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Do welfare-to-work initiatives work?
Evidence from an activation programme targeted at social security recipients in Norway

Abstract:
This paper presents results from an evaluation of a Norwegian initiative to combat poverty launched in 2003. Central to the plan is a broad spectrum of rehabilitation and activation measures intended to help long-term social security recipients from welfare to work. We illuminate short-term effects up to the end of 2004, taking a dual approach: First, we analyse transitions to work among participants in the programme and study the determinants of this process by means of survival analysis and multivariate hazard rate regression. Second, we address the question of programme effects adopting a quasi-experimental design based on propensity score matching. We find that the mean programme effect is positive, but only when work is defined fairly broadly. However, the impact varies by target group. For immigrants and single mothers, there is no impact whether we use a strict or less strict definition of work. For youth, the effect is even estimated to be negative, implying that they would have been better off without this initiative. The only significant effect in the desired direction is found among other long-term social security recipients, and applies for both the strict and less strict definition of employment. Moreover, this effect is fairly large.

Keywords: Active labour market programmes, social security recipients, programme evaluation, propensity score matching.

JEL classification: C41, H55, I38, J64

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1. Background and introduction

Since the early 1990s there has been an increasing emphasis in Western welfare states on active labour market programmes (ALMP) to combat high and persistent unemployment and promote labour force participation. The activation policies have first and foremost been directed at people who have lost their jobs and receive unemployment insurance benefits, but the emphasis on work and activation is also part of an international ideological shift in the thinking about social security in general. It stems from a widespread concern over long-term passive receipt of welfare benefits. For society as a whole welfare benefits are costly, and for the individual the role as recipient may undermine responsibility and self-sufficiency and cause passivity and dependence.

In the wake of the spread of ALMP, different programmes in many countries have been evaluated (for an overview, see e.g. Heckman et. al. 1999, Kluve 2006, Martin and Grubb 2001). In Norway, various aspects of the impact of ALMP targeted at the insured unemployed have been extensively examined over the last decade (e.g. Aakvik 1998, Raaum, Torp and Tzhang 2002, Røed and Raaum 2006). However, much less attention has been given to the impact of active measures directed at more disadvantaged groups such as social security recipients. A few recent exceptions are Dahl (2003), who analyses a so-called 'workfare' scheme in Norwegian municipalities, and Dahl and Lorentzen (2005), and Lorentzen and Dahl (2005) who analyse the outcome for social security recipients who participate in ordinary ALMP.

Recently, the Norwegian Government issued an Action Plan to Combat Poverty [hereafter referred to as just the Action Plan; St.meld nr. 6 (2002-3)] that singles out long-term recipients of social security as one of the main target groups. Central to the plan is a broad spectrum of rehabilitation and activation measures intended to help moving this group from welfare to work, and this includes the close cooperation of two large welfare sectors, The National Employment Service (state level) and The Social security System (municipality level). The initiative is thus 'tailor-made' for more vulnerable groups, and the scope has increased from 1 250 slots in 31 municipalities at the introduction in 2003 to about 3 900 slots and an aim of making the programme country comprehensive by 2007.

Shortly after introduction, the government called for a large-scale evaluation of the special labour market initiative for welfare recipients, and the results presented here are part of this evaluation. The analysis covers the period 2003-2004, which means that we only address short-term effects. Our contribution is twofold: First, using survival analysis and hazard rate regression we analyse transitions to work among social security recipients who participate in the programme, and study the

determinants of this process. Second, we address the question of programme effects, i.e. we assess whether the observed outcome can be ascribed to participation in the programme. To do this, we adopt a quasi-experimental design based on propensity score matching.

The paper is organised as follows: In the next chapter we take a brief glance at the Norwegian setting, including labour market and welfare policies, and the special initiative directed at social security recipients. Then follows a short summary of the findings of previous evaluation studies, based on data from other countries as well as from Norway. The theoretical framework for the analyses is outlined in chapter four, and chapter five explains our empirical approach. More information on data and variables can be found in chapter six, and the results of the analyses are reported in chapter seven. Chapter eight concludes with a short summary and discussion.

2. The Norwegian setting

All employees in Norway under the age of 67 are covered by the National Insurance System, which is financed by general taxes. When unemployed, insured individuals who register at an employment office receive unemployment insurance (UI) benefits. Newcomers to the labour market and others who have not been gainfully employed are not entitled to UI benefits, but may apply for welfare benefits (social security). Welfare benefits are means tested and can in principle be received for an unlimited period, whereas UI benefits can only be received for a limited period. [1] The administration of the disbursement of welfare benefits is placed in the hands of the municipalities, which are also responsible for the organisation of different measures to assist welfare benefit recipients in becoming self-supporting.

The stated goal of ALMPs is to enhance the participants' prospects of obtaining ordinary work, to improve their qualifications, and to dampen the negative consequences of being out of work in terms of discouragement and loss of self-esteem. The programmes are funded by the central government and organised by the local employment service under the supervision of the Directorate of Labour and Welfare and the Ministry of Labour and Social Inclusion. During the 1990s, the ALMPs grew considerably, and by the turn of the century Norway had taken over Sweden's leading role as the country in Europe with the largest share of active labour market policy measures relative to passive (Raaum, Røed and Torp 2002). Later, Sweden has regained its top ranking, but in 2003-2004 the cost

[1] After 1997 the maximum period for UI benefits has been 156 weeks or 78 weeks for people with little previous work practice (Røed and Raaum 2006).

of ALMPs in Norway still constituted close to 50 per cent of the total public budget for labour market policies (OECD 2007).

The ALMPs can basically be divided into four main groups: labour market training, temporary public employment, employment (wage) subsidy, and work practice schemes (Røed and Raaum 2006). Training and employment subsidies are the largest programmes, while work practice is typically offered to youth and immigrants with little work experience. Programme slots are established in close conjunction with the business cycles, i.e. more places are offered when the economy is sluggish, as it was during the first half of the 1990s. In the mid-1990s, ordinary ALMPs were mostly targeted at the insured unemployed, but not exclusively. Welfare recipients who were judged fit to work also had access to these programmes, but the labour market offices were often quite particular about who they selected (Lorentzen and Dahl 2005).

The ideological re-orientation towards work and activation also influenced the thinking about social security, and in 2002 the government issued an Action plan to combat poverty [St.meld nr. 6 (2002-3)] that expresses a firm belief in activation measures as a means of increasing work activity, earnings and self-sufficiency among vulnerable groups. In addition to long-term social recipients the target groups were young people aged 20-24, single parents, immigrants and people who receive drug substitution treatment. The novelty of this programme was that it involved a closer cooperation between the Social Security Service and the National Employment Service. Previously, these sectors did not cooperate very well, and social security applicants were regularly sent from the social security office to register as job seekers at the employment services, but most of them were sent back to the social services with the label 'unable to seek employment or to benefit from vocational rehabilitation' (Schafft and Spjelkavik 2006). In addition, the labour market courses for the participants of the new programme were different from traditional courses as the participants were given a much closer individual follow-up from both services.

The special vocational rehabilitation programme for social security recipients was launched in 2003 with 1 250 slots in 31 municipalities and has been expanded every year since. In 2006 the goal was to make the programme country comprehensive, and for 2007 the government grant will fund about 3900 slots at a cost of about NOK 600 million (about EUR 75 million).

3. Theoretical considerations

Work and activation programmes may influence the functioning of the labour market in many ways, through direct effects on the participants (changed search behaviour, improved work competence etc.) and through indirect effects on non-participants (e.g. increased competition for ordinary jobs). In addition the programmes may have a general effect on both the non-employed and employers, as the possibility of programme participation will be part of the choice set of the former, while the latter may take the extent of labour market programmes into consideration in their wage setting (Calmfors et al. 2002).

The most obvious effect of labour market programmes is on the participants, and this will be the focus of our analysis. Various training and work practice programmes will increase the participants' human capital and work capabilities and make them more attractive on the labour market. Hence, they are more likely to be offered a job. Activity measures may also increase the participants' work motivation and make them more effective as job seekers. These effects will increase the productivity of the participants, both as potential employees and as job seekers, and thus their employment probability will increase. However, there may also be so-called locking-in effects, i.e. programme participation may dampen search activity and make the job seekers more choosy. Such effects may first and foremost prevail during qualification and training periods, as there will be less time for job search, and the participants will wish to complete the course before starting to look for employment. Participation in work practice and employment schemes may also have such an effect, but this will partly be counteracted by the presumed positive contribution from getting in touch with potential employers.

In a welfare state with generous benefits to those who are not gainfully employed there may be relatively few who are willing to accept jobs that imply that they will be just marginally better off if they start working. Within the framework of search theory (Mortensen 1986) this means that their reservation wage is higher than their market wage, i.e. the lowest wage they are willing to accept in order to start working is higher than the wage associated with job-offers they are likely to receive. A reduction in the benefit level would then reduce the reservation wage and be an incentive for non-employed people to seek more actively for a job and increase their likelihood of becoming employed.

However, in this simple version search theory ignores many important aspects of non-employment. For example, if people have been outside the labour market for a long time, they may have become too discouraged to start searching for a job, even if the benefit level is reduced. Such 'discouragement' effects (Rosholm and Toomet 2005) have recently been reported for married women in Norway

(Dagsvik et. al. 2006) and may particularly strike non-employed people with low productivity as job-seekers and employees, e.g. long-term recipients of social security, immigrants and other vulnerable groups. Hence, economic incentives may have a more ambiguous effect on marginal groups than on core groups on the labour market. The predictions of the simple version of the search model are furthermore at odds with other fields of research, e.g. 'economics of happiness' research and research in the intersection between economics and social psychology. Findings from these fields suggest that having a job increases life quality beyond the increased utility from higher income, as gainful employment yields status, improved self worth and self confidence, and gives a firm structure to everyday life (Jahoda 1981, Warr 1987 as cited in Rosholm 2005).

One of the goals of ALMPs is to improve the qualifications of non-employed with low productivity and to match vacant resources to the existing demand for labour. In the Norwegian labour market, which is characterised by high minimum wages and strong labour unions, it is relatively difficult to enter the labour market for particularly disadvantaged groups with few qualifications. This is often the situation for long-term social security recipients, immigrants and other vulnerable groups. Training programmes may thus be particularly helpful for these groups. In addition, participants in ALMPs will be provided with a network that may be useful in finding a job. Both these effects imply that the probability of receiving a job offer will increase. However, the participant's reservation wage may also rise, as there will be more alternatives to choose from and he or she will probably expect a bonus in terms of higher wages.

ALMPs may also be used to test if a non-employed person really is available for the labour market. If people are not willing to be activated, they will presumably not be willing to work either. Others may want an ordinary job, but do not like to take part in an activation plan. If there is an underlying threat behind the offer of programme participation, e.g. that benefits will be reduced otherwise, the element of force may drive many people who are poorly motivated into the programme. This may also harm the outcome for other participants, and is particularly unfortunate if slots are rationed, which is often the case. Hence, a negative selection into the programme may hamper the effect of ALMPs.

A priori, the expected total effect of ALMPs is thus ambiguous, but our assumption is that the positive effects will outweigh the negative especially for marginal groups in the labour market such as the ones we are dealing with in the present analysis, and especially as the vocational rehabilitation programme in question is mainly based on voluntary participation and a close individual follow-up. One may, however, hypothesise that some groups will benefit more than others, and that possibly those with the

poorest labour market prospects may profit the most. A prerequisite is, of course, that it is possible to find suitable jobs for this kind of labour, and this will largely depend on the business cycle. In a boom with a great demand for labour there will be more job openings for less productive people, and more will be able to make the move from passive dependency into active participation in the labour market. For Norway, it has e.g. been demonstrated that the training effects of ALMPs for unemployed people are larger when economic conditions are favourable than in business cycle slumps (Raaum, Torp and Zhang 2002).

