DISCUSSION PAPER SERIES

Caseworker's Discretion and the Effectiveness of Welfare-to-Work Programs

Jonneke Bolhaar
Nadine Ketel
Bas van der Klaauw

Caseworker's Discretion and the Effectiveness of Welfare-to-Work Programs

Jonneke Bolhaar
Netherlands Bureau for Economic Policy Analysis

Nadine Ketel
University of Gothenburg, CEPR and IZA

Bas van der Klaauw
VU University Amsterdam, Tinbergen Institute and IZA

ABSTRACT

Caseworker's Discretion and the Effectiveness of Welfare-To-Work Programs*

In this paper we focus on the role of caseworkers in the assignment and take-up of welfare-to-work programs. We conduct a field experiment that generates exogenous variation in the assignment to different policy regimes to caseworkers. The experiment allows us to provide evidence on the effectiveness of welfare-to-work programs and to study how caseworkers exploit their discretion in assigning these programs to welfare recipients. We find substantial heterogeneity in how caseworkers assign welfare-to-work programs. Participation in the experiment and learning about the effectiveness of the different programs does not induce caseworkers to focus more on the effective programs. This implies that obtaining knowledge about welfare-to-work programs is not enough to improve policy, also effort on implementation is required.

JEL Classification:	C93, I38, J64, J08
Keywords:	field experiment, welfare-to-work, caseworkers

Corresponding author:
Nadine Ketel
Department of Economics
VU University Amsterdam
De Boelelaan 1105
1081 HV Amsterdam
The Netherlands

E-mail: nadine.ketel@gu.se

1   Introduction

Randomized control trials (RCTs) are increasingly used to evaluate the effectiveness of active labor market programs. In their 2010 meta analysis on active labor market programs, Card et al. (2010) report that 10 percent of the studies use an RCT explicitly designed to empirically evaluate a program. In the 2018 update this increased to 19 percent (Card et al., 2018). RCTs solve the problem of selective participation in active labor market programs and, therefore, are considered to provide a credible empirical evaluation (e.g. Heckman et al., 1999). However, using RCTs some problems remain unsolved (Rothstein and Wachter, 2017). For example, the estimated treatment effect is only policy relevant if program participation can easily be varied, which requires that caseworkers have limited discretionary power when deciding about participation in active labor market programs.

In this paper, we focus on the role of the caseworker in the assignment and take-up of active labor market programs. RCTs assign all unemployed workers in the treatment group to participate in the program, but usually ignore the take-up decision. The strict program assignment rule of an RCT does not concur with the large degree of discretion which caseworkers have in many countries (e.g. Behncke et al., 2009; Bell and Orr, 2002; Lechner and Smith, 2007; Schmieder and Trenkle, 2016; Vikström, 2017).[1] The average treatment effect estimated using the RCT may then not be the most policy relevant treatment effect. While there is quite a lot of recent evidence on the effectiveness of various active labor market programs, for example documented in Card et al. (2018), much less is known about the motivations and goals of caseworkers (Schmieder and Trenkle, 2016).

This paper contributes to the literature by answering three questions. First, we investigate whether a caseworker assigns unemployed workers to active labor market programs which are most effective for them. We study a setting where caseworkers have a limited caseload and meetings with benefits recipients occur frequently. Caseworkers have an excellent opportunity to gain detailed information about the client's ability and needs, which allows them to effectively match clients to services (Lechner and Smith, 2007). Second, we

---

[1]Vikström (2017) refers to a PhD thesis by Eriksson (1997), which shows that caseworker heterogeneity is more important than heterogeneity among unemployed workers when assigning active labor market programs.

explore if caseworkers prefer certain programs, which they offer to most of their benefits recipients. Related to this we investigate if caseworkers which express such specialization in a particular program obtain better results when providing this program to a benefits recipient. Third, we study learning of caseworkers by investigating if caseworkers adjust their beliefs and actions after having been exposed to a different (and possibly more effective) way of working.

We conduct a field experiment covering all new entrants into welfare benefits (with a potential to work) in Amsterdam in the period April 2012 to March 2013.[2] The field experiment generates exogenous variation in the assignment to three different welfare-to-work programs: direct job matching, job-search training and counseling. We evaluate these programs against two alternatives, one where the caseworker has full discretion in choosing the program which she finds most appropriate and one where the benefits recipient does not participate in any program. This setup allows us to evaluate each of the programs against the alternative of no program and to study what the added value of caseworkers is in selecting an effective program. In addition, the program choices when the caseworker has full discretion identify specialization of the caseworker. We address this specialization and the beliefs about the effectiveness of the different programs in a survey among caseworkers which provides insights in learning by caseworkers after having gained experience with other programs.

Our study relates to a substantial literature evaluating active labor market programs summarized in Card et al. (2018). Most RCTs focus on a program additional to the standard support provided to benefits recipients (e.g. Graversen and Van Ours, 2008; Van den Berg and Van der Klaauw, 2006). A unique feature of our field experiment is that we introduce a treatment where no support is given, which allows to evaluate the existing programs rather than only new programs. Our study also relates to the literature on the optimal assignment of unemployed workers to active labor market programs. Lechner and Smith (2007) compare caseworker discretion, a statistical treatment rule based on

---

[2]This field experiment was implemented simultaneously with the experiment evaluating job search periods prior to entry in welfare benefits which is described in Bolhaar et al. (2018). The random assignment in both field experiments is orthogonal, which allows to evaluate them separately.

observable participant characteristics and random assignment to services and find that caseworkers obtain roughly the same post-program employment rate as the random allocation, while statistical treatment rules outperform both. Compared to our study, they measure program effectiveness by only controlling for observed participant characteristics rather than using exogenous variation from a field experiment. Behncke et al. (2009) focus on targeting active labor market programs using a large field experiment in Switzerland. They find that caseworkers ignore the information of the statistical system which is provided to them and thus do not change behavior. Also, Schmieder and Trenkle (2016) find that caseworkers do not optimize their behavior when the length of the entitlement period to unemployment insurance benefits changes.

For the empirical analysis we combine data from different sources to construct a very detailed administrative dataset describing the participants in our field experiment. We observe individual labor market histories in the years prior to collecting welfare benefits, we have measures of guidance received at the welfare agency such as meetings with caseworkers and participation in welfare-to-work programs, and after exit from the welfare benefits we observe employment status and earnings at the daily level. Our empirical results do not show evidence in favor of efficient targeting of welfare-to-work programs. Some caseworkers specialize into very frequent use of only a single welfare-to-work program, but this does not translate into them being more effective in using this program. We also do not find evidence for caseworker learning. Most striking is that some caseworkers continue specializing in job-search training even after having been informed that it only has adverse effects on the labor market outcomes of benefits recipients. The policy implication is that even if a randomized controlled trial provides credible evidence on the effectiveness of certain treatments, the roll-out of such policies is not obvious.

The remainder of this paper is structured as follows. The next section provides details about the welfare system in the Netherlands, the specific setting of the experiment and describes the role of caseworkers. In section 3 we explain the experimental design of the field experiment. Section 4 describes the data, provides evidence on the randomization and compliance rates and discusses the empirical strategy and identification. In section 5

we present the main results, and section 6 concludes.

2 Institutional background and the role of caseworkers

2.1 Welfare benefits in the Netherlands

Welfare provides benefits to households that do not have enough income. The benefits level depends on the composition of the household.[3] Monthly benefits range from 668 euro for a single without children, to 1336 euro for a couple with children. In the same period the net minimum wage was about 1200 euros per month. Individuals with a (part-time) job earning less than the welfare benefits level, can receive partial welfare benefits, which complement their income from work to the welfare benefits level. In that case, the marginal tax rate for (additional) earnings is 100 percent. There is no limit to the period that households can be welfare benefits recipient. Welfare recipients have the obligation to accept any type of employment, also if it does not fit their education or work experience.

The rules on eligibility for welfare and the level of the benefits are determined at the national level, but municipalities decide about welfare-to-work programs and other activation policies for welfare recipients. Individuals have to apply for welfare benefits in the municipality where they live. Our experiment was set up in Amsterdam, which had 790,110 inhabitants on January 1, 2012. Within the population between 20 and 65 years old in Amsterdam, 6.4 percent receive welfare benefits, compared to 3.1 percent for the whole of the Netherlands.

---

[3]Table A1 in the Appendix gives an overview of the different benefits levels by household composition in the year 2012 (start of our observation period).

