proportion of time at work drops from marginal significance in the unadjusted equation to non-significance in the adjusted equation. Crucially, the effects of market oriented programmes on both proportion of post-programme time employed and income from employment are maintained, suggesting that their superiority is not simply an artifact of selection effects.

6. Conclusion

In this paper we have argued that most of the research on the effectiveness of active labour market policies has treated schemes as "black boxes", not enquiring too deeply into what happens on programmes. In failing to distinguish between different types of programmes, that literature has generated inconsistent and confusing, but generally pessimistic, conclusions regarding the effectiveness of active labour market programmes. Simply put: the literature fails to distinguish between programmes that work and those that do not. We developed a typology of programmes based on the strength of their orientation to the open labour market. We argue that programmes characterised by strong linkages to the labour market - training programmes that are designed to meet the needs of employers and wage subsidies for real jobs in the marketplace - are much more likely to improve the job prospects of participants than those characterised by weak market linkages.

We tested our hypothesis using the results of a survey specifically commissioned by the European Commission to examine the impact of active labour market policies in Ireland in 1994.

Our expectations are confirmed both with respect to employment prospects and earnings from employment: programmes with strong linkages to the labour market both enhance the employment prospects of their participants and increase their earnings, even when we take account of relevant individual characteristics such as education and previous labour market experience.

We argue that Ireland is a particularly useful case in which to examine the effects of active labour market programmes because it has suffered from mass unemployment over a prolonged period, as one of the leading countries in the share of national income spent on such schemes it is following the recommendations of the European Commission on how to tackle unemployment, and it operates a wide range of differing types of programmes to a diffuse target population.

The analysis in the present paper was confined to young people aged less than 23 years. This was because we lacked matching data on a comparison group. In other work, however, we have analysed the relative effectiveness of the four programme types on the employment prospects and earnings of the entire sample of programme participants, including all those aged over 23 (O'Connell, 1996; O'Connell and McGinnity, forthcoming). That analysis shows an essentially similar pattern of results to that found for young people presented in the present paper: participants in market oriented programmes were more likely to find work in both the short and long-term, they spent a longer proportion of post-programme time in employment, and their earnings were significantly higher than participants in programmes with weak market linkages.

Our findings suggest that much of the international research in the area has ignored crucial differences between programmes, resulting in inconclusive and often invalid assessments of the impact of such schemes. We would argue that our typology of programmes, based on the strength of their linkages to the labour market, can be applied to other countries and contribute to a more refined understanding of the impact of such schemes: helping to identify what works and who works.

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