4. Previous findings

Evaluations of labour market programmes give a somewhat mixed picture concerning effects. Most of the evaluations are American studies, and it is uncertain whether it is possible to generalise these findings to other countries because of differences in labour markets and target populations (Dahl and Lorentzen 2005). Yet, some authors are more optimistic in this respect as the main patterns from European studies are similar to the American studies (Heckman et. al. 1999). One meta-analysis from the US has shown positive results for employment, but the programmes had less effect on poverty (Michalopoulos and Schwartz 2000). An important point, however, is that the most disadvantaged seems to benefit the most from work-programmes. The general findings seem to be that for most participants, the benefits are modest, and varies between type of programmes and target groups. There are also heterogeneity in treatment effects in subpopulations (Heckman et. al. 1999). One review of the literature from studies in the OECD countries found that in some countries there is a positive effect, while in others there is no or even a negative effect (Martin 2000). A more recent review considering 159 studies from both OECD and developing countries concludes that the effects vary a great deal by programme design and the context the programme operates in (Betcherman et. al. 2004).

In a review of more than 100 European studies, Kluve (2006) concludes that there are generally positive effects, although dependent on the type of programme, and that the effects are heterogeneous over target groups. The Swedish experiences seem to be less positive than the results from the US and Europe more generally. One review of Swedish studies concludes that there is little evidence that active labour market programmes are effective, and that the programmes would probably be more effective if they were carried out on a smaller scale than is currently done in Sweden (Calmfors et. al. 2001). However, by developing more elaborate models and controlling for selection bias, Sianesi found a generally positive effect for Sweden (Sianesi 2004). One study from Denmark that controls for selection on unobservables concludes that programme effects are heterogeneous, and that those who

are most likely to be assigned to certain initiatives are those who benefit the least from it (Graversen and Jensen 2006).

Until quite recently, there have been few effect evaluations of Norwegian labour market programmes, but the now growing body of studies largely suggests a modest positive effect of such programmes on both earnings and employment (Moe 2000, Raaum et.al. 2002a, Raaum et.al. 2002b, Dahl and Lorentzen 2005, Aakvik et.al. 2005, Hamre and Bråthen 2006). Though, one study of programmes directed at young social security recipients and drug-users estimated a negative effect for participants with some education, but a positive effect for the less educated (Pedersen 1998).

Most of the evaluation literature has been of "general" programmes including target groups that might differ substantially from the main target group of the Action Plan considered in the present study. It seems fairly clear that the treatment effects are heterogeneous across subpopulations, both between and within target groups. Hence, it is an open question whether these lessons also apply to specific target groups.

The literature on particularly disadvantaged groups such as social security recipients and ethnic minorities are scarcer. Lessons from work programmes directed at social security recipients are largely American. A recent meta-study based on 46 work programmes concluded that the programmes have a small and consistent effect on employment, earnings and welfare payments during the first six years after intervention (Smedslund et. al. 2006). This particular meta-analysis considered only studies that used randomised assignment, with the result that only studies from the USA and Canada were included, as they had not found any proper randomised trials from European countries. This does not imply that there are no high-quality studies done in Europe, however. A number of other kinds of studies do exist, but few European studies pay proper attention to the issue of unobserved selection effects (see Dahl and Lorentzen 2005: 88).

The Norwegian literature is meagre in this field. One study distinguishes between employment programmes and training programmes, where the latter was found to have a modest positive effect and the former had no mean impact (Dahl and Lorentzen 2005). However, they also found that employment programmes had no impact for the most and least disadvantaged in the target group, but did have a positive impact for those in the middle range. Many participants in these programmes do not only follow one programme, but chains of programmes. Not all such chains are equally efficient, but most have, nevertheless, a positive effect (Lorentzen and Dahl 2005).

When young people are concerned, which are one of the target groups of the Action plan, there are also mixed evidence from previous research. There are some examples of positive results from the OECD countries (Martin and Grubb 2001) and the U.S. (Heckman et. al. 1999). On the other hand, Swedish experiences are not very positive (Calmfors et. al. 2001). Larsson (2002) studied the effect of work programmes for the age group 20-24 and concluded that these programmes seem to be counterproductive. A Norwegian study adds more nuances to this picture, concluding that for youth, the effects vary by gender and age subgroups across programmes. Females seem to benefit the most from programmes, while males and those in the age group 21-25 do not benefit at all. There might even be negative effects for both males and females in this age group (Hardoy 2005). This is in line with the findings from a recent meta-analysis of European studies, which concludes that programmes aimed specifically at youth fare significantly worse than programmes targeted at the adult population (Kluve 2006).

Most of the literature on the labour market behaviour of immigrants and ethnic minorities are not evaluations of work programmes. It is perhaps not surprising that other issues have been given priority, such as the impact of country background, labour market conditions at arrival, or whether they are discriminated against on the labour market. Only one Norwegian study estimates the effect of work programmes on non-western immigrants, controlling for selection bias. The results suggest that there is a positive effect for both men and women, but it varies somewhat across type of programme and immigration background (Kvinge and Djuve 2006). Danish experiences have also shown that the effects vary by immigrant group. Some groups do not experience much effect of work programmes, while the impact is large particularly for refugees (Rosholm 2005). It should be noted that the composition of immigrant population differs substantially between countries, even in Scandinavia, and generalisations from one country to another are therefore uncertain.

In the U.S, many of the general welfare to work programmes are in practice directed at single parents (usually mothers), so many of the American findings concerns this group. A meta-analysis of random assignment programmes directed at single parents with dependent children, reveal interesting nuances and variations of the effects. Generally, work-first programmes have the most positive effect, but "participant characteristics and site environmental conditions were often equally, and sometimes more, important than programme characteristics" (Ashworth et.al. 2004: 200), and the impact of most programmes declines with time (*ibid*: 210). As one of the main findings from this study is that social environmental conditions constitute a very important factor, it is not obvious that these results are as relevant in a European or Norwegian setting.

All in all, the literature thus gives a mixed picture of the effects of work programmes. Generally, there seems to be a small, or moderate, positive effect. On the other hand, the effects seem to vary considerably between countries, types of programme and target groups. Some studies also suggest that the effects may be heterogeneous within target groups. Further, there are disagreements as to whether findings from the U.S are transferable to Europe, and even if findings from one European country are transferable to another. Despite of varying results, it seems that only a few studies estimate negative effects, except for programmes targeted at youth. The target groups of the Norwegian Action Plan are considered to be particularly disadvantaged or vulnerable on the labour market, and it is less clear to what extent work programmes are helpful for these groups. There may be reasons to expect a positive effect for social security recipients in general, and perhaps also for single parents. The literature on immigrants is meagre, but one Norwegian study suggests a positive effect for this group. As for youth, the effects have generally been shown to be counterproductive.

5. Empirical approach

5.1. Analysis of transitions to work

As job search is a dynamic process in which the timing of employment entry is an essential event, we use survival analysis and hazard rate regression to study transitions to work among participants in the programme. It is well known from the literature that the survival function and the hazard function are two sides of the same coin, i.e. if we know one function we can estimate the other (see e.g. Allison 1995). For example, if t is a continuous variable, $h(t)$ the hazard function and $S(t)$ the survival function, the following equation applies:

$$S(t) = \exp\left\{-\int_0^t h(u)du\right\} \tag{1}$$

where

$$h(t) \equiv \lim_{\Delta t \to 0} \frac{P(t \le T < t + \Delta t \mid T \ge t)}{\Delta t}. \tag{2}$$

In our analysis we use the survival function specification to estimate the time to employment entry among different target groups, while we use the hazard function specification to estimate a multivariate model with explanatory factors, studying the determinants of employment entry. Since time is measured in months in our data, we use a discrete hazard rate model specified as a logit function, i.e. we estimate

(3) $$\log\left(\frac{P_t}{1-P_t}\right) = X_t\beta,$$

where P_t is the probability of entering work at time t, X is a vector of covariates, and β is a vector of parameters. In addition to process time, the X-vector consists of variables that are likely to affect employment entry, such as human capital variables (age, education, previous employment experience), possibilities and obstacles for working (e.g. family situation and the local labour market), and economic restrictions (income and social security benefits).

5.2. Propensity score matching

The effect of a treatment is in principle the difference between the observed result and the hypothetical result for the same person given non-treatment. Of course, only one of these results is observable. In an experimental setting, where individuals were randomly assigned to treatment or control, we could let the control group represent the counterfactual result. This is obviously not as straight forward in a setting where there is no randomisation. The target groups are heterogeneous groups, and it is likely to be some kind of selection into treatment. By applying econometric techniques, a control group can be constructed in a way that minimizes the problem of systematic selection bias. One such method is propensity score matching (PSM). In principle, we match each treated persons with an untreated person that is as equal as possible on all observable characteristics. This kind of technique is particularly well suitable when we have a large number of non-treated compared to the number of treated, which we have in this study. Hence, it should be possible to find a good match for most of the treated.

The matching procedure is done by first estimating the probability of being treated conditioning on observable characteristics. This is done by means of a binomal logit model, as we do not distinguish between different types of programmes, but only by whether the persons participate or not. The variables used in this procedure are more or less the same as the ones used when modelling the transitions to employment entry (see Section 6.2). The "historical" covariates are the most important. Our data sources allow us to map each person's individual history when both employment and social security reception are concerned. We assume that this will greatly improve the matching, as much unobserved heterogeneity is likely to be reflected in the past history.

In the next step, to avoid mismatches, we exclude all observations that had propensity score values outside the common region of the propensity score distribution for the treated and controls (common support). Only 0.3 per cent of the observations were outside the common support limits. The last step

in the matching procedure is then to match every participant with a non-participant on this score. We apply one-on-one nearest neighbour matching. To ensure a good match, one could perform exact match on some important characteristics. We decided to make a separate matching for each target group, and for each sex (except for single parents, where there were very few male participants).

In some countries, such as Sweden and Denmark, all unemployed will be enrolled in a programme sooner or later, and hence matching on non-participants should be avoided (Sianesi 2004, Graversen and Jensen 2006). This is largely the case in Norway as well. However, in our context, the governmental Action Plan provides more than the ordinary initiatives, as it also involves a tighter collaboration between the Employment Services and the Social security services. This collaboration is assumed to be the active component in the programme (Schafft and Spjelkavik 2006). The non-participants might participate in ordinary initiatives, but then without the joint effort of these two services.

Since the Action Plan is an ongoing programme, the people included in our analysis started participating any time between April 2003 and the end of our observation period, 31 December 2004. Matching at only one point in time might therefore be problematic. We have chosen a practical solution to this, performing the matching at three time points: First, at 1st April 2003, next at 1st January 2004, and last at 1st July 2004. When estimating the survival function, the treated group is followed from the time they entered the programme, and the control group from the matching time-point. The matching procedure outlined above was thus performed three times for each target group and sex, i.e. a total of 21 times.

After matching, an inspection of kernel density plots showed that the distribution of propensity scores in the treated and non-treated groups was almost identical (Rønsen and Skarðhamar 2006). To further check the quality of the matching, we tested whether the groups differed on any of the conditioning variables, and there were no significant differences between the groups after matching (see Appendix Tables A1-A7). In conclusion, the matching seemed very successful. All observable variables were well balanced after matching, and more than 99 per cent were matched in each target group at each matching point. The final sample is shown in Table 1.

Table 1. Results from the matching procedure

	Men		Women		Total
	Participants *before* matching	Participants *after* matching	Participants *before* matching	Participants *after* matching	Per cent matched
Immigrants					
April-December 2003	1 146	1 141	599	588	99,1
January-June 2004	499	499	158	157	99,8
July-December 2004	443	443	173	172	99,8
Single parents					
April-December 2003	45	45	505	504	99,8
January-June 2004	25	24	205	203	98,7
July-December 2004	14	14	223	222	99,6
Youth					
April-December 2003	813	812	438	437	99,8
January-June 2004	527	526	233	232	99,7
July-December 2004	436	434	196	196	99,7
Long-term welfare recipients					
April-December 2003	1 108	1 106	303	303	99,9
January-June 2004	536	536	159	158	99,9
July-December 2004	458	458	118	118	100,0
Sum	6 050	6 038	3 310	3 290	99,7

6. Data, target groups and variables

6.1. Data and target groups

The data are extracted from a large longitudinal database in Statistics Norway covering the whole population of Norway. The database contains information from several administrative registers on individual life events that we have linked together to form complete histories of demography, employment, education, income and social security benefits during 1992-2004. Information on participants and their programme entry and exit dates was obtained directly from the Directorate of Labour and Welfare and merged with the data from the longitudinal database.