2.2 Caseworkers

Welfare applicants in Amsterdam are randomly matched to a caseworker (within the welfare office), which allows the benefits agency to benchmark caseworkers against each other.[4] Applicants are supposed to meet their caseworker twice a month. These meetings with the caseworker are not necessarily face-to-face meetings but can also be phone calls or email contacts. The caseworker supports the welfare recipient in her job search, can offer participation in welfare-to-work programs, monitors job search effort and sanctions individuals that do not comply with the job search requirements.[5] The welfare-to-work programs are discussed in more detail in the next section.

During the first meeting the caseworker determines the labor market prospects of the welfare applicant using a computerized program that profiles based on characteristics such as work history, age, education, language and computer skills, family situation and physical or psychological problems. This results in a classification into four classes. This classification determines which type of guidance a welfare benefits recipient receives and what the obligations of the welfare recipient are. We focus on class IV, which contains welfare recipients who do not have work limitations and are considered to be able to find a job within six months. Welfare recipients in this class have to actively search for work (typically they are required to make one or two job applications each week). About 40 percent of all welfare applicants in Amsterdam are assigned to class IV.[6] Welfare offices have teams of caseworkers that support only welfare recipients in class IV in their job search. If the welfare recipient does not find work within six months, she should be transferred to class III and another team of caseworkers. In practice, the period in class IV is often extended with some months.

---

[4]Note that we can not use the average treatment assignment rate of a caseworker as an instrumental variable to estimate the effect of the treatment, as Maestas et al. (2013) and Dahl et al. (2014) do. Caseworkers usually interact more with their clients than judges and may also provide guidance unrelated to the decided treatment. If this type of guidance is related to how frequent caseworkers choose certain active labor market programs, the validity of an instrumental variable approach is violated.

[5]A sanction generally reduces benefits with 30 percent for one month.

[6]The three other classes have a larger distance to the labor market. Class III individuals should be able to work, but lack some (social) skills and require guidance to find work and stay employed. These individuals often start working in a subsidized job. Individuals in class I and II have social problems and/or physical limitations that make them unfit for work.

Table 1: Caseworker characteristics

	Mean
Female	60%
Age	41.9
Bachelor/master degree	96%
Years worked at welfare agency	10.6
Being caseworker is first job	23%
Ever received benefits	29%
N	50

Note: The information in this table is based on a survey among the caseworkers that participated in the experiment. The response rate to the survey is 80.6 percent.

Table 1 provides characteristics of the caseworkers for the welfare recipients in class IV. These caseworkers are on average 42 years old, almost all hold a bachelor and/or master degree and 60 percent are female. Average tenure at the welfare agency is long (almost 11 years), although for only 23 percent of the caseworkers it is their first job. Finally, 29 percent of the caseworkers have ever received either welfare or unemployment insurance benefits.

2.3 Welfare-to-work programs and caseworker discretion

A caseworker assigned to class IV can use three programs to support welfare recipients in their job search. First, they can send the individual to a job-search activation course. This is an intensive eight-week program with daily sessions. During the first two weeks welfare recipients receive job-application training and guidance on how to find vacancies. During the subsequent six weeks participants spend a few hours per day in a computer room, where they make job applications (under the guidance of a trainer). Second, the caseworker can match the individual directly to a vacancy, which is taken from a pool of vacancies gathered by a separate unit in the welfare office. The match is often accompanied by a trial period or a wage subsidy for the employer.[7] Third, the caseworker can apply

---

[7] A trial period is period of one to three months in which a welfare benefits recipient works for an employer but is still receiving welfare benefits instead of a wage. Trial periods are aimed at employers that have hesitations about the capability of welfare benefits recipients and are meant as a possibility for welfare benefits recipients to prove they are suitable for the job.

Figure 1: Treatment heterogeneity of caseworkers
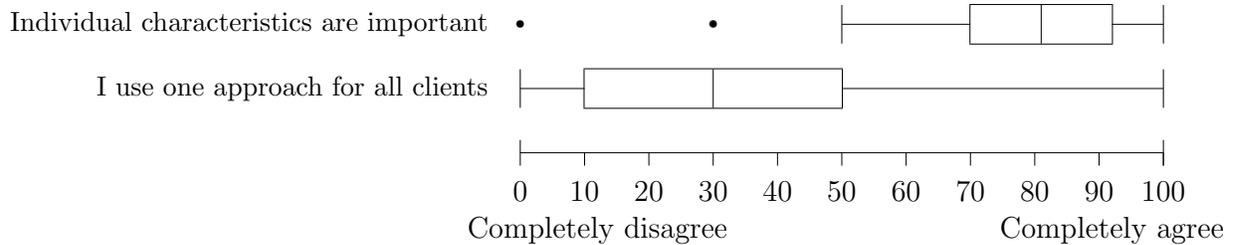
Note: data from post-experiment survey among caseworkers.

caseworker counseling. This includes regular meetings (typically every other week) in which the caseworker helps the individual with the job-search process, setting up the C.V., etc. Before our experiment, the caseworker had full discretion in the assignment of programs to welfare recipients with the restriction that direct matching to vacancies can only be done in case of a suitable vacancy and the eighth-week training course has entry requirements on language and computer skills.

The welfare-to-work programs offered by the welfare administration of Amsterdam are very similar to programs used in many other municipalities, and also, in other countries. Data from Eurostat shows that most European countries spend substantial amounts on what they call client services and employment incentives. The job-search activation course and caseworker counseling fall in the category of client services. According to Eurostat spendings on client services are highest in Denmark, France, UK, Germany and Sweden. Direct matching contains most elements considered in employment incentives such as temporary financial incentives to employers. Card et al. (2010) show that in Nordic countries, but also in Anglo countries a very substantial share of the evaluation studies concern subsidized private sector employment, such as direct matching. Often the programs that are evaluated in this literature have strong similarities with the programs considered in this paper.

In a post-experiment survey, we asked the caseworkers to indicate how much they target programs to welfare recipients. On a zero to one hundred scale caseworkers answer how

much they agree with two statements (see Figure 1 for a summary of the answers). The first question concerned heterogeneity among welfare recipients. Almost all caseworkers agree that heterogeneity in individual characteristics is important when assisting welfare recipients. The second question concerned the choice for welfare-to-work programs. The caseworkers indicate that they do not apply a uniform policy to support welfare recipients in their job search.

To investigate further how caseworkers target welfare-to-work programs to welfare recipients, we asked the caseworkers how they would support a number of hypothetical welfare recipients.[8] For example, client number one is 'a married man of 50 years old with limited command of Dutch and only a primary school degree'. Figure 2 shows how many caseworkers would use each of the welfare-to-work programs to support each of the seven individuals. Three things are important to note. First, the program which is chosen most often varies between the seven cases. Second, caseworkers almost always prefer to provide a welfare-to-work program over having a passive role and giving the welfare recipient time to search for work herself. And third, in all cases a substantial number of caseworkers deviates from the most often chosen welfare-to-work program. The results confirm that heterogeneity among welfare applicants is taken into account when offering welfare-to-work programs and show that caseworkers have different opinions about the most suitable welfare-to-work program and a lot of discretion in providing these programs.

3 The experiment

3.1 Experimental design

The field experiment includes five policy regimes.[9] For each of the three welfare-to-work program, there is a policy regime in which caseworkers are supposed to assign as many welfare benefits recipients as possible to the specific welfare-to-work program. In the

---

[8]Table A2 in the Appendix provides the details of the hypothetical welfare recipients which also the caseworkers received. These welfare recipients closely resemble actual applicants for welfare benefits at the time of our experiment.

[9]The original design of the experiment, including a power analysis, can be found at `http://personal.vu.nl/b.vander.klaauw/ResearchProposalDWI2012.pdf`.

