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June 2010

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Key words: Active labour market policy; re-employment likelihood; propensity score matching.

JEL: J08, J68

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This work was produced for the National Assembly for Wales, contract number 130/2006. All views expressed are those of the authors, and not necessarily those of the National Assembly for Wales. The Labour Force Survey data used in the report were made available by the ESRC Data Archive at the University of Essex. The database of information on Want2Work participants was provided by the Welsh Assembly Government.

**Using Financial Incentives and Improving Information to Increase
Labour Market Success: A Non-Parametric Evaluation of the
'Want2Work' Programme**

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February 2010

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Abstract: The 'Want2Work' programme was designed to help individuals back into work. This article uses propensity score matching to evaluate the success of a policy that cannot otherwise be evaluated using standard parametric techniques. Using a range of estimation methods, sub-samples and types of job, the scheme was successful. Our most conservative estimates indicate that participants were 4-7 percentage points more likely to find employment than a control group of non-treated job-seekers. Effects were even stronger for Incapacity Benefit recipients. Moreover, there is little evidence that participants were placed in low quality or temporary jobs.

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1. Introduction

The Want2Work scheme is an active labour market policy that was introduced by the Welsh Assembly Government in order to improve the chances of individuals currently out of work re-entering the labour market. This paper evaluates the Want2Work pilot scheme, which ran from September 2004 until March 2008 in particular areas of Wales, namely selected wards within the Cardiff, Neath Port Talbot, Merthyr Tydfil, Caerdyddion and Denbighshire unitary authority areas¹. The primary aim of the scheme is to improve the re-employment chances of the participants, which is therefore the primary focus of this evaluation.

Want2Work was initially aimed at Incapacity Benefit (IB) recipients. Hence, many of the key features of the scheme were concerned with the health status of participants. The scheme was voluntary and advertisements were placed in public places such as doctors' surgeries, which detailed the services on offer. However, with advertisements also being placed in local job centres, non-IB claimants also wanted to be involved, and so the scheme was expanded to include all those out of work. Nevertheless, the scheme retained its health focus, and the core of its clients remained IB-claimants.

The key features of the programme include a combination of measures aimed at improving the information of participants as well as providing financial incentives. In terms of information provision, a network of community-based advisers were appointed to engage with residents and provide quality advice and guidance. In

¹ The pilot was funded from both Objective 1 and Objective 3 European Social Fund (ESF) grants, through ESF projects directly delivered and managed by Jobcentre Plus.

addition, a health professional was attached to each team to support these advisors, to develop links to local health services, and to provide information to participants as to how they could cope with their health problems in order to participate in the labour market. Participants also received in-work development and support during the first year of employment.

In terms of financial incentives, a return to work bursary was provided, consisting of a weekly payment to individuals to cover the costs of returning to work. This paid £60 per week during the first four months in work, £40 per week in the second four months and £20 per week in the third four-month period of the first year in work. There was also provision of, or funding for, training, including the development of ‘soft’ skills (such as time management, communication, responsibility etc), as well as a job preparation premium, paid to participants to cover the cost of undertaking additional work preparation activities. Finally there was discretionary funding available to overcome other barriers to participation in employment.

The aim of this paper is to determine whether all of these additional services, over and above standard assistance to those out of work, led to an increase in the likelihood that participants obtained a job. The challenge to be faced is common for such policy evaluations: Would the successful participants still have obtained a job even if they had not participated in the Want2Work scheme? We use propensity score matching techniques to derive a control group of non-participants with similar observed characteristics to those who participate in Want2Work, and then compare the employment probabilities of each group. Unlike parametric methods used for previous

similar policy evaluations, propensity score matching does not impose any particular functional form on the estimated relationships.

The next section reviews some other recent evaluations of active labour market policies in the UK. The following section then describes the data and methodology to be used, followed by a presentation of the results. A final section offers a summary and some conclusions.

2. Recent Evaluations of Active Labour Market Policies in the UK

In the last decade or so, a number of large-scale active labour market policies have been introduced in the UK. At the same time, there has been an increasing desire to undertake effective evaluations of these policies, to justify or not, according to the evidence, their continued existence. The scheme most similar to Want2Work, in terms of a focus on IB individuals, is Pathways to Work (Pathways). This was introduced on a pilot basis in three local areas in October 2003, and a further four areas in April 2004. It has now been rolled out nationally. Pathways is a compulsory programme for all new IB claimants (and is available on a voluntary basis for existing claimants). Apart from this compulsory nature, many of the elements are similar to the Want2Work programme in Wales. Thus, new IB claimants must have a Work Focused Interview (WFI) within eight weeks of their initial claim, and then attend five further WFIs if they remain on IB. If they wish, claimants can partake on a voluntary basis of the other services offered by Pathways, such as a 'Choices' package aimed to improve their readiness for work, a £40 per week Return to Work Credit if they do find a job paying less than £15,000 per year, in-work support, such as mentoring,

health advice etc, and finally receipt of up to £100 from a discretionary fund to support any activity that might help them to find work.

Various evaluations of Pathways have been undertaken. Adam *et al.* (2006) collected data via a telephone survey from individuals who made an enquiry about IB in either pilot or selected non-pilot areas, in both cases both before and after the introduction of Pathways. They could therefore adopt a difference-in-differences technique to compare the difference in the re-employment rates between pilot and non-pilot areas after the introduction of Pathways, to the same difference between areas before the introduction of Pathways. By observing the inter-area difference before the programme was introduced, then any unobserved differences between the regions can be controlled for. The results show that, amongst those beginning a claim for IB, Pathways increased the percentage in employment 10½ months later by an estimated 9.4 percentage points, from a base of just 22.5 percent.