When PSM is used as a programme evaluation tool, we also need information on people who did not participate, but who may be potential members of the control group. Since receipt of social security benefits is a main condition of programme participation, we have used this as a point of departure to

define the population extracted from the database. In addition, the programme comprises immigrants and refugees who do not necessarily receive welfare benefits, but who are believed to need special assistance to get a job. The data extract thus included people who:

1. had been a resident in the country after 01.01.2003, and
2. had received social security benefits after 01.01.2000, or
3. were immigrants or refugees

The first criterion implies that we exclude people who died or emigrated before 2003, as the programme was not launched before then. The second criterion is used to be able to identify long-term welfare recipients (defined as having received benefits for six months or more, or on and off during the last three years). The third criterion is necessary to include immigrants and refugees who are not selected by criterion two, i.e. who had not received welfare benefits during this time. Following these rather wide criteria the population extract consisted of almost 784 000 persons, of whom 9 368 had participated in the programme by the end of 2004, which was the latest update of our data at the time of extraction. Before matching, we investigated the range of values on all relevant variables (income, social security, length of unemployment etc), for the treated group and excluded all potential controls who had values on these variables that were outside the ranges present in the treated group. The population was then reduced to 539 408 persons.

In addition to immigrants and refugees the programme is also especially targeted at single parents and young people aged 20-24 who have welfare benefits as their main source of income. As these target groups are fairly dissimilar, our main strategy has been to stratify the data by target group and do the analyses separately for each target group. Target group is not a variable that is available in the data, but we have used our own definition as follows:

1. *Single parents*: People who have received extended child benefits as single parents during the last year.
2. *Immigrants:* Western and non-western immigrants (including refugees) who moved to the country after the age of 10.
3. *Youth:* People who are born in Norway or people who immigrated before the age of 10, and who have not yet turned 25.
4. *Long-term social security recipients:* The remaining people in the data extract.

These groups are not mutually exclusive. For example, a 22-year immigrant who is a single parent may belong to all of the three first groups. We have therefore applied a rule that allocates people to

one and one group only, following the above ranking, i.e. we first distinguish single parents, next immigrants, then youth and finally the remaining social security recipients. The ranking is based on an assessment of what is likely to be most important for the labour market behaviour of the person in question. Hence, we assume that when programme participation and labour market outcomes are concerned, being a single parent is more decisive than being an immigrant or a young person, and that those immigrants who arrived in the country as children have more in common with other Norwegian youth than with immigrants who came to the country later in life. The single parents group therefore also contains immigrants and people under the age of 25, and the immigrant group also contains young people.

In addition to differences between the target groups we expect that the participation and labour market behaviour of men and women may be quite different. Hence we also estimate the models for each sex separately, except for single parents who mainly consist of women (94 per cent).

6.2. Explanatory variables

Since many of the factors that affect employment entry are likely to also affect programme participation, the covariates included in the hazard rate model of employment entry and the covariates used in the PSM model are more or less the same. The purposes of the models differ, however, as the former is used to study the effects of various determinants, while the latter is used to predict propensity scores for further input in the matching procedure. Multicollinearity will therefore be more of a problem in the hazard rate model, which focuses on the estimated effect of each variable. Hence, the hazard rate model has a more parsimonious formulation than the logit model used to predict the propensity scores.

The variables included in the hazard rate model are shown in Table 2, which contains descriptive statistics for the participants' characteristics measured at programme entry. Most variables are time varying, but in the model they are usually fixed to the value at programme entry. This especially concerns variables that are likely to be influenced by programme participation such as indicators of previous employment and social security experience, while others are updated along with process time, such as age, marital status, and number and age of children.[2]

Some variables may need a bit of explanation: *Age of youngest child* refers to the youngest child in the family (not just biological children), as this reflects the true caring situation more appropriately. The

[2] In the PSM model all time varying variables are entered with the value they had at the time of matching.

variable is a combination of number of children and age of youngest child, where those with no children constitute one category, while the rest of the categories consist of people with children in different age groups. *Social background* is based on father's or mother's educational level.[3] Usually father's level is used, but if unknown, mother's level is used instead. For a relatively large proportion and especially among immigrants there is no information on education for either parent, and therefore we have included a category for missing values in this variable. Some also have missing information of own *educational level,* so the same procedure is used here. *Immigrant background* is a dummy variable that equals one if the individual has immigrated herself or himself, or if she or he has two parents who are immigrants. Data on the *local unemployment rate* is linked on to the data, using information of place of residence and aggregate time series of the municipality unemployment rate from Statistics Norway (www.ssb.no/hjulet). If place of residence is unknown (concerns only a few people), the local unemployment rate is set to the average of the rest of the data material (3,3 per cent for 2003 and 4,1 per cent for 2004).

In the database we are using, we have access to longitudinal information that dates back to 1992, but in the analyses we mainly use the history over the last three years as we assume that recent events have a larger impact than events that took place longer ago. Our models include several cumulated measures of *previous employment experience:* total number of years with income from labour, number of months employed as well as number of months unemployed during the past three years, number of months since last employment (counting back maximum three years), and whether the person has been registered as vocationally disabled during the last three years (dummy). Having received social security benefits is a main criterion for programme participation, and in the models we include three indicators for *previous welfare benefit history:* number of months with benefits during the past six months, number of months with benefits during the rest of the past three years, and number of months since last benefit payment (counting back maximum three years). Single parents are further entitled to some special benefits, the so-called transitional allowance plus extra child benefits (see e.g. Kjeldstad and Rønsen 2004). For this target group we therefore also include the total sum of *transitional allowance* received during the last three years and number of months with extended child benefits. The latter variable is also an indication of how long the individual has been a single provider the last three years.

[3] We have created a three-group classification based on the ISCED97 standard classifications. *Low* corresponds to levels 0-2, *medium* to levels 3-4, and *high* to levels 5-6. See www.ssb.no/stabas/

Table 2. Descriptive statistics of programme participants by target group

	All target groups	Immigrants	Single parents	Youth	Long-time social security recipients
Men (per cent)	64,6	69,2	8,3	67,2	78,4
Age (years)	31,2	34,9	33,8	21,4	35,8
Social background (per cent)					
High	9,5	1,1	6,1	15,9	13,8
Medium	39,0	3,6	38,6	65,6	52,7
Low	14,4	2,3	23,8	12,7	25,9
Unknown	37,2	93,0	31,5	5,8	7,6
Educational level (per cent)					
Low	19,2	12,6	20,6	27,2	18,5
Medium	59,4	38,6	63,3	70,6	70,3
High	6,2	8,2	6,7	0,5	9,2
Unknown	15,2	40,6	9,4	1,8	2,1
Age of youngest child (per cent)					
No children < 18 years	65,7	58,5	5,4	73,6	88,8
0-2 years	5,9	12,3	4,5	2,3	2,9
3-6 years	11,1	14,2	40,7	3,9	3,7
7-18 years	17,3	15,1	49,4	20,3	4,7
Marital status (per cent)					
Unmarried	65,5	30,6	55,7	97,6	77,1
Married	20,5	54,9	4,3	1,9	6,4
Previously married	14,0	14,5	40,0	0,6	16,5
Immigrant background (per cent)	38,8	100,0	31,4	8,4	2,7
Refugee (per cent)		71,1			
Years since immigration		7,9			
Months employed past 3 years	7,5	6,9	6,8	8,4	7,6
Months unemployed past 3 years	9,6	8,7	10,1	7,1	12,7
Vocationally disabled past 3 years (per cent)	20,0	12,7	14,9	20,3	29,7
Months with welfare benefits past 6 months	3,5	3,2	3,7	3,1	4,0
Months with welfare benefits the rest of the past 3 years	10,7	11,4	10,8	7,2	13,1
Transitional allowance (1000 NOK) past 3 years			102,7		
Months with extended child benefits past 3 years			13,3		
Income from labour last year (1000 NOK)	31,0	31,7	24,3	28,7	34,9
Years with labour income	3,9	2,2	3,8	0,6	9,2
Densely populated area (per cent)	91,5	95,5	93,7	87,2	90,2
Local unemployment rate	4,0	4,0	4,0	4,0	4,1
N	9 360	3 013	1 018	2 626	2 703

Source: FD-Trygd, Statistics Norway.

7. Results

7.1. Transitions to work

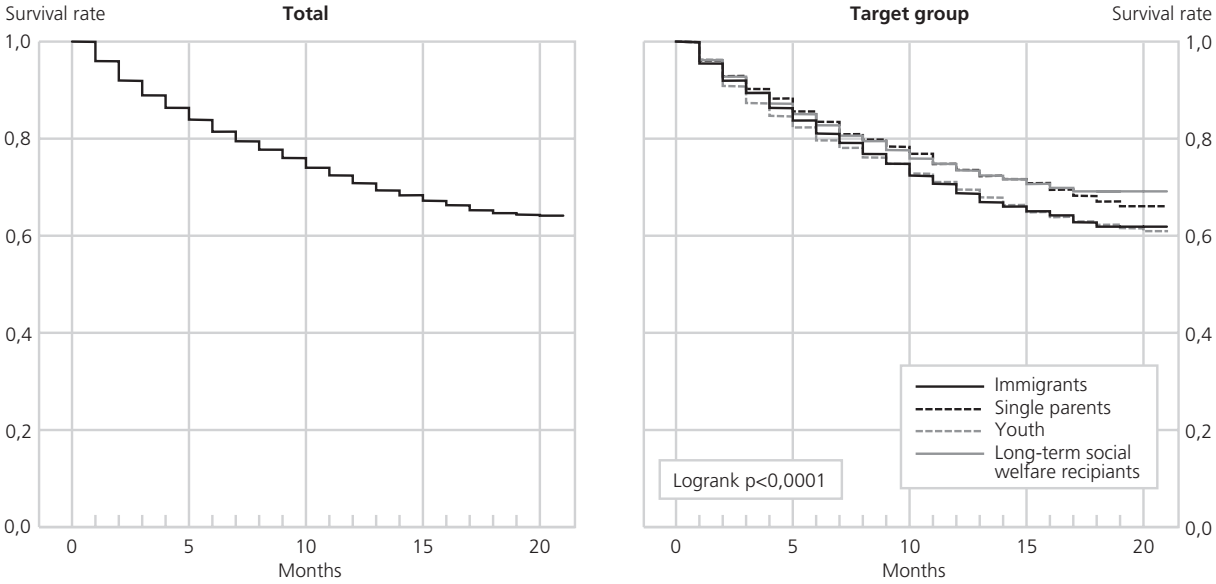
In the first step of our analyses we investigate to what extent the participants in the programme succeed in getting a job, whether this outcome varies with target group and how it is affected by the personal characteristics of the participants. But before doing so, we must decide on how to define the success criterion. The goal of the programme is to get the participants into an "ordinary job", but what kind of employment this should include is an open question. An obvious criterion is that the employment activity must be recorded in the employment register, but a closer inspection revealed that some individuals were registered as both employed and unemployed in the same month. This overlap may be due to incorrect dating, but it may also be real - for two reasons. First, we simplify the analysis by using month instead of day as our time unit. An unemployment spell that ends before an employment spell starts later in the same month will then be overlapping in our data. The implication is only that job entry will be delayed with up to a month for each individual (½ month on average), and this should be of no importance for the results. Second, certain ALMP activities among unemployed job-seekers should in fact be reported to the employment register. It is doubtful whether this kind of employment should be considered a success, but among disadvantaged groups with hardly any contact with to the labour market, it may be argued that they have come a long way towards success in obtaining such a job. In consensus with the Directorate of Labour and Welfare we therefore also consider some who are registered as both employed and unemployed as successfully employed, but this is limited to certain categories only: (i) those who are partly employed, (ii) those who are in school or on an establishment grant and (iii) those who are employed with a wage subsidy.