Figure 2: Program applied to fictional clients
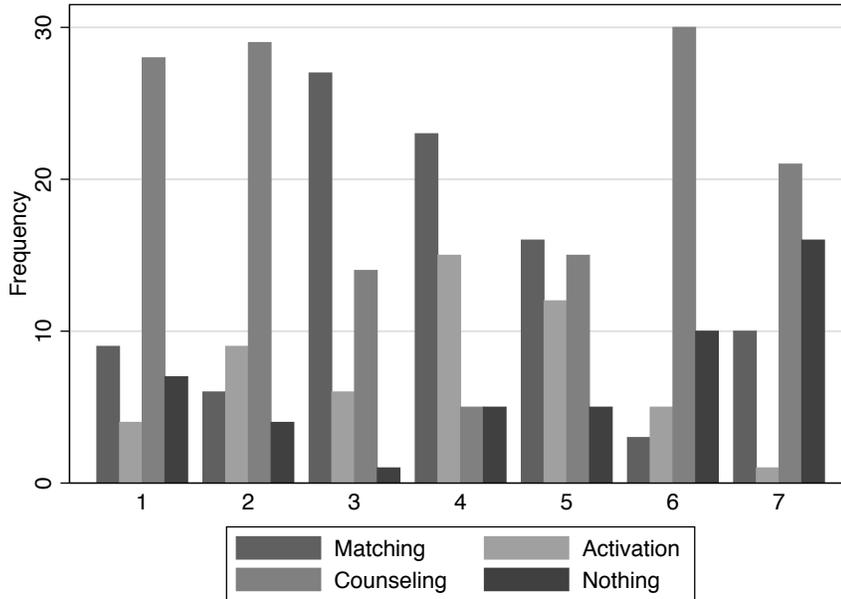
Note: Data from post-experiment survey among caseworkers.

fourth policy regime, benefits recipients do not receive any guidance from the caseworker and are not supposed to participate in any welfare-to-work program. This is the control group, which allows to evaluate the effectiveness of the three welfare-to-work programs. In the fifth policy regime the caseworker has the usual (full) discretion in assigning benefits recipients to the welfare-to-work programs (or to do not provide guidance). This policy regime allows us to test if caseworkers can choose the most effective approach for benefits recipients.

During the experiment, caseworker are assigned to one of the five policy regimes. They are asked to treat all new clients they receive according to the rules of this policy regime for at least six months. If following the policy regime is inappropriate or not suitable for the client, caseworkers can 'opt out', and use another program to guide a client back to work. We prefer to randomize policy regimes rather than participation in a particular welfare-to-work program. In reality caseworkers always have some discretion or they will not be able to convince some benefits recipients to participate. Therefore, policy makers of the welfare agency do not use strict protocols which impose full compliance, but rather

formulate policy regimes where some discretion is given to caseworkers.

Every three months the policy regime of the caseworker for *new* welfare benefits recipients changes. This implies that caseworkers support benefits recipients in different policy regimes at the same time, as they have to treat an individual according to the same policy regime for at least six months.[10] Welfare recipients apply at five different locations in Amsterdam, and each location has their own team of caseworkers. We made sure that in every three-month period each of the five policy regimes is allocated to at least one member of each team. At the start of a new three-month period, each caseworker was instructed by us about his or her new policy regime.

The five policy regimes are communicated to the caseworkers as follows:

Counseling Provide counseling to the welfare recipients. Do *not* act as an intermediary between vacancies and the welfare recipient and do *not* offer participation in the job-search activation program.

Direct matching Try to match the welfare recipient directly to a vacancy. You can offer a trial period or wage subsidy to an employer if that helps to establish a match. If there are no appropriate vacancies, provide counseling in the meantime. Do *not* offer participation in the job-search activation program.

Job-search activation Offer participation in the job-search activation program to the welfare recipient. Provide counseling if the welfare recipient lacks the (computer or language) skills to participate, is on the waiting list or has completed the program. Do *not* act as an intermediary between vacancies and the welfare recipient.

Nothing Do not use any welfare-to-work program. Do not initiate contact with the welfare recipient but be available for questions of the welfare recipient.

Full discretion Choose the program(s) that you think are most appropriate. So follow your usual approach of supporting the welfare recipient.

---

[10]This feature makes the design complicated for the caseworker. To remind them of their current policy regime, we handed out forms with the policy regime preprinted. Caseworkers were asked to fill in these forms at the intake meeting. Most caseworkers also note the policy regime in the digital file of each individual, so that they remember which policy regime the individual is in.

The policy regimes are based on the programs that the welfare agency offered before our experiment. The caseworkers were thus experienced in the use of each program. Comparing the policy regime for each of the three programs with the policy regime nothing provides insight in the effectiveness of the three welfare-to-work programs. If we compare the policy regime with full discretion for the caseworker with nothing, we can assess the added value of the combination of all services provided by the welfare agency. And to obtain insight in how well caseworkers allocate programs to benefits recipients, we can compare the policy regime of full discretion to the three policy regimes for each of the welfare-to-work programs.

The five policy regimes are randomly allocated to caseworkers and apply to all new welfare benefits recipients in a period of three months. New welfare recipients are within a local office randomly assigned to caseworkers.[11] The number of caseworkers assigned to the policy regimes is such that overall the number of participants in the job-search activation program and in direct matching remains similar as before the experiment. The policy regimes only apply to new welfare recipients, and not to the existing caseload. Furthermore, caseworkers have welfare recipients who are treated under different policy regimes at the same time. Roughly the amount of time that caseworkers have available for each individual in their caseload will not vary much.[12]

Our setup had several advantages. Full randomization in the context of benefits programs is often difficult to enforce and raises ethical concerns. This is especially the case when evaluating existing policies (in contrast to the evaluation of additional policies or resources) as we achieve when introducing the policy regime nothing. The possibility to opt out in each policy regime gives caseworkers some discretion to prevent harmful effects of the experiment. This limited discretion also increased the support among caseworkers to commit to the experiment. The risk is of course that compliance to the policy regimes is low. We monitored this throughout the experiment by checking data on participation

---

[11]At each local office, new welfare recipients are assigned to the caseworker with the lowest caseload. Such random assignment allows the welfare agency to evaluate caseworkers based on their (unconditional) realized outflow.

[12]At the start of the experiment the managers promised to adjust targets to caseworkers for the assignment of policy regimes to them.

in programs. A second risk of our setup is that caseworkers exchange the welfare recipients they support. We can monitor this by checking if welfare recipients meet another caseworker after the intake meeting and by checking the forms filled in at the intake meeting. Furthermore, in the next section we show balancing of the welfare recipients in the different policy regimes.

3.2 Implementation

The experiment was conducted in Amsterdam from April 2012 until September 2013. The sample consists of all new welfare recipients older than 27 years that started collecting benefits between April 2012 and March 2013 and are classified in class IV (able to find a job within six months). The welfare agency in Amsterdam is organized in five local offices which each serve different neighborhoods of the city. Benefits recipients are not informed about their participation in an experiment, but the setup of the experiment was discussed with the formal council of welfare recipients.

Before the start of the experiment we organized meetings at all the local offices to inform the caseworkers about their role in the experiment. During the experiment we visited all local offices almost weekly to answer questions of caseworkers and monitor the implementation of the experiment. At the start of every three-month period we instructed each caseworker individually about the new policy regime assigned to her. The caseworkers then also received a new set of forms which they were required to fill in for each new welfare recipient at the intake meeting. These forms were personalized for each caseworker and had their current policy regime pre-printed on the form, in order to remind the caseworker of their policy regime.

At one local office the manager was changed several times during the experiment. As a result, the caseworkers at this office received mixed instructions with respect to their participation in the experiment, which had its effect on their compliance with the experiment. For example, the second (interim) manager explicitly instructed caseworkers to ignore the experiment to boost exit to work for the period that she was manager. We

exclude all welfare recipients from this welfare office from the empirical analysis.[13]

After the experiment we administered a survey among all participating caseworkers. The goal of this survey was to learn about choices caseworkers make when supporting benefits recipients in their job search. Furthermore, we wanted to have insight in the beliefs of caseworkers about the effectiveness of the different welfare-to-work programs and how they update these beliefs. This allows us to address caseworker learning.

4 Data and empirical strategy

4.1 Data sources

In the empirical analysis we employ data from several sources. First, we use administrative date from the welfare agency of Amsterdam, which provide information on the start and end date of collecting welfare benefits, exact records of all benefits payments, and an identifier for the caseworker assigned to the benefits recipient. In addition, these data include all contacts (meetings, phone calls and email contact) between the caseworker and the benefits recipient and participation in the welfare-to-work programs. Finally, the welfare agency registers individual characteristics such as gender, date of birth, highest obtained education and household composition.

The second data source is employment and income data abstracted from social insurance records. These records have weekly information for each individual on the amount of earnings from employment and all types of benefits payments (including welfare benefits in other municipalities and benefits from other schemes such as unemployment and disability insurance). The data on all participants in the experiment cover the period from January 2008 until May 2014 and allow us to construct outcomes such as earnings from work and total income after random assignment. We exploit the retrospective nature to construct control variables describing the labor market history before entering welfare. Income from self employment is missing because self-employed workers do not participate in social insurance schemes.

---

[13]Applicants from this local office constitute 20 percent of the experimental sample.