This work was extended by Bewley *et al.* (2007), who considered a longer time period of eighteen months after the initial enquiry into receiving IB. Using a similar methodology to Adam *et al.* (2006) of surveys in pilot and non-pilot areas before and after programme introduction to derive a difference-in-differences estimator, Bewley *et al.* (2007) found that Pathways increased the probability of an initial IB claimant being in work eighteen months later by 7.4 percentage points, from a base of 29.7 percent in the absence of the policy.

Bewley *et al.* (2008) also considered the impact of Pathways on existing IB claimants. A policy variation was introduced in February 2005 in that individuals living in the

pilot areas with an IB claim of up to 2 years when Pathways was first introduced were also required to participate in the scheme. In this report, Bewley *et al.* (2008) used duration analysis to estimate the impact of Pathways on the time taken to move into work. Their core result showed that having a WFI three months after the introduction of Pathways reduced the probability of still being out of work by 3.5 percentage points eighteen months later, from 97.2 percent to 93.7 percent. Thus, the impact of the programme was significantly reduced when applied to those who were in the middle of an IB claim, rather than to those at the start of their claim.

A second active labour market scheme that has attracted a lot of attention is the New Deal, and in particular the New Deal for Young People (NDYP). This scheme was piloted in selected areas of the UK in January 1998 and rolled-out nationally in April 1998. NDYP is a compulsory scheme for young people aged 18-24 who have been out of work for 6 months. The scheme involves an initial 'Gateway' period of around 4 months, where extensive job search help is provided by an advisor. If the participant fails to obtain a job in this period, they can spend up to one year in one of four options provided by NDYP: a period of education and training; a subsidised job; a job in the voluntary sector; or work with an environmental task force. If a permanent job is still not obtained after participating in an option, a further 'follow through' period with an adviser is undertaken.

Again, a number of evaluations of NDYP have been undertaken. Blundell *et al.* (2004) conducted a difference-in-differences analysis, where the control group consisted of individuals with similar observed characteristics in non-pilot areas during the pilot phase, or individuals with similar observed characteristics and living in the

same area, but aged just over 24 and so not eligible for NDYP, in the roll-out phase. The authors only studied the impact of the initial four month Gateway period, and found that in the former (pilot versus non-pilot) case, participating in the Gateway increased male individuals' prospects of having moved into employment four months after joining the Gateway by 10-11 percentage points, from a base of 24 percent. When they studied the national roll-out using the older comparison group, the impact fell to 5 percentage points, against a base of 26 percent. They attribute the fall in the size of the effect to the maturing of the scheme, and the loss of the 'program introduction effect'.

De Giorgi (2005) evaluated NDYP in 2003, five years after its introduction. He considered the probability of re-employment 18 months after beginning an unemployment spell, and so considered the impact of the period spent on an option, as well as the Gateway period considered by Blundell *et al.* (2004). They adopt a similar procedure to the latter paper, using a difference-in-differences approach with those individuals aged just over 24 and so not eligible for NDYP as the control group. His results show NDYP participation increased the male re-employment probability after eighteen months by 4.6 percentage points, thus very similar to the estimate obtained by Blundell *et al.* (2004). There was no evidence of the NDYP effect falling further over time, as the programme matured.

Other papers have evaluated NDYP in more detail, looking at variations in the average effect. A good example is McVicar and Podivinsky (2009) who consider whether the impact of NDYP varies across regions and in particular with the tightness of their labour markets. They use a difference-in-differences approach to duration

analysis, comparing the change in unemployment durations for 18-24 years olds before and after the introduction of NDYP, to the similar before and after changes for 25-29 year olds who form the control group. Their results show that NDYP reduced unemployment durations for young men in all regions, with the size of the effect being positively, though weakly, related to local unemployment rates, so that NDYP had a greater impact in slack labour markets. Further detail is provided in a competing-risks duration analysis, considering exits from unemployment to different labour market states. The results show that NDYP reduced duration until job entry in every region, with the size of effects correlated not with the state of the labour market this time, but with the proportion of men in the area seeking managerial or professional jobs. To the extent that this variable indicates the skill levels of the local unemployed men, this result suggests that NDYP is more successful when working with higher skilled clients. Considering other client outcomes, McVicar and Podivinsky show that NDYP also increased the speed of exit from unemployment to education/training, though perhaps worryingly also to inactivity.

The evaluation methodology to be used in this paper is Propensity Score Matching. An example of an evaluation of NDYP where this technique has been used is Dorsett (2001). This paper considers each of the four options, and so the control group in each case comprises those individuals who followed one of the other three options other than the one being considered, as well as those young people who remain on the Gateway longer than the four month period without entering any of the options. For each pairwise combination of options in turn, Propensity Score Matching was used to match individuals following one option, to a similar person following the other. The outcomes in terms of remaining unemployed could then be compared. The results

showed that the subsidised employment option dominated all others in reducing the likelihood of remaining unemployed.

We turn now to the evaluation of Want2Work policy. The size of any estimated effects will be compared to the effects of these similar programmes, keeping in mind that a difference between Want2Work and these other schemes is that the former is voluntary in nature.