We follow the participants from the month they enter the programme and until they become employed, or until censoring in December 2004, which is the latest month of observation in our data. Since the programme was launched in March 2003, the follow-up period is rather short. We are therefore only able to capture short-term effects. In the left panel of Figure 1 we have plotted the estimated Kaplan-Meier survival function for all participants considered together. It shows that the probability of still being out of work falls fairly gradually over the first 7-8 months, and then subsides before it more or less stagnates after about 18 months. After 21 months (the maximum follow-up time) the probability of still being non-employed is estimated to be 0.64, i.e. the probability of getting a job before this time is 0.36. The small table at the bottom of the graph further shows that 25 per cent of the participants had entered employment within ten months.

The right panel of Figure 1 depicts the survival function for each target group. We notice that there are significant differences between the curves, indicating that immigrants and young people have a bigger chance of getting a job than single parents and long-term social security recipients. Twenty-one months after registering in the programme the probability of not yet being employed is estimated to be 0.61 among youth, 0.62 among immigrants, 0.66 among single parents and 0.69 among other social security recipients. Within nine months 25 per cent of the two former target groups had entered employment, while it took 11 months for the two latter groups to reach the same proportion.

Since the estimated survival rates in Figure 1 do not control for personal characteristics, the observed differences in employment chances between target groups may just result from the fact that these participants are very heterogeneous. The multivariate analyses in Table 3 confirm that this is so. When controlled for covariates there are no longer any differences in employment chances between the target groups - not when male and female participants are analysed together (column 1), nor when the model is estimated for each gender separately (columns 2 and 3). There are also very few effects of gender, age and social background. When the participants' own education is concerned, a clear positive effect is found in most target groups, except among young people who still have relatively low education and among female long-term social security recipients. Marital status does not seem to affect employment entry at all, but having small children delays the process even among men, and especially among male long-term recipients of social security. Being a refugee makes it harder to find work for immigrant women, but not for immigrant men. Time since immigration, on the other hand, has only an effect on men. The effect is non-linear and is fairly low and stable the first few years whereupon it increases with time since immigration.

Figure 1. Transitions to employment since entry into the programme. All participants and by target group



	N	Transition to employment	Censored	Months until 25% got employed
Participants	9 360	27 %	73 %	10

	N	Transition to employment	Censored	Months until 25% got employed
Immigrants	3 013	29%	71 %	9
Single parents	1 018	24%	76 %	11
Youth	2 626	28 %	72 %	9
Long-term social welfare recipiants	2 703	24 %	76 %	11

Source: FD-Trygd, Statistics Norway.

What seems to matter most for employment entry, however, is the past employment and social security history. Longer work experience has a clear positive effect on the likelihood of getting a job, in particular fairly recent experience gained during the last three years, but among long-term social security recipients also total experience as reflected by number of years with income from labour. Conversely, previous unemployment experience and having been vocationally disabled in the past both have clear negative effects, but the former mainly applies to male immigrants and single parents, and the latter mainly youth.

Higher labour income last year also has a clear positive effect on the transition to work, except among single parents. As labour income is a product of hours worked and hourly wage, higher income may reflect both higher wage and longer hours, but since both effects normally are assumed to be positive, the combined effect is as expected. Greater dependence on social security in the past pulls in the opposite direction, and recent experience seems to matter more than somewhat older experience. Number of months with social security assistance the past six months has a significant negative effect

on employment entry both among male immigrants and young people, while number of months during the rest of the past three years is only significant when all target groups are analysed together.

Somewhat surprisingly, we find no effect of the local unemployment rate. This may be due to the limited number of municipalities that were included in the programme during of analysis period (31 in 2003 and 45 in 2004, out of the country's 431 municipalities), and in addition the labour market conditions were fairly stable at the time. Altogether this probably implies that there is little variation in the local unemployment rate. The indicator for densely populated area is also meant to pick up local labour market conditions. Here there is a significant effect among male long-term social security recipients indicating that their chances of becoming employed are poorer if they live in a densely populated area. Assuming that there are more job openings in densely populated areas, this may also seem surprising. But if personal follow-up during programme participation is more decisive for the success of this target group, this may be more prevalent in tight-knit smaller communities than in larger residential areas. In addition there may be a larger proportion with drug addict problems among social security recipients in cities and more populated places. Unfortunately, we cannot explore these hypotheses further with the available data.

The last covariate in Table 3, time since programme entry, is process time. It is measured in months and collapsed into intervals of three months except for the last interval, which is six months. In correspondence with the survival curves in Figure 1, the employment rates are estimated to be highest the first few months, and over the next months the rates fall fairly rapidly at first and then more gradually. Even if the model controls for a lot of observable characteristics, the slope may be influenced by other factors that we are not able to observe. Models that control for unobserved heterogeneity may partly rectify this, but as we are mainly occupied with the effects of various explanatory factors, and not so much with the time dependence of the baseline employment hazard, we have not applied such models here.

Table 3. Transitions to employment among participants. Odds ratios[1] estimated from proportional hazard regression. All participants and by target group

	All target groups			Immigrants		Single parents (both sexes)	Youth		Long-time social security recipients	
	All	Men	Women	Men	Women		Men	Women	Men	Women
Target group (ref=long-term welfare recipients)										
Immigrants	1,130	1,146	1,063							
Single mothers	1,108	1,428	0,993							
Youth	1,004	0,979	0,994							
Woman	0,989					0,739				
Age (years)	1,017	1,029	0,979	1,065	1,079	0,955	4,260	1,415	0,961	**0,857**
Age squared /10	0,995	0,994	0,999	**0,989**	0,986	1,005	0,723	0,928	1,001	1,014
Social background (ref=high.)										
Medium	0,959	0,979	0,909	1,855	0,270	1,030	0,973	0,804	0,938	1,290
Low	0,913	0,862	0,976	1,646	1,373	1,033	0,866	0,840	0,804	1,235
Unknown	1,074	0,990	1,189	1,996	0,825	0,833	1,226	1,149	**0,600**	1,922
Educational level (ref=low)										
Medium	**1,277**	**1,204**	**1,392**	1,163	**1,873**	**1,439**	1,242	1,245	1,239	1,172
High	**1,706**	**1,588**	**1,852**	**1,673**	**2,065**	**2,703**	2,218	1,304	**1,549**	1,522
Unknown	**1,328**	1,224	**1,482**	0,928	**1,669**	**1,869**	0,702	1,976	1,066	0,560
Marital status (ref=not married)										
Married	1,212	1,250	1,125	1,090	1,057		0,835	1,233	1,285	1,472
Previously married	1,107	1,100	1,100	1,016	1,089		1,056	0,779	1,184	1,006
Age of youngest child (ref=no children < 18 years)										
0-2 years	**0,642**	**0,711**	**0,511**	0,752	**0,477**	0,553	1,021	0,476	**0,462**	0,732
3-6 years	**0,775**	0,808	0,812	0,738	0,844	0,722	1,027	0,470	1,138	1,053
7-18 years	0,915	**0,821**	1,065	1,021	1,193	1,011	**0,712**	1,025	0,595	1,172

[1]Coefficients in bold: significant at 5% level

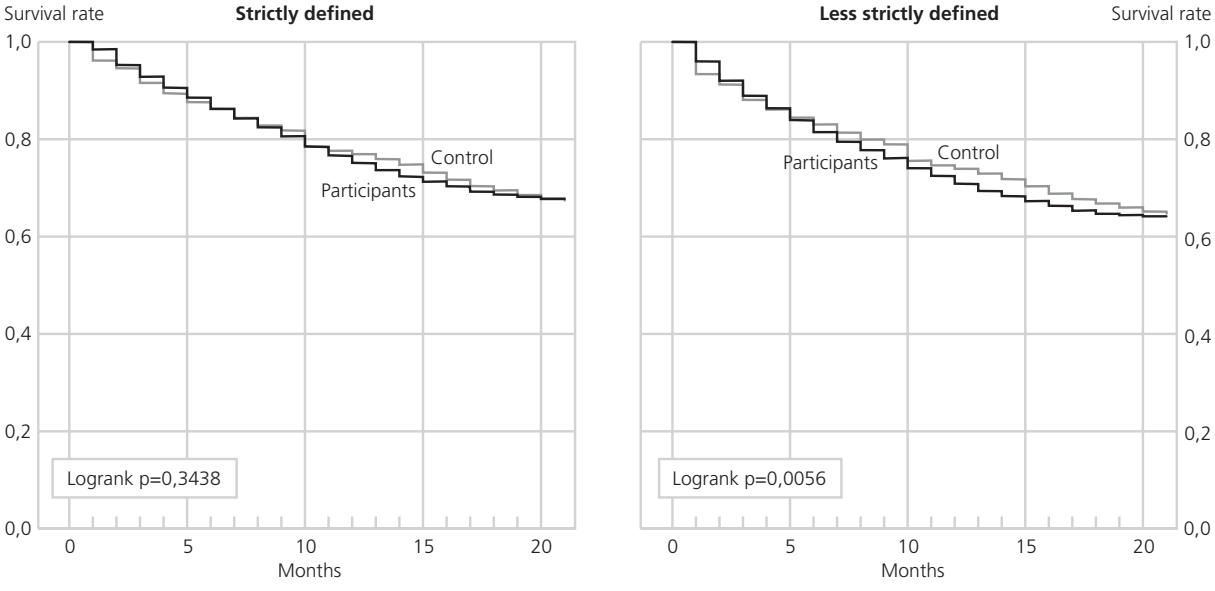
Table 3 (cont.)

	All target groups			Immigrants		Single parents (both sexes)	Youth		Long-time social security recipients	
	All	Men	Women	Men	Women		Men	Women	Men	Women
Immigrant background	1,015	1,035	1,021			1,008	1,040	1,342	1,146	0,445
Refugee	**0,844**	0,892	**0,748**	0,838	**0,673**					
Years since immigration				**0,904**	0,973					
Years since immigration, squared				**1,035**	1,005					
Log (transitional allowance in 1000 NOK past 3 years)						1,050				
Months with extended child benefits past 3 years						0,995				
Months employed past 3 years	**1,027**	**1,027**	**1,026**	**1,022**	**1,021**	**1,030**	**1,028**	**1,031**	**1,041**	**1,027**
Months unemployed past 3 years	**0,991**	**0,990**	0,922	**0,987**	1,010	**0,981**	1,003	0,978	0,998	0,990
Vocationally disabled past 3 years	**0,746**	**0,734**	**0,773**	0,799	1,459	0,685	**0,703**	**0,559**	0,859	0,891
Months with welfare benefits past 6 months	**0,953**	**0,945**	**0,956**	**0,947**	0,995	0,952	**0,934**	**0,914**	0,953	0,999
Months with welfare benefits the rest of the past 3 years	**0,994**	**0,993**	0,996	0,997	0,999	0,989	0,992	1,006	0,989	0,998
Log (labour income in 1000 NOK last year)	**1,112**	**1,115**	**1,099**	**1,115**	**1,125**	1,054	**1,129**	**1,120**	**1,098**	**1,161**
Years with labour income	**1,013**	1,009	**1,024**	0,991	0,978	1,002	1,004	0,974	**1,024**	**1,055**
Densely populated area	0,966	0,883	1,127	1,017	1,198	1,338	0,934	1,080	**0,715**	1,241
Local unemployment rate	1,014	1,004	1,036	1,128	1,199	0,968	0,999	0,916	0,945	1,122
Time since programme entry (ref=1-3 months)										
4-6 months	**0,781**	**0,726**	0,885	**0,782**	1,151	0,775	**0,642**	0,883	**0,745**	0,716
7-9 months	**0,628**	**0,582**	**0,717**	**0,614**	0,980	**0,652**	**0,468**	**0,613**	**0,679**	**0,564**
10-12 months	**0,665**	**0,592**	0,807	**0,594**	1,262	0,652	**0,618**	0,679	**0,574**	0,617
13-15 months	**0,508**	**0,567**	**0,408**	**0,482**	0,637	**0,394**	0,729	**0,426**	**0,539**	**0,145**
16-21 months	**0,359**	**0,289**	**0,497**	**0,343**	0,657	0,538	**0,307**	0,495	**0,212**	**0,289**
Likelihood Ratio	1127,9	760,3	407,1	253,9	111,2	109,1	223,8	164,9	351,3	115,9
DF	33	32	32	30	30	29	28	28	28	28
N (person-months)	90 882	58 601	32 281	20 369	9 364	10 066	16 419	7 886	21 008	5 770

7.2. Evaluation of programme impact

We now turn to the question of programme impact, by comparing the survival rates of the participants with the corresponding rates of the matched control group. If there is a significant difference in survival rates between these two groups, we may conclude that there has been a programme impact on transitions to employment. As explained in section 7.1, we have two definitions of success: one strict and one less strict, and the results for both definitions are displayed in the figures below. The average survival rates of all participants and controls are plotted in Figure 2 for both the strict definition (left panel) and the less strict definition (right panel) of employment. If we apply the strict definition, there is no significant difference between the treated and the control group ($p > 0{,}34$). However, if we apply the less strict definition, then there is a positive treatment effect ($p < 0.01$). For the participants, it takes 10 months before the first 25 per cent get a job, compared to 11 months for the controls. Hence, the transition rate is slightly higher for participants than for non-participants.