The third data source is the forms completed by caseworkers at the intake meeting. The form asks the date of birth, gender, educational level, household composition, reason of applying for welfare, a subjective measure for the financial situation, an estimate from the caseworker on the duration of welfare benefits dependency and an indication which welfare-to-work programs will be offered to the welfare recipient. This final question was included to check whether the caseworker complied to the policy regime or used the possibility to deviate in special cases. The forms were filled in for 73 percent of the welfare recipients that participated in the experiment. Given that all crucial information is available through the administrative records (for the full sample), we only use these forms for complementary information.

Finally, we have information from the (ex-post) survey that was administered among the participating caseworkers. The survey included questions on caseworker characteristics and asked their opinion on the experiment. This survey was conducted after the results of the evaluation were presented to the management of the welfare agency and at all local offices. When filling in the survey the caseworkers were familiar with the estimated effectiveness of each of the welfare-to-work programs. In the survey we asked for the caseworker's beliefs on effectiveness of the different programs and whether they changed their beliefs after the experiment. The response rate to the survey is 81 percent (50 out of 62 caseworkers that participated in the experiment), or excluding the local office that did not comply to the experiment 75 percent (40 out of 53 caseworkers).

4.2 Descriptive statistics and balancing

During the experiment 2103 individuals, who started collecting welfare benefits in Amsterdam satisfied the criteria for participation in our experiment (class IV and older than 27 years). A small number of individuals experienced multiple welfare spells within the experimental period, so the sample contains 2061 unique individuals. This number is slightly lower than the inflow of 2500 individuals which was expected prior to the experiment. From our sample we exclude 424 applications (416 unique individuals), who applied at the local office where compliance was low due to changing managers during the experiment

Table 2: Descriptive statistics and balancing

	Counseling (1)	Activation (2)	Matching (3)	Discretion (4)	Nothing (5)	All (6)
Female	36%	38%	38%	36%	38%	37%
Partner	9%	13%	11%	10%	13%	11%
Children	10%	14%	13%	13%	10%	12%
Age (in yrs)	38.9	38.8	38.3	37.2**	38.9	38.4
Education (in yrs)	12.4	12.3	12.2	12.1	12.1	12.2
Education missing	1%	2%	2%	1%	1%	2%
Annual income 2 yrs before (x1000 €)	14.5	13.8	14.1	12.8	13.4	13.7
N	353	333	328	394	271	1679

The header "Policy regime" spans columns (1)-(5).

Note: Stars indicate that there is a significant difference with the policy regime nothing. These p-values are weighted by the office of registration, as randomization took place within the welfare office. *** =significant at 1% level ** =at 5% level, * =at 10% level.

period. Our final sample contains 1679 spells of collecting welfare benefits experienced by 1645 unique individuals.

Table 2 provides descriptive statistics. The final column shows descriptives for the entire sample, the other five columns the descriptives for each policy regime. The policy regime with full discretion for the caseworker has the largest number of observations, while nothing has the fewest observations. This is according to the design which followed the request of the welfare agency to minimize the number of welfare recipients without any guidance and ensured that all caseworkers are observe at least once in the policy regime with full discretion. The compositions of the five treatment groups are well balanced. Out of 28 *t*-tests, there is only one significant difference (at the five percent level) between the groups.[14]

Less than 40 percent of the welfare recipients are women, about 90 percent are single and slightly over 10 percent have children. The average age at starting collecting welfare benefits is 38.4 years. This is relatively young given that we only consider individuals older than 27. The explanation is that the entitlement period to unemployment insurance

---

[14]The *p*-values are weighted by office of registration, as randomization took place within each local office.

benefits depends on age, so older workers who lose their job have more time to find work before becoming dependent on welfare benefits. On average, the individuals have slightly more than 12 years of education. About 30 percent either have a bachelor or master degree and 35 percent completed higher vocational education. Slightly less than 15 percent have only followed primary education. In the two years before entering welfare, the average annual income was about 13,700 euro, which is approximately the minimum wage.

4.3   Empirical strategy

We focus on estimating the effects of the different policy regimes on various labor market outcomes. As reference we take the policy regime where nothing is done to the welfare recipient. The variable $Y_{i\tau tw}$ denotes the labor market outcome of individual i observed t time periods after applying for welfare benefits at welfare office w at calendar time τ. The four different policy regimes are indicated with C (counseling), A (activation), M (direct matching) and D (full discretion of the caseworker on which welfare-to-work program to apply). Our regression model is specified as

$$Y_{i\tau tw} = \alpha_{\tau t} + \gamma_{wt} + \delta_t^c C_{i\tau w} + \delta_t^a A_{i\tau w} + \delta_t^m M_{i\tau w} + \delta_t^d D_{i\tau w} + X_i \beta_t + U_{i\tau tw} \qquad (1)$$

The vector X_i contains background characteristics including age, gender, partner status, having children, cumulative income in the 24 months before welfare and level of education. In addition, we control for whether the applicant received a job-search period at the time of application for welfare benefits (for a discussion of this policy, see Bolhaar et al. (2018)).[15] The parameters $\alpha_{\tau t}$ are fixed effects for the quarter of entering welfare and account for business cycle effects.

The parameters γ_{wt} are the fixed effects for the local welfare offices, which control for potential differences between the local labor markets in the five city districts. Furthermore, recall that within local offices the policy regimes are randomly assigned to caseworkers and new welfare recipients are randomly allocated to caseworkers. The fixed effects for the

---

[15]Controlling for a job-search period does not affect our results.

local offices are crucial to deal with the conditional random assignment (i.e. the rates at which policy regimes are assigned differ between local offices). In the previous subsection we showed that characteristics of welfare recipients in the different treatment groups are balanced after weighting for the local office.

We estimate this model separately for different elapsed durations t since applying for welfare benefits. The parameters of interest δ_t describe the effect of the different policy regimes t weeks after entering welfare benefits. Using this empirical model, we obtain the intention-to-treat effect (compared to no support of the caseworker). Below we discuss the compliance to each policy regime, but compliance is not perfect for three reasons. First, caseworkers were given the option to deviate from the approach described in the policy regime. Second, in some cases welfare recipients did not satisfy the criteria for participating in a welfare-to-work program (e.g. language and computer skills at job-search activation). And third, some welfare recipients found work quickly, so before the support of the caseworker could have started.

Since a small fraction of the applicants appear twice in the data we cluster standard errors at the level of the individual welfare applicant.

5 Results

We present results in four steps. First, we provide evidence on the effectiveness of the different policy regimes. Second, we investigate the choices that caseworkers make within each policy regime, and assess whether caseworkers assign applicants to programs that are most effective for them. Third, we investigate if caseworkers that specialize in a specific program get better results when applying them. Finally, we investigate if caseworkers learn by assessing if they changed their choices after being exposed to a different way of working.

Figure 3: Percentage of applicants receiving welfare benefits by policy regime
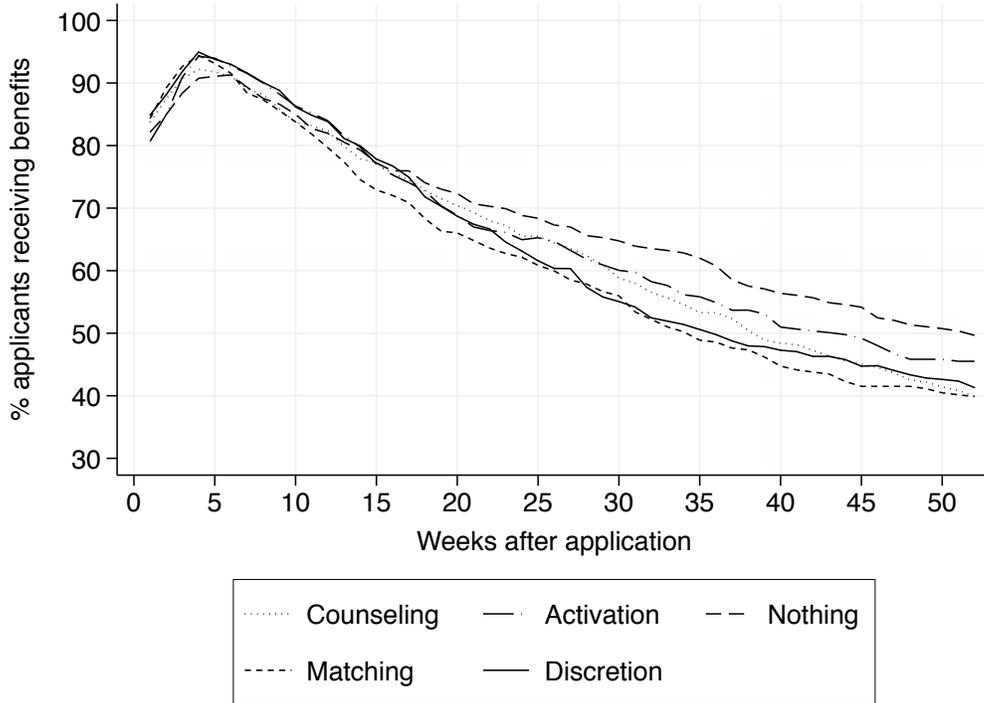
Note: Results are weighted by local office as this was the level of randomization.