3. Data and Methodology

The key to a good programme evaluation is successfully estimating the counterfactual, of what would have happened to the participants if they had not engaged in the programme. Given that we cannot observe participants in the non-participation state at the same point in time as they are participating, then data on non-participants must be used to estimate the counterfactual. It is therefore important that there is good information available on both the treatment and control groups (participants and non-participants), so that any differences in characteristics, which may in turn have explained differences in employment outcomes, are held constant.

Extensive data on Want2Work participants are available, since this was collected at their point of entry on to the scheme.² Any future changes in status, such as a movement into employment or training, were also monitored and recorded, together with some information about the new status. Anyone who joined Want2Work between January 2005 and December 2007 is included, so we have information on the

² The database of information on Want2Work participants was collected by the Welsh Assembly Government.

full population of Want2Work participants between these dates (approximately 6400 individuals). The Want2Work database also contains detailed information on background characteristics, including age, gender, ethnicity, whether a single parent or not, highest qualification, type of welfare benefit being received when first registered with Want2Work, whether suffering from an illness or disability and if so what type, and time spent out of work³. If the individual finds a job during the observation period, then some characteristics of that job are also recorded, such as annual earnings, full- or part-time status and permanent or temporary status, as well as the date that the job started.⁴

The counterfactual data used for the control group are drawn from the Quarterly Labour Force Survey (QLFS) for Great Britain.⁵ The QLFS has a wealth of information on employment outcomes and job characteristics, as well as all of the individual level characteristics that are observed for the Want2Work participants. The QLFS is conducted quarterly, with each quarter's sample of 60,000 private households made up of 5 'cohorts', each of approximately 12,000 households, and each in different response 'waves'. Therefore, in any one quarterly survey, one-fifth of respondents are participating for the first time, one-fifth for the second time, etc., with one-fifth being replaced each quarter. The QLFS is therefore a rolling panel where each cohort is interviewed in 5 successive quarters. Given that we need to

³ 'Time spent out of work' is a particularly useful control variable in that it will proxy for unobserved 'employability' characteristics.

⁴ The earnings information is only included in bands, with individuals indicating whether their annual earnings are below £10,000, between £10,000 and £15,000, between £15,000 and £20,000, between £20,000 and £30,000, or above £30,000.

⁵ Details of the sampling methodology and questionnaires are available from the Office for National Statistics at <http://www.ons.gov.uk>. The sample is for Great Britain and therefore excludes Northern Ireland.

observe changes in labour market status over time, use will be made of this panel element.

Since the Want2Work data cover the period 2005 to 2007, QLFS data for the same period were used, as far as possible. Nine quarterly data sets for this period were used: March-May 2005, June-August 2005, and so on through to March-May 2007⁶. Thus all five appearances in the data set could be observed for five different cohorts of QLFS respondents, the first appearing in the QLFS for the first time in March-May 2005, and the last appearing in the QLFS for the first time in March-May 2006. The fifth and last appearance of this final cohort was therefore March-May 2007.

Since all Want2Work participants were, by definition, initially out of employment, the QLFS sample was similarly restricted, also excluding full time students and those who had taken early retirement. In addition the control group was restricted to all those who responded to the survey for the full five waves. The resulting sample consisted of 8,994 men and women aged 16-65. Of these, 3,427 reported that they wanted a job and were looking for a job. It would have been useful to restrict the control group to specifically selected areas with similar socio-economic characteristics as the Want2Work pilot areas, in order to ensure greater similarity between the two. However, this made the control sample unworkably small. Thus all regions other than the Want2Work pilot areas were included in the control group. The unemployment rate by travel-to-work area was therefore included amongst the list of conditioning variables, in order to control for differences in the state of the local labour markets in which treatment and control group individuals reside.

⁶ The QLFS changed from seasonal quarters (December-February=Winter, March-May=Spring etc) to annual quarters (January-March etc) during this period. After this change, the annual quarters were used to reconstruct seasonal quarterly data sets, to maintain consistency.

These data on the treatment and the control groups were used to estimate the effect of Want2Work:

$$ATT = E(Y_{1i} | D_i = 1) - E(Y_{0i} | D_i = 1) \quad (1)$$

where ATT is the average treatment effect on the treated, Y_1 is the outcome (whether individual i finds employment) if they participate in Want2Work, and Y_0 is the same outcome if they do not participate. D is an indicator variable that takes the value of 1 if the individual participates in Want2Work and zero otherwise. Of course, the final term in equation 1 cannot be observed since this is the counterfactual of what would have happened to the Want2Work participants if they had not participated in the programme. Thus, the outcome variable for the non-Want2Work (control) group is used instead, so that equation 1 becomes:

$$ATT = E(Y_{1i} | D_i = 1) - E(Y_{0i} | D_i = 0) \quad (2)$$

Thus it is assumed that the outcome for the control group provides a good estimate of the counterfactual for the treatment group. For this to be valid, we require a conditional independence assumption to hold, that conditional on observed variables, X , the outcome is independent of treatment status:

$$Y_0 \perp D | X$$

Thus, if we can find individuals with the same observed characteristics in both the treatment and control groups, then their outcome in the absence of treatment would be same. This relies upon the X vector fully capturing the differences in characteristics between the treatment and control groups that may also influence the outcome variable, Y .