Figure 2. Transitions to employment among all participants and matched control group. Employment defined strictly and less strictly.



	N	Transition to employment	Censored	Months until 25% got employed
Control	9 328	26 %	74 %	14
Participants	9 328	23 %	77 %	13

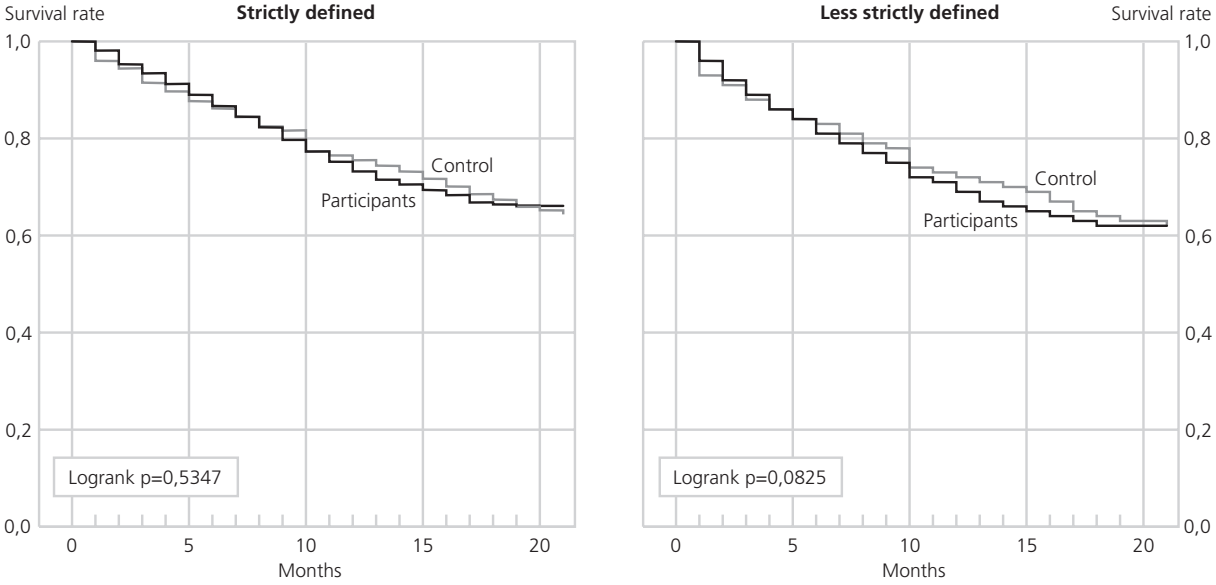
	N	Transition to employment	Censored	Months until 25% got employed
Control	9 328	29 %	71 %	11
Participants	9 328	27 %	73 %	10

Source: FD-Trygd, Statistics Norway.

As the average effect might differ across subpopulations, we also need to consider each target group separately. The survival rates for each group are plotted in Figure 3-6. Considering immigrants, the

transition rate to employment seems to be slightly higher for the treated group, but this difference is not significant. Still, when applying the less strict definition of employment, the p-value is fairly small (p=0.0825), which suggests that there might be a very small positive effect if we are willing to accept this definition of success.

Figure 3. Transitions to employment among immigrant participants and matched control group. Employment defined strictly and less strictly.

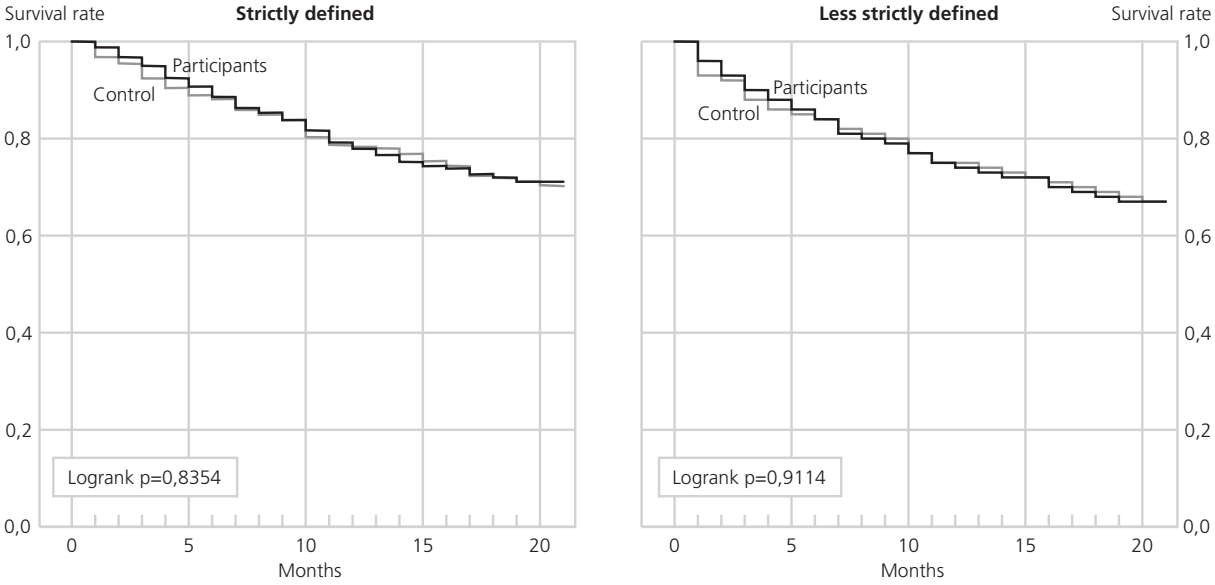


	N	Transition to employment	Censored	Months until 25% got employed
Control	3 000	29 %	71 %	13
Participants	3 000	25 %	75 %	12

	N	Transition to employment	Censored	Months until 25% got employed
Control	3 000	32 %	68 %	10
Participants	3 000	29 %	71 %	9

Source: FD-Trygd, Statistics Norway.

Figure 4. Transitions to employment among single parent participants and matched control group. Employment defined strictly and less strictly.

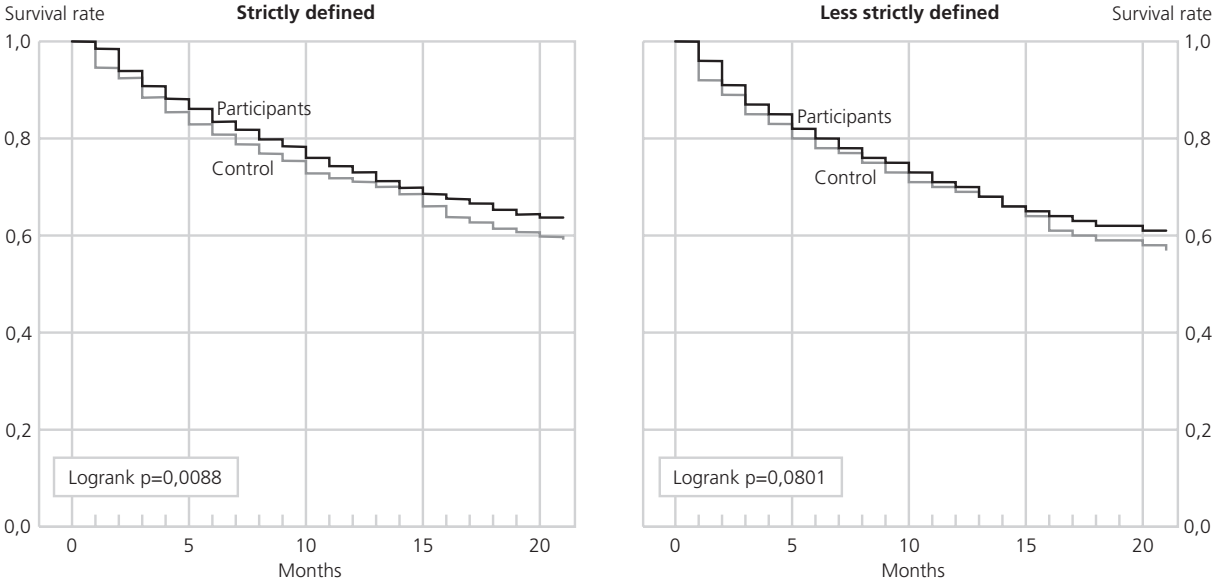


	N	Transition to employment	Censored	Months until 25% got employed
Control	1 012	24 %	76 %	16
Participants	1 012	20 %	80 %	15

	N	Transition to employment	Censored	Months until 25% got employed
Control	1 012	27 %	73 %	12
Participants	1 012	24 %	76 %	12

Source: FD-Trygd, Statistics Norway.

Figure 5. Transitions to employment among youth participants and matched control group. Employment defined strictly and less strictly.

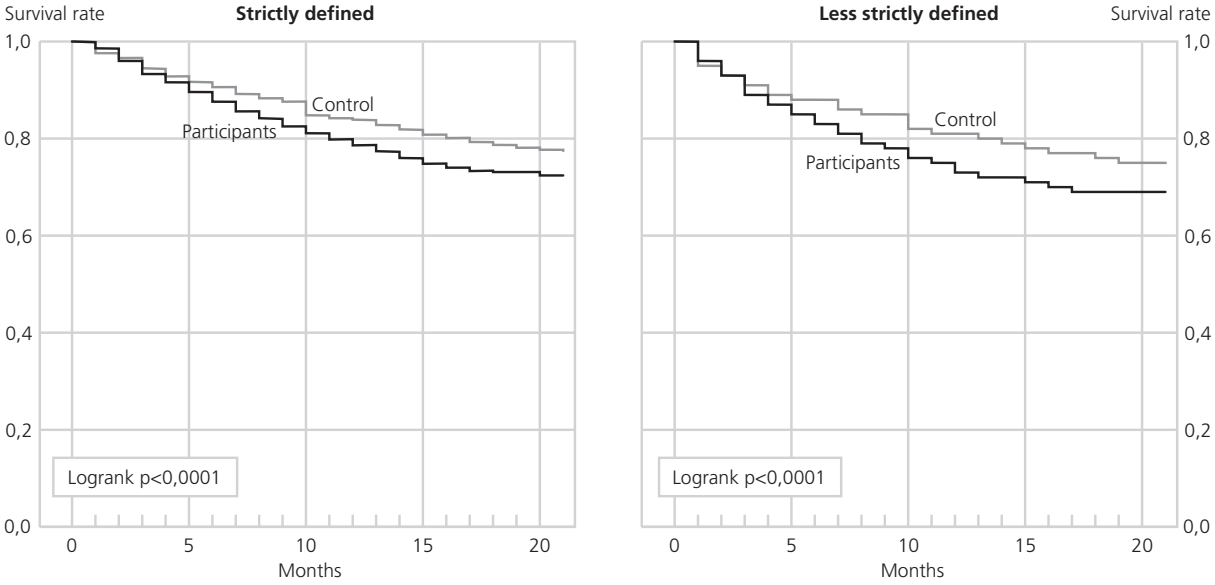


	N	Transition to employment	Censored	Months until 25% got employed
Control	2 637	32 %	68 %	10
Participants	2 637	25 %	75 %	11

	N	Transition to employment	Censored	Months until 25% got employed
Control	2 637	34 %	66 %	8
Participants	2 637	28 %	72 %	9

Source: FD-Trygd, Statistics Norway.