5.1 Effects of the policy regimes

Figure 3 shows for each policy regime the percentage of individuals that collect welfare benefits since their moment of application.[16] During the first 10 weeks after application, there are no substantial differences between policy regimes in the likelihood to receive benefits. After that exit in the direct matching regime is slightly higher. After about 20 weeks differences between policy regimes get more pronounced. First, outflow in the policy regime with no support lags behind and next also the job-search activation regime has a lower outflow than the other regimes. Almost at each moment outflow is highest in the direct matching regime. One year after inflow the outflow from welfare is almost ten percentage points higher in the direct matching regime than in the nothing regime.

---

[16]The moment of application may be earlier than the moment of eligibility for welfare benefits. For example, the unemployment insurance administration advises individuals who are close to exhausting unemployment insurance benefits to already apply for welfare benefits. Also, some applications are initially incomplete and denied, but after a reapplication the individuals may still entitle to welfare. At the initial application, an individual is matched to a caseworker, which determines the policy regime.

Figure 4: Effect of policy regimes on the probability to receive welfare benefits (0/1)
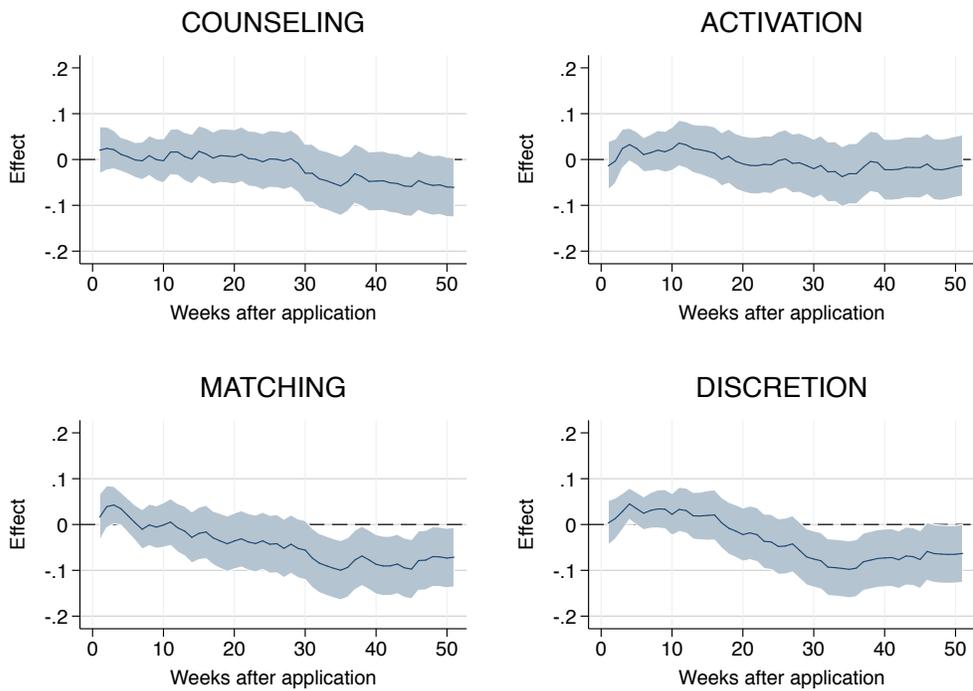
Note: This figure is based on 52 separate regressions, following equation (1). Included controls are calendar time fixed effects, local office fixed effects and applicant characteristics. The applicant characteristics are age at registration, gender, household composition, cumulative income in 24 months before registration and dummies for five education categories. Standard errors are clustered at the level of the applicant.

To explore whether the observed differences in Figure 3 are statistically significant, we estimate the regression model in equation (1) where benefits receipt is the outcome. The model is estimated separately for each week since the moment of application and the effects of the policy regimes (compared to the policy regime where no support is given) are shown in Figure 4 together with the 90 percent confidence interval. Outflow in the policy regime with job-search activation is the same as in the policy regime without support. There might be lock-in effects associated to the job-search activation. The waiting list for the training is around three months and some individuals may reduce their job-search effort while waiting for the start of the training. We return to other explanations below. The policy regime with counseling has a higher outflow after 30 weeks, but differences are not significant. Differences are significant for direct matching and for full discretion of the caseworker. Direct matching and full discretion show very similar patterns of outflow, which implies that caseworkers with full discretion cannot target support such that they obtain a higher outflow than in a more restricted policy regime. We return to this issue below.

Finding work is the most frequent reason for outflow from welfare benefits, but it is not the only reason. Furthermore, individuals who leave welfare because they find work, may also lose their job again. Therefore, in Figure 5 we show effects on having work (with positive earnings) for each week after application to welfare benefits. The figures largely show the reversed pattern as in Figure 4. The main exception is that about 40 weeks after application individuals in the job-search activation regime have a significant *lower* probability to have a job with positive earnings than in the policy regime with no support.

Welfare-to-work programs may not only affect the rate at which work is found but can also affect the quality of the job. Job quality is often proxied by earnings. Figure 6 reports the effects of the policy regimes on the earnings in each week after application. Individuals who do not have a job in a particular week, have zero earnings. There are also individuals with very flexible contracts who have some weeks very low earnings. Since the earnings measure is noisier than, for example, and indicator for work, confidence intervals are wider. The effects of direct matching and full discretion are no longer significant, which

Figure 5: Effect of policy regimes on the probability to have a job (0/1)
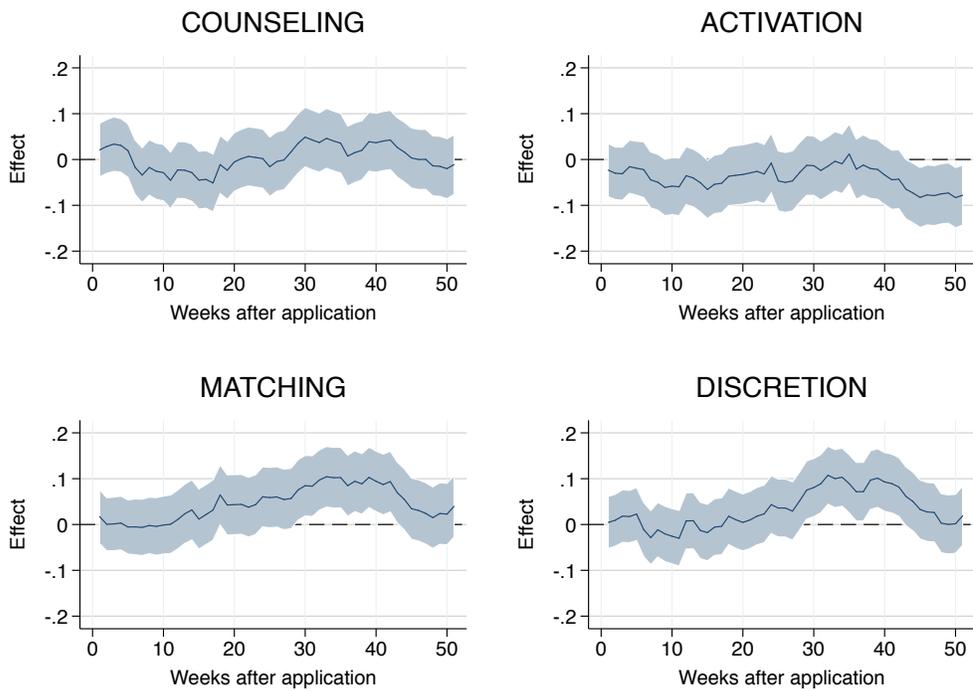
Note: This figure is based on 52 separate regressions, following equation (1). Included controls are calendar time fixed effects, local office fixed effects and applicant characteristics. The applicant characteristics are age at registration, gender, household composition, cumulative income in 24 months before registration and dummies for five education categories. Standard errors are clustered at the level of the applicant.

implies that many people find low paying jobs. This is in agreement with the observation that often trial periods and wage subsidies are necessary to convince employers to hire welfare recipients. Moreover, our experiment was done during a recession with relative high unemployment for the Netherlands.