In actual fact, we do not need the two X vectors to be identical, only that the propensity score is the same. The propensity score, $p(x)$, is defined as the probability of an individual appearing in the treatment sample conditional on their observed characteristics:

$$p(x) = \Pr\{D=1 | X = x\}$$

The propensity score can be estimated with a binary choice model such as a probit equation. The results of Rosenbaum and Rubin (1983) show that conditional on the propensity score, outcomes will be independent of treatment status:

$$Y_0 \perp D | p(x)$$

Thus, if the treated individuals can be matched to control individuals who have the same propensity score, then the outcomes of the latter group can be taken as an estimate of the outcomes for the former group if they had not participated in Want2Work. Essentially, treated individuals are being matched to individuals who look as though they should have participated on the basis of their observed characteristics, but did not.

The actual process of matching remains to be defined. One approach is one-to-one, or ‘nearest neighbour’ matching, where each individual in the treatment group is matched to the person in the control group who has the closest propensity score (where a ‘caliper’ or tolerance level for acceptable matches can be set). Another approach that will be used side-by-side in all results tables is kernel matching, which uses a weighted average of *all* of the observations in the control group to provide the match (and therefore does not throw away information), with larger weights attached to observations with a closer propensity score to the treatment group individual being considered. In particular, the weights are defined as:

$$w_{ij} = \frac{K\left(\frac{p_i - p_j}{h}\right)}{\sum_{j \in (D=0)} K\left(\frac{p_i - p_j}{h}\right)}$$

where K is the kernel density function and h is the chosen bandwidth.

Since the true propensity score is unknown and has to be estimated in the first stage of the procedure, the computation of the standard errors on the treatment effect in the second stage needs to take this prior estimation into account. In the absence of an exact formula for the standard errors in these circumstances, the usual approach is to ‘bootstrap’ the standard errors, which essentially involves repeatedly calculating the treatment effect with random samples of the available data, to ascertain the degree of uncertainty attached to the result. This procedure was therefore used in all analyses. For one-to-one matching 500 replications were used, while for kernel matching, 50 replications were used, due to its greater computational demands.

Propensity score matching is said to have two advantages over traditional regression-based methodologies. First, it does not impose any functional form on the relationship (compared to, for example, Ordinary Least Squares, which imposes a linear relationship). Second, the technique identifies those observations in the treatment group for which there is no ‘common support’, i.e. there is nobody in the control group with a sufficiently similar propensity score, and so no accurate way of estimating the counterfactual of what would have happened to such an individual if they had not participated in Want2Work. Observations without common support are dropped from the evaluation⁷.

⁷ Fewer than 5% of the sample observations were dropped for this reason.

This propensity score matching approach was chosen, over the difference-in-differences techniques used for example by Blundell *et al.* (2004) as described in the literature review above, because of the nature of the available data. The information in the Want2Work database, described above, could not have been evaluated using the difference-in-differences methodology, since participants were not observed prior to their involvement in Want2Work. In order to estimate a difference-in-differences estimator, before-and-after data in the pilot and non-pilot areas would need to be obtained, with administrative benefit databases the only possible source. Such databases necessarily contain data on far fewer individual characteristics than the Want2Work database. In order to make use of the extensive database made available to us, the propensity score matching method described above, estimating a cross-sectional impact at a point in time, was therefore adopted. Thus, the evaluation has a more micro-econometric than macro-econometric focus, concentrating on the individuals involved rather than the whole labour market in the pilot areas. The question that is being asked is therefore: ‘Are individuals more likely to find work by participating in Want2Work than if they had not participated in Want2Work?’ rather than other, more aggregate questions, such as: ‘By how much is the employment rate increased, or the inactivity rate reduced, in the pilot areas by introducing Want2Work?’ that have been the focus of other evaluations of different active labour market policies.

4. Results

(i) Raw Data on Labour Market Outcomes

The key indicator of success for the Want2Work programme is whether individuals move into employment. This first section of results looks at the raw data on this outcome, before moving onto the formal evaluation. An indicator was derived that took the value of one if individuals, in either the treatment or control group, moved into work at any point during the period in which they were observed. A second indicator of labour market outcomes, for those who find a job, is the wage that they earn. Banded data on earnings are available in the Want2Work database, as described above. With respect to the control group, income questions are only asked of respondents in their first and final waves in the QLFS. Since individuals in our sample are by definition not employed in their first wave, we can only observe wages for respondents who have just moved into employment in wave 5, or who moved into employment in waves 2, 3 or 4 *and remained* in employment by the time of their final, fifth wave appearance in the QLFS⁸. This is the case for 838 individuals. Actual gross weekly earnings are used and then converted to banded annual earnings to be consistent with the Want2Work earnings data. Both full-time and part-time workers are considered, so that the earnings measure picks up the quality of job obtained in both the wage rate and hours worked dimensions.

Table 1 compares employment and earnings outcomes for the Want2Work participants and QLFS respondents. The raw data show that 30 percent of

⁸ Note that very short duration jobs will therefore not be observed in the QLFS control group. If such jobs have lower wages, we might expect to see lower average wages amongst the Want2Work participants, for whom short duration jobs are not ruled out.

Want2Work participants found a job at some point in the period between them joining the scheme and the end of 2007⁹, compared to only 19 percent for the out-of-work QLFS respondents in the period that they were observed in that survey. However, the full sample of non-employed QLFS respondents may not be an appropriate control group. Because of the voluntary nature of Want2Work, participants in that scheme have already by definition indicated their interest and motivation in finding work. By contrast, some of the non-employed QLFS respondents may be unable or unwilling to work. The difference in the employment probabilities might then be explained by this difference in the motivation to find work. Fortunately, the QLFS contains questions asking those of working age who are not currently working whether they want to work and whether they are looking for work. When the QLFS control group is restricted to individuals actually wanting and looking for work, then the proportion obtaining a job within the observed period rises to 32 percent, as shown in the third row of Table 1a. Thus, without conditioning on individual characteristics, Want2Work participants are slightly *less* likely to have found work than job-seekers in the QLFS.