Figure 6. Transitions to employment among long-term social security recipient participants and matched control group. Employment defined strictly and less strictly.



	N	Transition to employment	Censored	Months until 25% got employed
Control	2 679	18 %	82 %	-
Participants	2 679	20 %	80 %	15

	N	Transition to employment	Censored	Months until 25% got employed
Control	2 679	21 %	79 %	20
Participants	2 679	24 %	76 %	11

Source: FD-Trygd, Statistics Norway.

For single parents, there is no effect whatsoever, as the survival rate is almost the same for the treated and the controls. Whether we apply a strict or a less strict definition of employment does not affect this result. A perhaps more surprising result is that the effect for youth is statistically significant, but not in the desired direction. The survival rate for the treated group is higher than for the control group, implying that treatment have a counterproductive impact on this group. This applies to both the less strict and the strict job definition, but only the latter is statistically significant ($p<0.01$). For the treated, it takes 11 months before the first 25 per cent get a job, compared to 10 months for the controls. The finding of no programme effects among youth is in line with other studies (Larsson 2002, Hardoy 2005), but in our case, there may also be some methodological issues involved. In the matching procedure we use the persons' past three years history as covariates. If we assume that the participants have some unobservable latent traits that are highly correlated with their history of employment and receipt of social security, the time may have been too short for these traits to be manifested in their recorded history and may not be visible until later in life. In other words, for youth, the matching procedure may not be as good as for the older groups because of the shorter history of the former.

The largest program effect appears among other long-term social security recipients, and the effect is highly significant for both the strict and the less strict definition of employment. For participants, it takes 15 months before the first 25 per cent get a job, compared to more than 21 months (i.e. longer than the observation window) for the controls when applying the strict definition ($p<0.0001$). When applying the less strict definition, the difference increases, and the comparable estimates are 11 months for the treated and 20 months for the controls.

8. Summary and conclusion

In this paper we have examined the short-run effects of a vocational rehabilitation programme directed at particularly disadvantaged groups in Norway. The initiative is part of the Norwegian government's Action Plan to Combat Poverty, which was launched in 2003. The main intention is to make people economically independent, but because these groups are particularly disadvantaged on the labour market, the short-term goal for them is to get a regular job.

The programme has a focus on four target groups whose main source of income is social security benefits: long-term welfare recipients, single parents, youth and immigrants. Immigrants may be allowed even if they do not receive benefits as long as they are believed to need special assistance to get a job. In a number of municipalities, these groups have been offered work programmes in combination with a closer collaboration between the social services and the labour market services. The target groups thus receive more support than just work initiatives - also the combined effect of a more tight-knit collaboration between these services. We are here evaluating the joint impact of these efforts. Our research strategy is twofold: We adopt a quasi-experimental design to estimate the mean effect for the participants, and use a multivariate hazard rate model to investigate the determinants of the process to a first job. The latter gives insight into which individual characteristics are associated with a higher employment probability, while the former allows us to estimate the programme effect by constructing a reasonable control group, and thus eliminating the effect of selection bias into the work programmes. As the impact may be heterogeneous across target groups, we have conducted separate analyses for each group.

We find that the mean programme impact across all target groups is positive, but only when work is defined fairly broadly. When employment is defined more strictly, there is no statistically significant effect. However, the impact varies by target group. There is no impact for immigrants or single mothers no matter how employment is defined. For the youth group, there seems to be a small, significant counterproductive effect, implying that they would have been better off *without* this

particular programme. The only significant effect in the desired direction is found among long-term social security recipients. This finding is statistically significant and applies for both the strict and the less strict definition of employment. Moreover, the effect is fairly large.

When not controlling for individual characteristics, the mean transition rate varies by target group, which would imply that the employment chances of the various target groups differ. However, when controlling for individual characteristics, the differences between the target groups disappear. This implies that the mean differences between groups are composition effects. The characteristics that are most important are their prior work- and welfare histories, and the effects are as expected: more employment experience is associated with a higher transition rate to employment. Correspondingly, a longer history of social security dependence is associated with a lower transition rate to employment. The effects are largely similar across target groups and gender, suggesting that the employment chances are determined by more or less the same factors in all subgroups.

An important point to consider is *why* the initiative has a positive impact on long-term social security recipients, but not on other groups. A study of the implementation of the initiative conducted in parallel and in collaboration with our study, suggests that the positive effect is caused by the tighter collaboration between the welfare services and employment services. This leads to a better understanding of each other's work and the needs of their mutual clients. Previously, the employment services tended to view clients from the social security services as unemployable, as these clients are particularly disadvantaged, and it takes more effort to find them a job. However, the employment services are now granted extra money, and also get more assistance through the collaboration with the social security services. Employment efforts directed at this group are then no longer at the expense of other unemployed clients. This has resulted in more and better services towards long-term social security recipients (Schafft and Spjelkavik 2006: 104).

But why did not this have the same positive impact on other target groups? Could it be that the positive gains from a tighter collaboration did not affect these groups? Considering youth, one explanation could be that the matching procedure did not work as well for this group as for the other groups. As previous welfare- and employment history are the most important determinants for both participation and outcome, many of these youths are too young to have had much past history. There may thus be some unobserved characteristics that are not yet manifested through their history. Even though the groups are equal on all observable characteristics, this may imply that the treated group is more disadvantaged than the control group, and that the estimate of programme effect therefore is

negatively biased. Another possibility is that the threat of having the benefits cut if one is not willing to enter the activation programme, is a strong incentive to find a job, which could result in more easily employable persons in the control group. This applies to all target groups, but may be more so for youth as they do not have a long history of marginalisation (at least not yet). On the other hand, other studies have also found that employment programmes are likely to counterproductive for youth (Calmfors et. al. 2001, Larsson 2002, Hardoy 2005), and this could be the case *despite* the positive gains of collaboration between the services. Whether this particular programme has increased or decreased this counterproductive effect is therefore uncertain.

It is possible that the target groups are likely to be offered different kinds of work initiatives, and that the difference in impact is due to the fact that different types of measures have different effects (see Dahl and Lorentzen 2005). It is e.g. likely that the immigrant group to a larger extent are offered courses that will improve their skills in the Norwegian language, or in other ways increase their social and cultural capital. If so, this may not have much of an effect in the short run, but may show better results in the future. Considering single parents, about 50 per cent have children under school age, and this may be one reason for a lack of impact in this group. It could be that caring for small children and the expenses for childcare are prohibitive, and in that case, even work programmes of this kind is not likely to be of much help. Our data cannot be used to investigate these assumptions, and other kinds of studies are needed to pursue such issues.

As the maximum observation period of our study is only 21 months, we have only been able to evaluate short-term effects. There is therefore a need for studies that follow the participants over a longer period. A particularly important aspect to investigate in the future is whether and to what extent those who got a job are able to *keep* it for a longer period. Taking the duration of jobs into account may alter the estimated impact, as the effects may be more long lasting in some target groups than in others. When analysing data over a longer time period, it will also be possible to assess the effect on poverty, analysing earnings and dependency on welfare benefits after the participants exit from the work programmes. For the youth group, we should also consider to what extent they return to education and thus increase their human and cultural capital, which might prove more beneficial in the long run.

So far, the short-term evaluation has proved the initiative directed towards these four target groups to be successful only for long-term welfare participants, and not for the other three target groups. From the multivariate analysis it is also interesting to see that the same characteristics seem to have similar

effects across target groups. It is therefore puzzling that the impact varies between target groups. Future research should dig deeper into the reasons for these differences.

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Table A1. Descriptive statistics and test for balance. Participants and controls. Men, target group immigrants. Mean and per cent

	1st April 2003				1st January 2004				1st July 2004			
	Partici-pants	Control	Ad-justed bias	P-value (t-test)	Partici-pants	Control	Ad-justed bias	P-value (t-test)	Partici-pants	Control	Ad-just-ed bias	P-value (t-test)
Age (years)	33,96	34,23	-2,7	0,5	34,42	34,78	-3,5	0,6	35,00	34,76	2,2	0,7
Social background (per cent)												
High	1	1			1	1			2	2		
Medium	4	3	4,5	0,3	5	4	5,1	0,4	4	3	5,1	0,4
Low	2	2	-0,7	0,9	3	2	4,0	0,5	3	2	5,8	0,4
Unknown	94	95	-4,4	0,3	91	92	-5,3	0,4	91	93	-8,4	0,2
Educational level (per cent)												
Low	9	8			12	12			12	12		
Medium	41	43	-5,6	0,2	41	39	4,9	0,4	40	41	-0,5	0,9
High	9	9	0,6	0,9	9	9	0,0	1,0	8	9	-3	0,6
Unknown	41	40	2,9	0,5	37	39	-4,5	0,5	39	38	1,4	0,8
Age youngest child (per cent)												
0-2 years	12	11			12	12			13	15		
3-6 years	11	9	5	0,2	10	9	3,9	0,5	13	14	-2,1	0,8
7-18 years	12	14	-5,1	0,2	14	16	-5,7	0,4	13	12	2	0,8
No child < 18 years	65	66	-1,1	0,8	64	64	1,3	0,8	61	59	4,7	0,5
Marital status (per cent)												
Unmarried	34	32			37	38			34	29		
Married	51	52	-2,3	0,6	47	46	2,0	0,8	50	53	-6,8	0,3
Previously married	15	16	-2,8	0,5	16	16	0,0	1,0	16	18	-3,2	0,7
Time since last welfare benefit payment (per cent)												
Receives now	61	62			64	65			65	64		
1-6 months	15	15	1,1	0,8	15	14	4,2	0,5	15	15	-0,7	0,9
7-24 months	3	2	2,4	0,5	3	2	6,4	0,2	3	4	-3,6	0,6
25 - 36 months	13	13	0,7	0,9	12	12	0,0	1,0	11	11	-1,2	0,8
> 36 months	7	8	-1,6	0,6	5	7	-3,2	0,4	6	6	1,2	0,8
Refugee (per cent)	80	80	-0,4	0,9	78	77	2,6	0,7	76	77	-1	0,9
Years since immigration	8,01	8,03	-0,2	1,0	8,43	8,35	1,2	0,8	8,45	8,19	3,7	0,6
Months unemployed	8,72	8,72	0	1,0	9,13	9,47	-3,9	0,6	8,77	9,23	-5,3	0,5
Vocationally disabled past 3 years (per cent)	0,26	0,25	2,5	0,5	0,26	0,24	2,4	0,7	0,26	0,23	3,8	0,5
Months employed past 3 years	5,57	5,26	3,3	0,3	5,65	6,07	-4,6	0,4	5,44	5,79	-3,7	0,5
Months since last employment (past 3 years)	23,28	23,35	-0,5	0,9	23,51	22,50	7,4	0,2	25,24	24,43	6	0,4
Months with welfare benefits past 6 months	3,59	3,62	-1,2	0,8	3,59	3,56	1,2	0,9	3,52	3,49	1,3	0,9
Months with welfare benefits the rest of the past 3 years	12,91	12,97	-0,6	0,9	12,96	12,77	2,0	0,8	12,65	12,27	4	0,6
Years with labour income	2,65	2,78	-2,3	0,5	2,58	2,73	-3,0	0,6	2,78	3,00	-4,4	0,5
Income from labour last year (in 1 000 NOK)	35,37	37,40	-2,3	0,5	33,51	33,15	0,6	0,9	36,36	44,71	-9,9	0,1
Local unemployment rate	3,76	3,77	-1	0,8	4,37	4,36	1,0	0,9	4,28	4,25	3,4	0,6
Densely populated area (per cent)	95	96	-2,8	0,4	98	97	4,8	0,3	95	95	-1,7	0,8

Source: FD-Trygd, Statistics Norway.