Most striking is the negative effect of the job-search activation regime on earnings, which already becomes negative after about 13 weeks. The job-search activation program was originally designed for workers in lower classes (larger distance to the labor market). The focus is largely on finding employment via temp work agencies. Because there were not enough welfare recipients in the lower classes satisfying the participation criteria, the job-search activation was also made available for welfare recipients in class IV. Our results suggest that jobs in temp work sector are not the best match for welfare recipients in class IV.

Figure 6: Effect of policy regimes on earnings
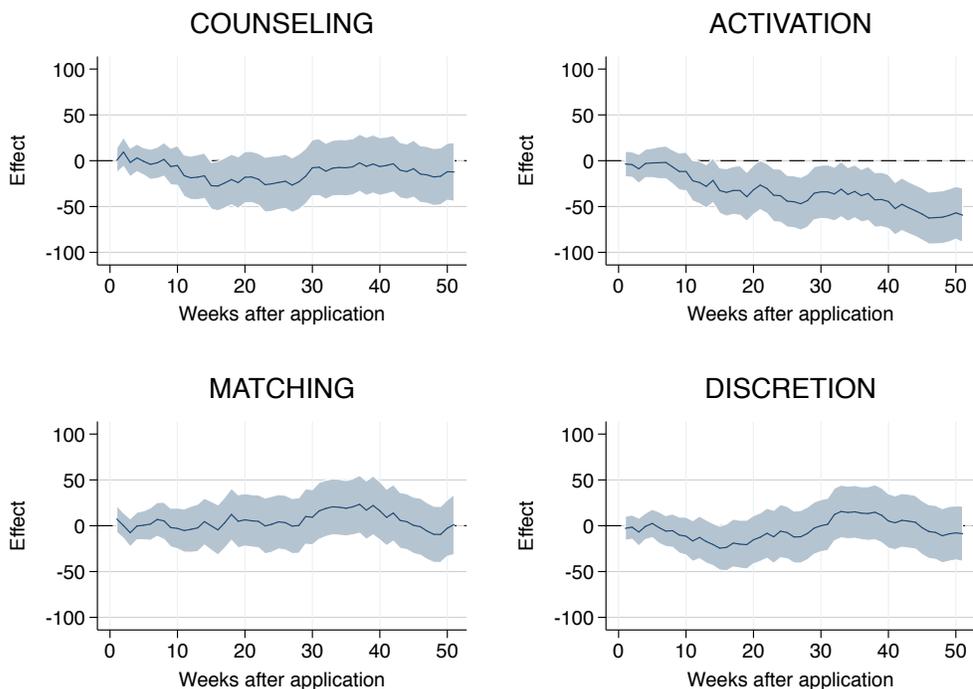
Note: This figure is based on 52 separate regressions, following equation (1). Included controls are calendar time fixed effects, local office fixed effects and applicant characteristics. The applicant characteristics are age at registration, gender, household composition, cumulative income in 24 months before registration and dummies for five education categories. Standard errors are clustered at the level of the applicant.

Finally, Figure 7 shows the effects on total income, which is the sum of welfare benefits, earnings and income from other types of benefits. This figure confirms the earlier finding. The higher job finding in the regimes with direct matching and full discretion of caseworkers do not translate in higher income for the welfare recipient. The earnings in most jobs do not exceed the benefits level. Job-search activation significantly reduces total income. The most likely explanation is that individuals who exit the welfare benefits system get flexible contract in the temp work sector which often provide too few hours of work in a week to earn more than the welfare benefits level. Counseling has zero effects on total income.

Figure 7: Effect of policy regimes on total income
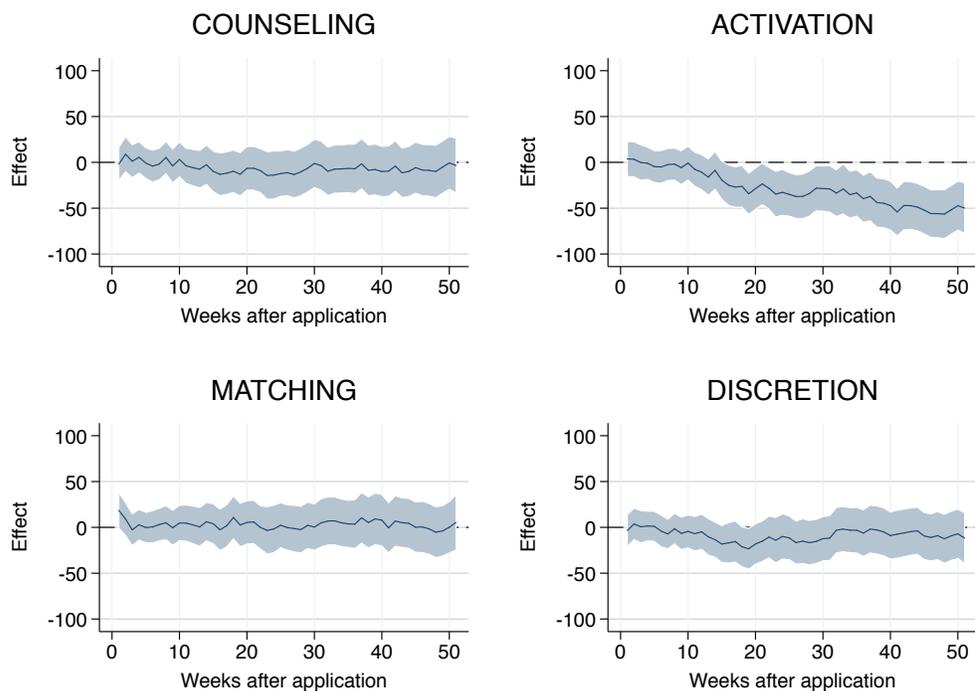
Note: This figure is based on 52 separate regressions, following equation (1). Included controls are calendar time fixed effects, local office fixed effects and applicant characteristics. The applicant characteristics are age at registration, gender, household composition, cumulative income in 24 months before registration and dummies for five education categories. Standard errors are clustered at the level of the applicant.

Table 3: Actual program participation in the different policy regimes

	Policy regime				
	Nothing (1)	Counseling (2)	Activation (3)	Matching (4)	Discretion (5)
No support	84%	23%	21%	29%	29%
Welfare-to-work program:					
Counseling	10%	70%	47%	49%	55%
Job-search activation	3%	6%	36%	4%	8%
Direct matching	10%	30%	27%	50%	36%
Job-hunter	2%	10%	8%	8%	10%
Other	4%	10%	19%	18%	14%
Contacts with caseworker (monthly)	0.73	1.07	1.02	1.16	0.96
N	271	353	333	328	394

5.2 Compliance by caseworkers

For the interpretation of the results in the previous subsection it is important to know which welfare-to-work programs were applied in the different policy regimes. This is shown in Table 3. The numbers in each column do not add up to one, as an individual can participate in multiple programs. In addition to the three welfare-to-work programs (counseling, direct matching and job-search activation) considered in the experiment, we also distinguish 'job-hunter' and 'other'. The job-hunter is a program that was first introduced when our experiment was already running.[17] We can, therefore, not include it in the description of the policy regimes. The same holds for some small and very specific welfare-to-work programs that are included in the category 'other'.

The first thing to note in Table 3 is that compliance to the policy regime nothing is high. About 84 percent of the welfare recipients in this policy regime did not receive any support from the caseworker. This percentage is much higher than in the other policy

---

[17]A job-hunter is a person (not the caseworker) that has to acquire vacancies and find suitable welfare recipients to fill these vacancies. As such, it is somewhat similar to the instrument direct matching, the difference being that the initiative for the match comes from the job-hunter instead of from the caseworker/welfare recipient.

regimes, where no support is often associated to individuals who exit welfare quickly.[18] Also the newly introduced programs (job-hunter and other) were less frequently provided to welfare recipients in the policy regime without guidance. This confirms that by comparing outcomes in the other policy regime to the policy regime nothing we learn about the added value of the various welfare-to-work programs and the practice of the welfare agency.

Looking at the other policy regimes, we see that the random assignment of the policy regimes changed the support given by the caseworker. For example, the policy regime with the job-search activation increased participating in this program with about 30 percentage points. In case of counseling and direct matching the increase is 20 percentage points. Interesting to note is how caseworkers allocate welfare-to-work programs in case they have full discretion. In that case about 30 percent of the welfare recipients do not receive any support, 55 percent receive counseling, less than 10 percent participate in the job-search activation program and direct matching is applied to 36 percent. If we also take the job-hunter and other programs into account, this implies that welfare recipients that do receive support, on average, participate in two welfare-to-work programs.