The raw data for earnings are shown in Table 1b. It is clear that those individuals who do obtain a job through Want2Work are likely to move into low-paid work, with 90 percent of those who found work accepting jobs for which they were paid less than £15,000 per year. This compares to 78 percent of the QLFS respondents in the control group. At the top end, significantly more QLFS respondents who found a job received in excess of £30,000 per year, compared to Want2Work participants, and it is such individuals who cause the higher mean wage amongst QLFS relative to

⁹ Note that this time frame provides the early participants in Want2Work with longer to find a job than QLFS respondents, who are observed for a maximum of 15 months. This fact will be considered further in the following section.

Want2Work workers¹⁰. On the other hand, the median wage is higher amongst the Want2Work group, with the very lowest wage category covering a smaller proportion of such workers compared to the QLFS control group.

Such raw differences in outcomes, however, ignore systematic differences in characteristics between the two groups. Table A1 in the appendix compares the background characteristics of the treatment and control groups, with a separate column for the job-seekers only, in the latter group. The data reveal that the Want2Work sample are on average younger, less well-educated, more likely to be a single parent, and less likely to be from an ethnic minority, relative to the full QLFS sample. They are more likely to have recently worked, and less likely to have never worked at all. On average, Want2Work participants live in areas with higher unemployment rates.

There is little difference between groups in the likelihood of having no illness, which is perhaps surprising given the focus of Want2Work on IB claimants, though in terms of type of illness, the majority of those with illness in the Want2Work sample have mental health problems, whereas the QLFS has a much higher proportion with cardio illnesses. As expected, Want2Work participants are much more likely to be IB claimants than the QLFS control group.

When the Want2Work participants are compared to job-seekers only in the QLFS control group, some of these differences between the treated and the control group are much reduced, particularly in the case of age and duration out of work. Overall, the

¹⁰ The mean wage in the Want2Work sample, where only banded data are available, is estimated by a interval regression of the log of the wage band limits against a constant.

job-seekers in the QLFS appear to be a more appropriate match for the Want2Work participants¹¹, and so from this point onwards, the control group will be limited to those wanting to work and looking for work¹².

(ii) Propensity Score Matching Estimates of the Impact of Want2Work

Table 2 contains the core results of the evaluation, presenting the impact of Want2Work participation on the probability of moving into work, estimated using the propensity score matching procedure described above. In each case, the results from two types of matching procedures are presented, namely one-to-one (nearest neighbour) and kernel matching. The first panel in Table 2 considers the full Want2Work and job-seeking QLFS samples. The first row of results concerns movement into any employment at any point, regardless of type of job and duration. The results show that those who participated in Want2Work are 5.3-8.3 percentage points more likely to move into employment than similar job-seekers from the QLFS control group. This effect is both statistically and economically significant. Given that the average likelihood of moving into work in the sample is only around 30 percent, this impact of the Want2Work scheme is considerable. It is also very similar in size to the estimated effects of other active labour market policies such as Pathways to Work and the New Deal for Young People, as described in the literature review earlier.

¹¹ This is of particular importance for the one-to-one matching, where each Want2Work respondent is matched to their nearest neighbour, with no weighting for the difference between their relative propensity scores, unlike with kernel matching.

¹² In some respects, the QLFS job-seekers are actually less like the Want2Work participants than the full QLFS sample. This is particularly noticeable for education, with the lack of qualifications amongst the Want2Work participants even more noticeable when compared to only job-seekers.

One possibility to explain their higher rate of moving into work is that Want2Work participants might be accepting jobs of lower quality. Two indicators of job quality that are available in both the Want2Work database and the QLFS, other than wages which are considered later, are whether or not the job acquired is full-time¹³, and whether or not the job acquired is permanent, or temporary and time-limited in some way.¹⁴ The second and third rows in each panel of Table 2 consider these two possibilities in turn. The results show a larger Want2Work effect on the probability of obtaining a permanent job than obtaining any job, with Want2Work participants being 10-11 percentage points more likely to acquire a permanent job than QLFS job-seekers. There is therefore no evidence that Want2Work is placing participants into casual jobs, in order to increase re-employment rates. When the analysis focuses on full-time jobs only, the results are very similar to those for ‘any jobs’, with Want2Work participants being 7-8 percentage points more likely to move into full-time work than job-seekers in the QLFS.

A potential caveat with the results presented so far is that Want2Work participants are potentially observed for longer than QLFS respondents, and that this might explain their apparent higher likelihood of finding work. Individuals respond to the QLFS for five successive quarters, meaning that respondents in the QLFS control group are observed for a maximum of 15 months. Want2Work participants, however, are observed joining the scheme any time between the beginning of 2005 and the end of 2007, and so could be observed for considerably longer than 15 months, thus giving them more time to be observed finding a job, relative to the QLFS out-of-work

¹³ Of course, part-time work need not be a signal of lower quality, and a part-time job may have been actively desired by some individuals, perhaps particularly amongst those just getting over long-term health or disability problems, who comprise a large proportion of the Want2Work participants.