Table A2. Descriptive statistics and test for balance. Participants and controls. Women, target group immigrants. Mean and per cent

	1st April 2003				1st January 2004				1st July 2004			
	Partici-pants	Control	Ad-justed bias	P-value (t-test)	Partici-pants	Control	Ad-justed bias	P-value (t-test)	Partici-pants	Control	Ad-just-ed bias	P-value (t-test)
Age (years)	33,44	33,41	0,4	0,9	31,52	31,78	-2,8	0,8	32,08	31,86	2,4	0,8
Social background (per cent)												
High	1	1			6	7			2	2		
Medium	2	1	2,4	0,6					2	1	7,9	0,3
Low	1	1	4	0,4	3	1	13,1	0,2	5	5	-3,1	0,8
Unknown	96	97	-4,1	0,4	94	92	-5	0,7	92	92	-2,3	0,8
Educational level (per cent)												
Low	13	12			18	18			8	6		
Medium	31	32	-1,8	0,8	31	29	4,2	0,7	40	41	-2,5	0,8
High	8	6	6,4	0,2	4	4	0	1,0	5	4	2,2	0,8
Unknown	48	50	-3,1	0,6	47	49	-3,8	0,7	48	49	-3,5	0,7
Age youngest child (per cent)												
0-2 years	12	13			9	10			16	18		
3-6 years	22	26	-7,7	0,2	20	15	11,3	0,3	20	23	-5,8	0,6
7-18 years	21	21	0,4	0,9	20	21	-3,2	0,8	22	20	2,9	0,8
No child < 18 years	44	40	7,5	0,2	52	54	-3,8	0,7	42	39	5,9	0,6
Marital status (per cent)												
Unmarried	19	16			32	35			27	29		
Married	72	76	-8,4	0,1	57	53	8,2	0,5	64	63	1,2	0,9
Previously married	9	8	3,2	0,6	11	12	-2,3	0,9	9	8	4,5	0,7
Time since last welfare benefit payment (per cent)												
Receives now	24	22			34	32			34	34		
1-6 months	8	7	4,5	0,5	15	17	-9,1	0,5	7	9	-7,8	0,5
7-24 months	2	3	-5,3	0,4	1	1	-6,3	0,6	5	5	0	1,0
25 - 36 months	13	15	-3,9	0,5	17	15	5,3	0,6	22	19	7,7	0,5
> 36 months	53	53	-1,8	0,8	33	34	-2,8	0,8	33	34	-2,6	0,8
Refugee (per cent)	49	49	1	0,9	62	61	2,6	0,8	64	67	-7,3	0,5
Years since immigration	7,23	7,00	3,2	0,5	7,13	7,06	1,4	0,9	7,15	7,10	0,8	0,9
Months unemployed	5,07	4,49	8,7	0,2	5,58	5,13	6,6	0,6	5,26	5,01	4	0,7
Vocationally disabled past 3 years (per cent)	0,13	0,13	0	1,0	0,11	0,15	-8,7	0,5	0,09	0,10	-3	0,8
Months employed past 3 years	4,27	4,00	3	0,5	4,45	3,93	6	0,5	4,63	5,66	-11,6	0,2
Months since last employment (past 3 years)	26,97	27,21	-1,7	0,8	25,71	25,43	2	0,9	25,41	24,41	7,1	0,5
Months with welfare benefits past 6 months	1,38	1,26	6,4	0,4	2,01	2,03	-1,3	0,9	1,67	1,59	4,4	0,7
Months with welfare benefits the rest of the past 3 years	4,77	4,52	3,5	0,6	6,59	6,63	-0,6	1,0	6,59	6,73	-1,8	0,9
Years with labour income	1,37	1,16	5,6	0,1	0,94	0,94	0,3	1,0	0,70	0,77	-3,1	0,7
Income from labour last year (in 1 000 NOK)	24,02	22,39	2,3	0,6	26,43	25,50	1,4	0,9	21,57	23,74	-3,6	0,7
Local unemployment rate	3,75	3,75	0,4	0,9	4,38	4,42	-4,9	0,6	4,18	4,20	-2,3	0,8
Densely populated area (per cent)	95	96	-3,1	0,5	94	93	1,9	0,8	92	92	1,9	0,8

Source: FD-Trygd, Statistics Norway.

Tabell A3. Descriptive statistics and test for balance. Participants and controls. Target group lone parents. Mean and per cent

	1st April 2003				1st January 2004				1st July 2004			
	Partici-pants	Control	Ad-justed bias	P-value (t-test)	Partici-pants	Control	Ad-justed bias	P-value (t-test)	Partici-pants	Control	Ad-just-ed bias	P-value (t-test)
Women (per cent)	92	93			89	90			94	92		
Immigrant background (per cent)	30	32	-4,7	0,5	29	33	-10,2	0,3	32	35	-5,8	0,6
Age (years)	32,69	31,91	10	0,1	32,62	32,68	-0,8	0,9	33,71	33,77	-0,8	0,9
Social background (per cent)												
High	7	6			5	5			4	4		
Medium	37	40	-4,8	0,4	39	36	7,1	0,4	43	40	6,0	0,5
Low	25	23	4,2	0,5	26	25	2,0	0,8	21	22	-3,1	0,7
Unknown	31	32	-2,1	0,7	30	34	-11,3	0,3	32	34	-3,9	0,7
Educational level (per cent)												
Low	21	21			22	20			19	16		
Medium	62	61	2,3	0,7	66	63	4,7	0,6	64	64	0,0	1,0
High	7	7	1,4	0,8	4	6	-5,5	0,5	7	8	-3,3	0,7
Unknown	9	11	-4,1	0,5	8	11	-12,0	0,3	11	13	-7,6	0,5
Age youngest child (per cent)												
0-2 years	5	5			4	4			5	5		
3-6 years	40	44	-9,5	0,1	41	44	-4,5	0,6	88	89	-2,3	0,8
7-18 years	50	46	8,4	0,2	47	44	7,1	0,5				
No child < 18 years	5	5	1,6	0,8	8	9	-5,3	0,6	7	6	5,2	0,6
Time since last welfare benefit payment (per cent))												
Receives now	57	57			65	66			63	62		
1-6 months	22	23	-1,3	0,8	19	20	-3,3	0,7	17	18	-2,1	0,8
7-24 months	4	3	5,3	0,2	3	2	3,3	0,6	3	3	0,0	1,0
25-36 months	14	17	-5,1	0,3	12	11	2,1	0,8	14	14	1,0	0,9
> 36 months	1	1	4	0,2	1	1	0,0	1,0	2	3	-2,2	0,8
Months unemployed	9,11	8,95	2	0,8	10,01	10,34	-4,0	0,7	9,31	9,52	-2,7	0,8
Vocationally disabled past 3 years (per cent)	0,25	0,17	9,8	0,0	0,26	0,26	0,0	1,0	0,26	0,25	1,1	0,9
Months employed past 3 years	5,34	5,79	-4,9	0,4	5,73	4,66	11,7	0,2	4,09	4,30	-2,4	0,8
Months since last employment (past 3 years)	24,89	24,74	1,1	0,9	24,49	25,82	-9,8	0,3	27,15	26,76	3,0	0,7
Months with welfare benefits past 6 months	3,27	3,21	3,1	0,7	3,36	3,43	-3,7	0,7	3,36	3,41	-2,3	0,8
Months with welfare benefits the rest of the past 3 years	9,83	9,63	2,5	0,7	10,18	10,26	-1,0	0,9	10,25	9,99	3,1	0,8
Years with labour income	3,81	3,56	4,3	0,4	3,81	3,42	6,9	0,4	3,92	3,98	-1,2	0,9
Income from labour last year (in 1 000 NOK)	25,62	26,15	-0,8	0,9	25,34	24,50	1,5	0,9	20,40	22,83	-4,2	0,6
Local unemployment rate	3,80	3,78	3,1	0,6	4,24	4,22	1,8	0,8	4,29	4,29	0,7	0,9
Densely populated area (per cent)	94	95	-2,9	0,5	94	95	-2,8	0,7	94	93	2,7	0,7
Months with extended child benefits past 3 years	10,51	10,49	0,7	0,9	10,49	10,33	5,5	0,6	10,29	10,07	7,0	0,4
Months since last extended child benefit payment	0,67	0,74	-3,4	0,6	0,67	0,73	-2,8	0,8	0,81	0,72	3,9	0,7
Transitional allowance in 1 000 NOK	112,95	118,91	-6,3	0,3	105,65	105,35	0,3	1,0	114,41	116,84	-2,3	0,8

Source: FD-Trygd, Statistics Norway.

Tabell A4. Descriptive statistics and test for balance. Participants and controls. Men, target group youth. Mean and per cent

	1st April 2003				1st January 2004				1st July 2004			
	Partici-pants	Control	Ad-justed bias	P-value (t-test)	Partici-pants	Control	Ad-justed bias	P-value (t-test)	Partici-pants	Control	Ad-just-ed bias	P-value (t-test)
Immigrant background (per cent)	8	7	2,6	0,5	9	7	4,4	0,4	14	14	1,9	0,8
Social background (per cent)												
High	15	14			18	16			19	18		
Medium	65	66	-2,0	0,7	64	66	-3,9	0,5	66	71	-9,0	0,2
Low	14	15	-3,8	0,5	12	12	0,0	1,0	10	8	5,3	0,4
Unknown	6	5	6,8	0,2	6	7	-0,9	0,9	6	4	8,2	0,3
Educational level (per cent)												
Low	35	34			28	27			28	29		
Medium or higher	65	66	-1,0	0,8	72	73	-1,3	0,8	72	71	4,1	0,5
Age youngest child (per cent)												
0-2 years	1	2			2	2			1	0		
3-6 years	4	5	-5,2	0,3	4	3	6,2	0,3	4	4	-2,5	0,7
7-18 years	21	19	3,6	0,4	17	17	-0,9	0,9	28	29	-2,0	0,8
No child < 18 years	74	75	-0,8	0,9	77	78	-1,7	0,8	67	66	1,9	0,8
Marital status (per cent)												
Unmarried	99	99			99	99			98	98		
Married	1	1	2,4	0,6	1	1	-2,0	0,8	1	0	6,8	0,3
Previously married	0	0	0,0	1,0	0	0	0,0	1,0	0	1	-12,8	0,3
Time since last welfare benefit payment (per cent)												
Receives now	51	51			54	51			47	46		
1-6 months	18	18	0,0	1,0	16	20	-11,4	0,1	21	20	1,8	0,8
7-24 months	6	6	1,6	0,7	6	7	-7,5	0,3	5	6	-4,9	0,5
25 - 36 months	21	22	-2,5	0,6	20	20	-0,9	0,9	22	24	-5,0	0,5
> 36 months	5	3	4,3	0,1	5	2	7,6	0,0	5	4	3,7	0,3
Age (years)	20,46	20,49	-1,8	0,7	20,86	20,84	1,0	0,8	20,24	20,22	1,1	0,8
Months unemployed	6,92	6,74	3,1	0,6	6,60	6,31	5,1	0,4	6,39	6,13	4,3	0,6
Vocationally disabled past 3 years (per cent)	0,46	0,47	-1,3	0,8	0,38	0,40	-2,6	0,7	0,38	0,36	3,0	0,7
Months employed past 3 years	6,68	6,83	-1,6	0,7	7,12	7,45	-3,8	0,5	6,19	6,24	-0,6	0,9
Months since last employment (past 3 years)	22,06	21,66	2,8	0,6	21,14	21,88	-5,4	0,4	22,02	21,53	3,5	0,6
Months with welfare benefits past 6 months	2,64	2,67	-1,4	0,8	2,47	2,46	0,5	0,9	2,38	2,30	3,8	0,6
Months with welfare benefits the rest of the past 3 years	7,38	7,39	-0,1	1,0	6,11	6,36	-3,6	0,6	5,77	5,85	-1,3	0,9
Years with labour income	0,80	0,83	-2,1	0,7	0,67	0,61	5,1	0,4	0,51	0,50	0,6	0,9
Income from labour last year (in 1 000 NOK)	29,14	30,02	-1,7	0,7	29,60	31,68	-4,5	0,4	26,44	26,88	-0,9	0,9
Local unemployment rate	3,80	3,77	3,1	0,6	4,27	4,22	5,6	0,4	4,19	4,15	4,6	0,5
Densely populated area (per cent)	87	89	-4,4	0,3	88	88	0,5	0,9	88	86	5,8	0,4

Source: FD-Trygd, Statistics Norway.