An alternative way to characterize the policy regimes is to look at the number of contacts that welfare recipients have with their caseworker. The bottom row of Table 3 shows the average number of times that the caseworker contacts the welfare recipient per month under the different policy regimes. Under no guidance, the caseworkers clearly had fewer contact with the applicant than under the other policy regimes. The number of meetings under no guidance is not zero because the caseworkers occasionally have to meet their clients in order to discuss the technical aspects of their benefits payments. However, we asked the caseworkers in this policy regime not to be proactive towards the benefits recipient with respect to job coaching.

Combining the actual policies that are applied with the estimated effects of the different policy regimes on welfare receipt and other labor market outcomes, there are a few things

---

[18]Figure A1 in the Appendix shows the likelihood to receive no guidance against the months until exiting welfare. For all policy regimes excluding no guidance, more than 60 percent of the individuals that exit welfare within two months after registration receive no guidance. This reduces to around ten percent conditional on exit after ten months. Only for the policy regime nothing the percentage of individuals without support is consistently around 80 percent.

that we can conclude. First, the policy regimes in which caseworkers have unrestricted access to direct matching (direct matching and full discretion) perform significantly better than no support by caseworkers with both higher exit from welfare and higher job finding. Second, the policy regime counseling does not lead to a higher outflow out of welfare benefits or higher earnings, compared to no support. This suggests that outflow from welfare does not increase if a caseworker can only provide counseling without directly providing vacancies. Third, the encouragement to participate in the job-search activation program, makes labor market outcomes significantly worse than any of the other policy regimes, including giving no guidance. From this we can conclude that the job-search activation program is ill suited for the welfare recipients in our experiment, which have relatively favorable labor market prospects among welfare recipients. We explain the latter from the relatively long waiting period and the strong focus on the temp work sector

In the policy regime where the caseworker has full discretion in choosing the most appropriate welfare-to-work program, the caseworker has the possibility to target programs to welfare recipients. If caseworkers can target programs optimally, then the policy regime with full discretion should outperform all other programs. This does not seem the case, in particular since the policy regime with direct matching seems to perform as least as good. Although it should be noted that program choice in the policy regime with full discretion has quite some similarities with direct matching. Maybe with the exception that the job-search activation program is used twice as frequent and direct matching somewhat less frequent.

5.3 Caseworker specialization

The fifth column in Table 3 shows which welfare-to-work programs caseworkers apply when they have full discretion. As expected, each program is used less than in case of the policy regimes with encouragement for the program, but each program is used much more than in the policy regime without any support. In this subsection, we study if all caseworkers use mixtures of programs or if caseworkers focus on a single welfare-to-work program (which can differ between caseworkers).

Figure 8: Fraction of welfare recipients that participates in each welfare-to-work program by caseworker in full discretion regime
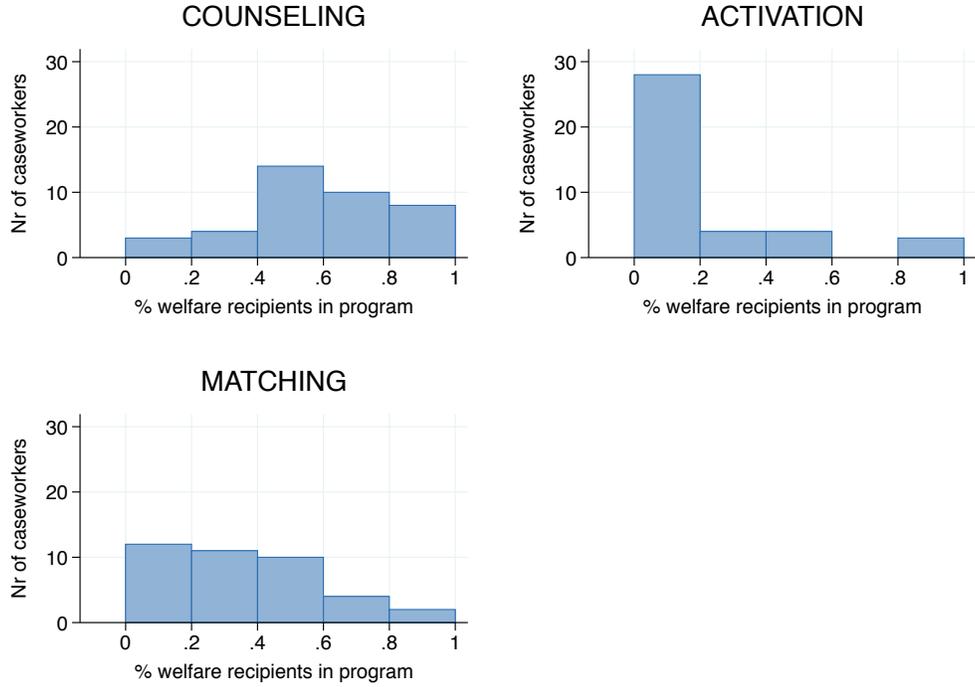

Figure 8 shows for each casework the fraction of welfare recipients that participate in a particular program in the policy regime of full discretion. There is substantial dispersion between caseworkers in how often they assign welfare recipients to the different welfare-to-work programs. For example, some caseworkers almost never use direct matching while others use it for the majority of their welfare recipients. Overall rates of use for the job-search activation are low and many caseworkers never assign welfare recipients to this training, but a few caseworkers very often assign welfare recipients to this program.

We use the information from Figure 8 to define specialization by caseworkers. In particular, we distinguish between caseworkers who use a welfare-to-work program more or less frequent than the mean of all caseworkers. Next, we interact the assigned policy regime with an indicator for the caseworker using the associated welfare-to-work program more often than the mean caseworker. This provides insight in whether caseworkers that specialize in a particular welfare-to-work program obtain better outcome with this pro-

Table 4: Effect of the different policy regimes on labor market outcomes, split by case-worker specialization

| | Outcome | | Treatment applied | |
| | Weeks on welfare | Weeks with work | Discretion | Assigned policy regime |
	(1)	(2)	(3)	(4)
Counseling:				
Low use	-0.94 (1.70)	0.08 (1.77)	0.40	0.63
High use	-1.01 (1.94)	0.36 (2.19)	0.76	0.81
Activation:				
Low use	-0.17 (1.61)	-1.59 (1.69)	0.02	0.36
High use	-0.61 (2.74)	-4.43 (2.97)	0.36	0.38
Matching:				
Low use	-2.80 (1.75)	4.16* (1.87)	0.18	0.40
High use	-1.71 (2.01)	-0.67 (2.11)	0.50	0.64

Note: The two rows under the name of each policy regime represent each one regression including the interaction of the relevant policy regime with the low or high use indicator. Included controls are indicators for the other policy regimes, calendar time fixed effects, local office fixed effects and applicant characteristics. The applicant characteristics are age at registration, gender, household composition, cumulative income in 24 months before registration and dummies for five education categories. Standard errors are clustered at the level of the applicant. *** =significant at 1% level ** =at 5% level, * =at 10% level.

gram. Table 4 presents the estimated effect of the different policy regimes on cumulative weeks on welfare and weeks with work (in the year after application). The rows labeled with 'low use' provide the effects for caseworkers that have a low use of the encouraged program under full discretion, while the rows with 'high use' present the estimated effects for caseworkers with an above average use of the encouraged program. Columns (3) and (4) show the fraction of clients that received a certain treatment under discretion and when the caseworker was assigned to that policy regime. Low-use caseworkers increase their use of a specific treatment when assigned to that policy regime while high-use caseworkers hardly change behavior when assigned their favorite treatment (as their use of that treatment is already high).

If caseworkers that specialize in a program have better results when providing this program, we expect that the effects are more substantial for high use caseworkers. For direct

matching, we observe the opposite: the effects are larger for caseworkers who usually do not use direct matching often. For the outcome weeks with work the difference between low and high use is also significant. For activation we see a similar pattern, the large negative effect on weeks with work is more pronounced for caseworkers that also use activation when they have full discretion. Finally, for counseling the differences are very small and not significant. Summarizing these results, we do not find strong evidence supporting the idea that caseworkers who specialize in a particular welfare-to-work program obtain larger effects when applying this program.