¹⁴ A full-time job is defined as one that involves 30 hours or more per week.

respondents. Thus, a new dependent variable was created to take the value of 1 if the Want2Work participant obtained a job within a maximum of 15 months of joining the scheme. Anyone who obtained a job through Want2Work, but took longer than 15 months to do so was regarded as being unsuccessful, on the basis of this new variable. In actual fact, this meant that the analysis was now loaded against the Want2Work participants, who if they joined the scheme in 2007 (which is actually 45% of the Want2Work sample) were observed for fewer than 12 months, whereas the individuals in the QLFS control group are observed for a minimum of 12 months, and so had longer to find a job than these late-comers to Want2Work¹⁵.

The second panel in Table 2 shows the results of this analysis. The impact of Want2Work on the employment probability is very similar to that estimated in the first panel, showing an estimated effect of 4-7 percentage points (compared to 5-8 percentage points in the uncensored sample)¹⁶. This estimate is the most conservative estimate produced in the paper, taking account of as many differences between treatment and control groups as possible, and so is our preferred result.

Similarly, the estimated Want2Work effects for finding a permanent or full-time job when given a maximum of 15 months to do so, are very similar to the uncensored results in the first panel, with falls of only around one-half a percentage point in the estimated effects between panels.

¹⁵ We experimented with including a 'time entered programme' variable. Since almost half of Want2Work respondents joined in the last year of the programme (2007), when we control for the fact that they did not have long to find a job, the estimated 'Want2Work' effects are increased. If anything, the estimates presented below are therefore under-estimates.

¹⁶ Further investigation reveals the reason for this similarity; of the 1,917 respondents who obtained a job through Want2Work, all but 69 did so within 15 months anyway.

The analyses in the third and fourth panels of Table 2 repeat the analyses of the first two panels, but restrict the sample to those on IB only. The original target group of the Want2Work scheme was those individuals in receipt of IB, and an important aspect of the scheme is the availability of health care professionals to provide advice and support to help IB-recipients overcome their difficulties and find suitable work. It might be expected, therefore, that if Want2Work is successful in helping people into employment, it will be most successful for this specifically-targeted group. The results in the lower 2 panels confirm that this is indeed the case, with all estimated marginal effects being substantially larger than their equivalents in the upper two panels. Thus, the first row in the third panel shows that Want2Work participants who are in receipt of Incapacity Benefits are 14-15 percentage points more likely to move into employment than job-seeking IB-recipients with similar characteristics in the control group. When only movements into jobs within 15 months of registering for Want2Work are considered, for compatibility reasons with the QLFS, Want2Work participants originally in receipt of IB are still 13 percentage points more likely to find a job than their equivalents in the QLFS (panel 4, row 1). The impact of Want2Work on finding permanent and full-time jobs are similarly larger for IB recipients only than for the full out-of-work population.

Table 3 considers whether Want2Work participants who find work earn more or less than their control group participants, adopting the same two methods of matching as used above. Since the wage data are banded, the midpoints of the bands are used, and then logged.¹⁷ Estimates are provided for the full sample, and for IB claimants only.

None of the four estimated coefficients approach statistical significance. Although

¹⁷ For the open-ended top category (£30000+), the value assigned to individuals is 1.5 times the opening point of this category, i.e. £45000. Since so few participants achieve a wage in this band, the results are not significantly affected if this value is changed.

three of the four are negative, which is suggestive of Want2Work participants accepting lower paid jobs, the evidence is in no way conclusive. The lack of statistical significance has two probable causes. First, sample sizes are small, with only 1884 Want2Work participants finding work and having non-missing wage data. Second, and in particular, there are only five wage bands in the data, and as shown in Table 1b.), over half of those who find work are in the first band, so there is little variation in earnings to explain.

Recall from above that both full-time and part-time workers are included in the analysis of wages. Want2work respondents are more likely to find a full-time job than QLFS respondents¹⁸, and so are likely to have higher weekly wages for this reason. When the analysis is restricted to full-time workers, the size of the negative coefficients in Table 3 is increased, but they remain statistically insignificant.

(iii) Job Duration

All of the analysis presented so far has simply considered whether individuals move into a job or not. A potential concern is that Want2Work might be successful in getting people into jobs, but they might not be staying in jobs very long, and we are not observing their return to unemployment. Potentially it was possible to consider this, as all individuals who find work and are in receipt of the Return to Work Credit continue to be considered as participants in Want2Work and so continue to be tracked in the database. The database also records individuals' final economic status when

¹⁸ Of the Want2Work respondents who found a job, 58% were working full-time, compared to 42% of QLFS respondents.

they leave the programme, which can be up to 12 months after moving into employment if they receive the Return to Work Credit for the maximum possible period. However, a considerable number of participants did not receive the Return to Work Credit and so were deemed to have left the programme, and thus no longer tracked, as soon as they found work. In addition, no final economic status was recorded in the database for another sizeable minority. Overall, of the 870 individuals who obtained a job through Want2Work before the end of 2006¹⁹, once all individuals with an unknown final outcome or who left the programme within 9 months of obtaining a job are removed, only 416 individuals remain²⁰. Of these, 387 (93 percent) were in some form of employment (almost all in full-time employment) as their recorded 12 month final outcome, though clearly there are concerns about the unrepresentativeness of this sample, in particular the omission of those individuals who left the programme within nine months of finding a job. This result can be compared to job duration in the QLFS. Recall that the control group of QLFS respondents are observed for five consecutive quarters, and are, by definition, out of work in the first quarter. By focussing on those who have moved into employment by the time of their second wave interview, we can see how many remain in employment in the following three waves, which represents a minimum of nine months.²¹ Across all five cohorts, 684 QLFS respondents move into work by the time of their second interview. Of these, 506 (74 percent) remain in a job for the succeeding three quarters that they are interviewed. This is clearly less than the 93 percent of Want2Work

¹⁹ This cut-off for finding a job was imposed, so that at least 12 months in potential employment could be observed before the database ended in December 2007.