Tabell A5. Descriptive statistics and test for balance. Participants and controls. Women, target group youth. Mean and per cent

	1st April 2003				1st January 2004				1st July 2004			
	Partici-pants	Control	Ad-justed bias	P-value (t-test)	Partici-pants	Control	Ad-justed bias	P-value (t-test)	Partici-pants	Control	Ad-just-ed bias	P-value (t-test)
Immigrant background (per cent)	8	8	0,0	1,0	6	6	1,3	0,84	7	5	6,3	0,4
Social background (per cent)												
High	14	12			12	12			18	22		
Medium	67	72	-10,9	0,1	67	68	-0,9	0,92	62	59	7,3	0,5
Low	14	11	9,2	0,2	16	17	-2,6	0,80	13	15	-6,4	0,6
Unknown	5	5	-1,2	0,9	4	3	4,9	0,63	7	4	12,5	0,3
Educational level (per cent)												
Low	24	23			24	24			26	24		
Medium or higher	76	77	-2,6	0,7	76	76	0,0	1,00	74	76	-3,6	0,7
Age youngest child (per cent)												
0-2 years	4	5			4	4			3	2		
3-6 years	5	4	4,1	0,5	4	3	4,3	0,61	3	3	0,0	1,0
7-18 years	18	16	5,2	0,4	14	10	9,3	0,20	23	26	-5,8	0,6
No child < 18 years	73	76	-5,3	0,4	78	82	-9,4	0,25	71	70	3,2	0,7
Marital status (per cent)												
Unmarried	94	94			96	94			95	96		
Married	5	5	-2,3	0,8	4	6	-8,9	0,38	3	3	2,8	0,8
Previously married	1	1	-2,7	0,8	0	0	0,0	1,00	2	1	5,3	0,7
Time since last welfare benefit payment (per cent)												
Receives now	52	51			55	53			40	43		
1-6 months	18	19	-4,1	0,6	19	21	-3,6	0,73	20	21	-1,4	0,9
7-24 months	4	5	-2,2	0,7	4	4	0,0	1,00	5	5	0,0	1,0
25 - 36 months	20	23	-5,8	0,4	16	19	-7,6	0,40	27	26	2,4	0,8
> 36 months	5	3	7,1	0,0	5	3	5,6	0,22	8	6	5,1	0,4
Age (years)	20,24	20,31	-3,5	0,5	20,15	20,14	0,5	0,96	19,76	19,63	7,4	0,4
Months unemployed	5,82	5,57	5,1	0,5	5,51	5,25	5,2	0,64	4,66	4,23	8,7	0,4
Vocationally disabled past 3 years (per cent)	0,25	0,27	-3,8	0,6	0,15	0,17	-5,2	0,61	0,18	0,16	3,2	0,7
Months employed past 3 years	8,15	8,23	-0,8	0,9	8,61	8,44	1,8	0,85	8,10	7,86	2,4	0,8
Months since last employment (past 3 years)	18,80	18,98	-1,2	0,9	18,72	18,77	-0,4	0,97	20,31	19,61	4,9	0,6
Months with welfare benefits past 6 months	2,74	2,69	2,5	0,8	2,52	2,66	-7,3	0,49	2,24	2,40	-7,7	0,5
Months with welfare benefits the rest of the past 3 years	6,51	6,36	2,3	0,8	5,82	6,41	-8,8	0,44	4,53	4,80	-4,3	0,7
Years with labour income	0,74	0,73	0,6	0,9	0,41	0,38	4,3	0,60	0,41	0,36	4,7	0,6
Income from labour last year (in 1 000 NOK)	32,94	36,66	-8,0	0,2	25,94	25,97	-0,1	0,99	24,81	21,56	7,9	0,4
Local unemployment rate	3,70	3,68	2,2	0,7	4,09	4,21	-11,8	0,21	4,03	4,06	-2,9	0,8
Densely populated area (per cent)	87	84	8,8	0,2	86	88	-3,5	0,68	84	82	5,4	0,6

Source: FD-Trygd, Statistics Norway.

Tabell A6. Descriptive statistics and test for balance. Participants and controls. Men, target group long-term social security recipients. Mean and per cent

	1st April 2003				1st January 2004				1st July 2004			
	Partici-pants	Control	Ad-justed bias	P-value (t-test)	Partici-pants	Control	Ad-justed bias	P-value (t-test)	Partici-pants	Control	Ad-just-ed bias	P-value (t-test)
Immigrant background (per cent)	2	3	-4,8	0,3	2	1	7,4	0,1	2	2	0,0	1,0
Social background (per cent)												
High	12	12			16	16			17	18		
Medium	54	57	-7,4	0,1	51	49	4,5	0,5	56	52	7,9	0,2
Low	28	26	4,6	0,3	26	29	-5,0	0,4	21	23	-4,6	0,5
Unknown	6	5	5,4	0,2	7	6	2,4	0,7	6	7	-1,9	0,8
Educational level (per cent)												
Low	18	17			18	17			19	18		
Medium	71	73	-3,0	0,5	71	72	-0,8	0,9	71	71	-1,0	0,9
High	9	9	-1,8	0,7	7	8	-2,5	0,7	8	8	0,0	1,0
Unknown	2	1	4,5	0,3	3	3	0,0	1,0	2	3	-10,5	0,2
Age youngest child (per cent)												
0-2 years	3	3			2	2			2	2		
3-6 years	2	1	1,0	0,7	2	3	-4,1	0,4	2	1	2,5	0,6
7-18 years	3	4	-2,5	0,5	4	5	-4,1	0,5	4	4	-1,0	0,9
No child < 18 years	92	92	1,1	0,8	92	90	4,6	0,4	92	92	-1,4	0,8
Marital status (per cent)												
Unmarried	81	81			79	77			81	84		
Married	5	4	1,6	0,6	4	4	-1,3	0,8	4	3	5,5	0,2
Previously married	14	14	-0,7	0,9	18	19	-3,5	0,6	15	13	4,2	0,5
Time since last welfare benefit payment (per cent)												
Receives now	66	66			69	69			66	67		
1-6 months	16	17	-2,7	0,5	14	15	-1,5	0,8	19	17	5,1	0,4
7-24 months	4	4	-0,4	0,9	4	6	-5,9	0,3	3	2	2,9	0,5
25 - 36 months	12	12	-0,7	0,8	11	9	3,3	0,5	11	11	-1,1	0,8
> 36 months	1	1	2,5	0,2	1	1	1,4	0,6	2	3	-3,3	0,4
Age (years)	34,93	34,87	0,7	0,9	35,39	36,09	-7,2	0,2	34,94	34,61	3,5	0,6
Months unemployed	13,42	13,57	-1,6	0,7	12,43	12,71	-3,0	0,7	12,32	11,87	4,7	0,5
Vocationally disabled past 3 years (per cent)	0,58	0,58	0,4	0,9	0,54	0,50	4,4	0,4	0,59	0,56	2,8	0,7
Months employed past 3 years	5,29	5,33	-0,4	0,9	5,86	6,21	-3,7	0,5	5,08	5,16	-0,8	0,9
Months since last employment (past 3 years)	25,07	24,92	1,1	0,8	25,15	24,87	2,1	0,7	26,23	26,59	-2,8	0,7
Months with welfare benefits past 6 months	3,70	3,65	2,4	0,6	3,51	3,46	2,5	0,7	3,73	3,75	-0,9	0,9
Months with welfare benefits the rest of the past 3 years	13,44	13,18	2,6	0,6	11,55	11,83	-2,8	0,7	12,05	12,52	-4,7	0,5
Years with labour income	9,88	10,03	-1,6	0,7	10,38	11,13	-7,9	0,2	9,90	9,28	6,8	0,3
Income from labour last year (in 1 000 NOK)	38,13	38,29	-0,2	1,0	35,73	34,48	1,4	0,7	34,79	32,67	2,4	0,6
Local unemployment rate	3,86	3,82	4,0	0,4	4,35	4,31	4,1	0,5	4,25	4,23	2,5	0,7
Densely populated area (per cent)	90	92	-4,1	0,2	89	91	-4,1	0,4	89	93	-11,3	0,0

Source: FD-Trygd, Statistics Norway.

Tabell A7. Descriptive statistics and test for balance. Participants and controls. Women, target group long-term social security recipients. Mean and per cent

	1st April 2003				1st January 2004				1st July 2004			
	Partici-pants	Control	Ad-justed bias	P-value (t-test)	Partici-pants	Control	Ad-justed bias	P-value (t-test)	Partici-pants	Control	Ad-just-ed bias	P-value (t-test)
Immigrant background (per cent)	4	5	-5,2	0,6	1	1	0,0	1,0	3	2	8,7	0,4
Social background (per cent)												
High	13	15			16	11			9	6		
Medium	47	52	-10,6	0,2	52	55	-6,3	0,6	60	62	-3,4	0,8
Low	28	22	11,8	0,1	20	20	1,5	0,9	22	25	-5,9	0,6
Unknown	13	11	5,1	0,5	12	14	-6,5	0,6	8	8	3,2	0,8
Educational level (per cent)												
Low	20	21			16	20			15	16		
Medium	66	66	1,4	0,9	68	62	12,0	0,3	70	72	-3,6	0,8
High	11	11	0,0	1,0	15	16	-5,0	0,6	11	8	7,3	0,5
Unknown	2	2	2,5	0,8	5	1	5,3	0,7	3	3	0,0	1,0
Age youngest child (per cent)												
0-2 years	4	4			6	4			3	1		
3-6 years	13	14	-1,0	0,9	8	8	2,1	0,8	10	10	0,0	1,0
7-18 years	9	8	4,3	0,6	7	9	-8,3	0,4	7	8	-5,7	0,6
No child < 18 years	74	74	-1,5	0,9	79	79	0,0	1,0	81	81	0,0	1,0
Marital status (per cent)												
Unmarried	68	67			64	68			64	62		
Married	12	14	-4,2	0,5	12	10	4,8	0,6	14	14	2,1	0,9
Previously married	20	19	0,8	0,9	24	22	4,7	0,7	22	25	-6,2	0,6
Time since last welfare benefit payment (per cent)												
Receives now	58	62			61	59			69	70		
1-6 months	18	15	7,3	0,4	12	12	0,0	1,0	18	15	7,0	0,6
7-24 months	2	2	3,0	0,6	4	3	2,8	0,8	3	2	3,9	0,7
25 - 36 months	15	15	0,8	0,9	15	18	-6,0	0,5	9	12	-6,4	0,5
> 36 months	7	7	0,0	1,0	8	8	-1,7	0,8	2	1	2,7	0,6
Age (years)	34,77	34,09	6,8	0,4	33,99	33,23	7,9	0,5	33,68	34,68	-10,7	0,4
Months unemployed	10,62	9,72	11,1	0,3	8,33	8,46	-1,8	0,9	9,97	9,96	0,1	1,0
Vocationally disabled past 3 years (per cent)	0,26	0,25	2,2	0,8	0,56	0,66	11,1	0,3	0,61	0,54	7,2	0,6
Months employed past 3 years	6,43	6,68	-2,4	0,7	6,03	6,03	-0,1	1,0	5,10	5,21	-1,2	0,9
Months since last employment (past 3 years)	24,20	23,17	7,4	0,4	25,01	24,35	5,0	0,7	26,15	26,56	-3,2	0,8
Months with welfare benefits past 6 months	3,16	3,23	-3,4	0,7	3,39	3,20	8,7	0,5	3,91	3,92	-0,8	1,0
Months with welfare benefits the rest of the past 3 years	11,23	10,31	9,8	0,3	11,31	9,90	14,7	0,2	12,01	12,08	-0,7	1,0
Years with labour income	6,92	6,62	3,9	0,6	5,65	5,51	2,1	0,8	5,58	5,90	-4,8	0,7
Income from labour last year (in 1 000 NOK)	29,87	35,39	-7,4	0,3	27,60	30,09	-3,5	0,7	24,91	22,60	4,5	0,7
Local unemployment rate	3,78	3,80	-2,2	0,7	4,30	4,20	10,8	0,3	4,22	4,26	-4,8	0,7
Densely populated area (per cent)	93	95	-6,9	0,2	92	93	-3,7	0,7	86	89	-6,7	0,6

Source: FD-Trygd, Statistics Norway.