²⁰ Thus only those who were observed at least nine months after finding a job were counted. If, for example, an individual obtained a job but was not observed beyond one month later, such an individual was not included here, as we cannot be sure that that job is his or her final outcome.

²¹ This is the reason that a nine month gap between finding a job and leaving the project was required for the Want2Work participants when observing whether they stay in employment, to ensure comparability between the Want2Work sample and the QLFS control group.

respondents who remain in work for at least nine months, and this difference is strongly statistically significant.

For robustness, a second method of examining job duration was also considered. This involved a postal survey, conducted in February 2008, of all 804 Want2Work participants who had found work by the end of 2006, in order to determine whether they were still in work. The response rate to the survey was, however, only 16% (131/804). Checking the representativeness of this sample revealed that the postal survey respondents were on average older than the full sample (an average age of 41 compared to 35), better educated (45% having no qualifications, compared to 51%), less likely to be from an ethnic minority (6% compared to 12%), and less likely to have never worked or to have been out of work for a long time. Although the differences are not large, it has to be acknowledged that these factors are all working in favour of the respondents, and so the likelihood of staying in a job amongst the postal survey respondents is a more likely than amongst all those Want2Work participants who find a job.

Of the postal survey respondents, 67% reported that they had worked in the previous week, with another 5% typically working but having been away that week. Consistent with the above results, there is therefore substantial persistence in the Want2Work employment effect, even after the Return to Work Credit has ended for those who received it. Recalling that the respondents were surveyed in February 2008, and had been in work at the end of 2006, it will be a minimum of 13 months (and for most significantly longer) since they obtained their Want2Work jobs. Of course, this does not mean that they are in the same job, and they may have been in a

succession of temporary jobs. However, answers to a further question revealed that, of those with a job in February 2008, 73% were working in the same job that they obtained through Want2Work. Thus, although the representativeness of the data may be questionable, such a large figure suggests that Want2Work is successful in getting workers into longer-term, permanent jobs.

5. Summary and Conclusion

The Want2Work pilot scheme was aimed at helping benefit recipients, primarily those receiving Incapacity Benefit, back into employment, using a range of advice and incentive mechanisms. By using propensity score matching to compare Want2Work participants with similar job-seekers in non-Want2Work regions surveyed in the Quarterly Labour Force Survey, we were able to evaluate the success of the Want2Work programme. The evidence produced is convincing, and supportive for Want2Work. Using a range of estimation methods, different sub-samples, and different types of job, the Want2Work participants consistently come out as being more likely to move into employment, compared to individuals in the control group. The size of the effect varies according to the specification being considered, but is always statistically significant. Our preferred specification is the most conservative one; allowing Want2Work participants a maximum of 15 months to find a job (as this is the longest that we can observe individuals in the control group), and comparing them to out-of-work QLFS respondents who say that they actually want a job and are looking for a job, the Want2Work participants are 4-7 percentage points more likely to move into employment. Given that only around 30 percent of jobseekers across the two datasets obtained a job, this Want2Work effect is sizeable. The size of this effect

is very similar to the estimated effects of other active labour market policies, such as the 5 percentage point effect on employment of the New Deal for Young People, as estimated by both Blundell *et al.* (2004) and De Giorgi (2005).

The original target of Want2Work was individuals in receipt of Incapacity Benefit, and the programme was tailored to help that group in particular, for example through the involvement of health professionals. When the treatment and control groups are restricted to those individuals initially in receipt of Incapacity Benefit, the estimated employment impact of Want2Work increases to around 13 percentage points, against a base of 25 percent of Incapacity Benefit claimants moving into employment within 15 months. The size of this effect compares very favourably with the Pathways to Work scheme, for which researchers have found employment effects of 7-9 percentage points using parametric methodology (Adam *et al.*, 2006; Bewley *et al.*, 2007).

As well as considering simply whether a job is obtained, the analysis also provided some evidence as to the quality of jobs being obtained. In terms of the type of job accepted, the results are not changed greatly when the focus is restricted to only full-time or permanent jobs, though the Want2Work effect is slightly weaker for obtaining full-time work than for obtaining any job in the case of former Incapacity Benefit claimants. Even in this case, however, the Want2Work effect compared to the control group is strongly positive. As for job duration, there is very tentative evidence that the majority of Want2Work participants who do find work are finding stable jobs, rather than short-lived jobs before experiencing a return to benefits, although the quality of the information on participants once they are in work is poor. In terms of

earnings, there is some evidence that Want2Work participants accept lower wage jobs than members of the control group, though this difference is not statistically significant. Overall, there is nothing to suggest that the success of Want2Work in terms of getting people into work can be explained by a greater willingness to push clients into low quality jobs.

Finally, on a methodological note, this paper shows how evaluations of labour market policies can be undertaken, even when policy-makers have not collected data on a control group of non-participants, or on participants before involvement, thus ruling out difference-in-differences techniques. Data from national surveys such as Labour Force Surveys can be used to obtain a sample of individuals in non-policy areas, who can then be matched to programme participants using propensity score matching techniques, to ensure the employment probabilities of similar individuals are being compared. Such non-parametric techniques have additional advantages over more traditional evaluation techniques, in that they do not impose functional form, and identify any individual for whom there is a lack of common support.

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Table 1: Labour Market Outcomes for the Treatment and Control Group

a) Employment Incidence (percent)

	Percentage that got a job	N
Want2Work	29.8%	6424
QLFS	18.7%	8994
QLFS seeking work	31.9%	3427

b) Annual Earnings (percent in each pay band)

Gross Annual Pay	Want2Work Participants	QLFS
<£10000	54.7%*	61.8%
£10000-14999	35.4%*	16.7%
£15000-19999	7.7%	8.4%
£20000-29999	1.7%*	7.3%
£30000+	0.5%*	5.8%
Mean	£9,508 ^a	£11,614
N	1901	838

Note: * denotes different from the QLFS at the 5% level.

a estimated by a interval regression of the log of the wage band limits against a constant.

QLFS is the GB Quarterly Labour Force Survey

Table 2: Propensity Score Estimates of the Want2Work Participation Effect on the Probability of Moving into Work

<i>Full Sample</i>			
	Propensity Score (one to one)	Propensity Score (Kernel)	N
Any job	0.053** (0.020)	0.083** (0.017)	9342
Permanent job	0.106** (0.019)	0.104** (0.015)	9249
Full-time job	0.070** (0.014)	0.083** (0.011)	9342
<i>On Want2Work scheme < 15 months</i>			
	Propensity Score (one to one)	Propensity Score (Kernel)	N
Any job ^A	0.043* (0.020)	0.073** (0.016)	9342
Permanent job	0.098** (0.019)	0.096** (0.014)	9249
Full-time job	0.064** (0.013)	0.077** (0.008)	9342
<i>IB recipients only</i>			
	Propensity Score (one to one)	Propensity Score (Kernel)	N
Any job	0.141** (0.033)	0.150** (0.023)	4686
Permanent job	0.157** (0.030)	0.159** (0.020)	4678
Full-time job	0.098** (0.022)	0.115** (0.016)	4686
<i>IB recipients only and on Want2Work scheme < 15 months</i>			
	Propensity Score (one to one)	Propensity Score (Kernel)	N
Any job	0.125** (0.033)	0.134** (0.025)	4686
Permanent job	0.144** (0.030)	0.146** (0.023)	4678
Full-time job	0.089** (0.022)	0.106** (0.015)	4686

Notes: ^A denotes our preferred result since it takes account of as many differences between treatment and control groups as possible.

** Statistically significant at the 1% level * statistically significant at the 5% level

Table 3: Propensity Score Estimates of the Want2Work Participation Effect on Earnings

	Propensity Score (one2one)	Propensity Score (Kernel)	N
Full Sample	-0.031 (748.68)	-0.001 (729.71)	2584
IB only	0.007 (1882.06)	-0.025 (1420.62)	1135

Appendix

Table A1: Sample Means for the Want2Work participants and the QLFS

	Want2Work participants (treated)	QLFS (control group)	QLFS – seeking work only (control group)
Variable	Mean	Mean	Mean
Age 16-19	0.077	0.052	0.081
Age 20-24	0.149	0.069	0.088
Age 25-29	0.145	0.075	0.088
Age 30-34	0.124	0.101	0.110
Age 35-39	0.137	0.121	0.125
Age 40-44	0.130	0.114	0.126
Age 45-49	0.102	0.105	0.105
Age 50-54	0.073	0.118	0.109
Age 55-59	0.052	0.175	0.115
Age 60 plus	0.010	0.070	0.052
Highest Qualification: NQF5	0.041	0.090	0.104
Highest Qualification: NQF4	0.020	0.053	0.050
Highest Qualification: NQF3	0.093	0.160	0.177
Highest Qualification: NQF2	0.196	0.224	0.244
Highest Qualification: NQF1	0.154	0.137	0.155
No Qualifications	0.497	0.337	0.270
Male	0.495	0.361	0.453
Illness: Cardio	0.025	0.117	0.107
Illness: Learning	0.017	0.033	0.030
Illness: Mental Health	0.250	0.085	0.074
Illness: musculoskeletal	0.192	0.198	0.185

Illness: Other	0.126	0.105	0.095
Illness: Respiratory	0.019	0.051	0.056
Illness: None	0.371	0.411	0.453
Single Parent	0.211	0.159	0.196
Non-white	0.100	0.120	0.112
Never worked	0.053	0.156	0.125
Last worked 0-6 months ago	0.209	0.103	0.193
Last worked 6-12 months ago	0.108	0.059	0.088
Last worked 12-24 months ago	0.118	0.085	0.113
Last worked 2-5 years ago	0.257	0.168	0.159
Last worked 6-10 years ago	0.147	0.192	0.162
Last worked 11-15 years ago	0.071	0.111	0.090
Last worked 16-20 years ago	0.018	0.056	0.037
Last worked more than 20 years ago	0.018	0.068	0.032
Regional unemployment rate	0.059	0.049	0.050
Incapacity benefit in first period	0.598	0.342	0.262
Income Support in first period	0.192	0.095	0.108
Claiming other benefit in first period	0.019	0.078	0.163
No benefit in first period	0.190	0.502	0.483

Note: QLFS is the GB Quarterly Labour Force Survey