5.4   Caseworker learning

Above we showed that caseworkers often have a very different approach when supporting welfare recipients. In the usual policy regime they have substantial discretion and they use this to focus on different welfare-to-work programs. We showed that there is heterogeneity in the effectiveness of the different welfare-to-work programs. In particular, direct matching is most effective in increasing job finding, while job-search activation mainly has adverse effects for the welfare recipients in our experiment population. Our experiment forced caseworkers to change their usual approach and also consider other welfare-to-work programs when supporting welfare recipients. Furthermore, the experiment provides insight in the effectiveness of the different programs, which was not systematically collected before. In this subsection we study if caseworkers respond to this by changing their approach for supporting welfare recipients.

After the experiment and also after we had presented results to the management and at the local offices, we conducted a survey among caseworkers.[19] In the survey we asked caseworkers to answer for each of the welfare-to-work programs 'Compared to before the experiment, have you changed your belief about to the usefulness of the program'. Caseworkers answered these questions on a scale from 0-100 where we indicated less useful (<50) no change (50) and more useful (>50). The results which are summarized in Table

---

[19]Caseworkers were also present in the meetings in which we presented our empirical findings about the effectiveness of the different welfare-to-work programs.

Table 5: Perceived effectiveness of different instruments compared to beliefs prior to the experiment

	Less useful (1)	No change (2)	More useful (3)
Counseling	19%	33%	47%
Job-search activation	34%	37%	29%
Direct matching	43%	11%	46%
N	36		

5 do not concur with our empirical findings. In particular, 43 percent of the caseworkers believe that direct matching is less useful, while we find it to be the most effective instrument. Similarly, 47 percent of the caseworkers report that counseling is more useful than they thought before the experiment, even though we find that counseling does not outperform providing no support. Finally, 29 percent answer that the job-search activation program is more useful, a program that we find to be not only non-effective, but also harmful to both outflow from welfare and income of the welfare recipient.

Next, we asked caseworkers in the survey if they actually change their usual approach of supporting welfare recipients in their job search.[20] In particular, we asked them about the frequency or their use of each welfare-to-work program in relation to before the experiment. The answers are again on a scale from 0-100, which we categorized as less use (<50), no change (50) in use and more use (>50). The results are presented in Table 6. The tendency is to intensify the use of welfare-to-work programs, and in particular counseling. The results also show that more caseworkers want to use job-search activation more often than less frequently, and direct matching is mentioned most often as program that should be used less frequently.

When asked whether the caseworkers found the experiment useful only five out of 50 answered negatively. The responses to the survey indicate that a majority of the case-

---

[20]Due to data limitations we do not observe the welfare-to-work policies that caseworkers applied after the experimental period.

Table 6: Use of different instruments compared to before the experiment

	use less (1)	no change (2)	use more (3)
Counseling	11%	33%	56%
Job-search activation	23%	46%	31%
Direct matching	31%	34%	34%
N	36		

workers provide support differently after the experiment. However, the caseworkers do not use empirical evidence to update their beliefs about the welfare-to-work programs. Their answers about the effectiveness of programs and their intended use are not aligned with our empirical evidence on the effectiveness of the different programs. A likely explanation is that due to the experiment caseworkers learn about other characteristics of the welfare-to-work programs which they value more than effectiveness. For example, some caseworkers indicated that they do not like direct matching because it provides free labor to employers, who have only limited commitment.

6 Conclusion

In this paper we study the role of the caseworker in the assignment and take-up of active labor market programs. We conduct a field experiment where five different policy regimes are randomly assigned to caseworkers and welfare recipients are randomly assigned to caseworkers. We find that direct matching to vacancies is effective in terms of higher exit from welfare and increased job finding. Participation in the job-search activation program makes labor market outcomes significantly worse than any of the other policy regimes, including giving no guidance. Our empirical results do no show evidence in favor of efficient targeting of welfare-to-work programs by caseworkers. Moreover, we find that some caseworkers continue specializing in job-search activation, even after being informed

that it has adverse consequences on the labor market prospects of benefits recipients.

Our findings imply that even when there is credible knowledge about the effectiveness of certain active labor market programs, the roll-out of such a program is not obvious. Caseworkers have substantial discretion, and do not easily change behavior, also not when provided with the necessary information. This finding confirms earlier results of Behncke et al. (2009) and Schmieder and Trenkle (2016). As a response, benefits agencies can formulate policy regimes to reduce discretion, but even with such regimes the heterogeneity of benefit recipients requires some discretion for caseworkers. Overall, it means that learning which active labor market programs are effective is not enough to improve the use of welfare-to-work programs.

References

Behncke, S., Frölich, M., and Lechner, M. (2009). Targeting labour market programmes - Results from a randomized experiment. *Swiss Journal of Economics and Statistics (SJES)*, 145(III):221–268.

Bell, S. and Orr, L. (2002). Screening (and creaming?) applicants to job training programs: The AFDC homemaker - home health aide demonstrations. *Labour Economics*, 9(2):279–301.

Bolhaar, J., Ketel, N., and Van der Klaauw, B. (2018). Job-search periods for welfare applicants: Evidence from a randomized experiment. *American Economic Journal: Applied Economics*, Forthcoming.

Card, D., Kluve, J., and Weber, A. (2010). Active labour market policy evaluations: A meta-analysis. *Economic Journal*, 120(548):F452–F477.

Card, D., Kluve, J., and Weber, A. (2018). What works? A meta analysis of recent active labor market program evaluations. *Journal of the European Economic Association.* Forthcoming.

Dahl, G. B., Kostl, A. R., and Mogstad, M. (2014). Family welfare cultures. *Quarterly Journal of Economics*, 129(4):1711.

Eriksson, M. (1997). *To Choose or not to Choose: Choice and Choise Set Models*. PhD thesis, Umeå University.

Graversen, B. K. and Van Ours, J. (2008). How to help unemployed find jobs quickly: Experimental evidence from a mandatory activation program. *Journal of Public Economics*, 92(10&11):2020–2035.

Heckman, J. J., Lalonde, R. J., and Smith, J. A. (1999). The economics and econometrics of active labor market programs. In Ashenfelter, O. C. and Card, D., editors, *Handbook of Labor Economics*, volume 3 of *Handbook of Labor Economics*, chapter 31, pages 1865–2097. Elsevier.

Lechner, M. and Smith, J. (2007). What is the value added by caseworkers? *Labour Economics*, 14(2):135–151.

Maestas, N., Mullen, K. J., and Strand, A. (2013). Does disability insurance receipt discourage work? Using examiner assignment to estimate causal effects of SSDI receipt. *American Economic Review*, 103(5):1797–1829.

Rothstein, J. and Wachter, T. V. (2017). Social experiments in the labor market. In Banerjee, A. V. and Duflo, E., editors, *Handbook of Economic Field Experiments*, volume 2 of *Handbook of Economic Field Experiments*, chapter 8, pages 555–637. North-Holland.

Schmieder, J. F. and Trenkle, S. (2016). Disincentive effects of unemployment benefits and the role of caseworkers. IZA Discussion Papers 9868, Institute for the Study of Labor (IZA).

Van den Berg, G. J. and Van der Klaauw, B. (2006). Counseling and monitoring of unemployed workers: Theory and evidence from a controlled social experiment. *International Economic Review*, 47(3):895–936.

Vikström, J. (2017). Dynamic treatment assignment and evaluation of active labor market policies. *Labour Economics*, 49:42–54.

A   Appendix

Table A1: Benefit levels (net, in € per month)

| | Housing costs | | |
	Full	Shared	None
Single without children	935.80	802.12	668.43
Single with children	1203.19	1069.50	935.81
Couple without children	1336.87	1203.19	1069.50
Couple with children	1336.87	1203.19	1069.50

Note: Benefit levels in period July 1 to December 31 in 2012, including holiday allowance. Benefit levels outside this time frame differ only marginally. Shared housing costs apply if the costs are shared with an individual that is not the partner or the child.

Table A2: Description of the seven fictional clients

Person 1	A married man of 50 years old. He has limited command of Dutch, and only finished primary school.
Person 2	A woman of 38 years old. She is divorced and has two children aged four and seven. Her ex-partner refuses to pay the alimony, so she hardly manages to make ends meet. She has little work experience.
Person 3	A single man of 33 years old. The past few years he only had temporary jobs. He only followed preparatory vocational education, but never finished his vocational degree.
Person 4	A highly educated woman of 51 years old. She has a lot of work experience and has never relied on welfare benefits before. She has made a lot of job applications, but is continuously rejected.
Person 5	A man of 45 years old. He applies for welfare benefits because his shop went bankrupt. He wants to have a regular job and has already deregistered as self-employed at the chamber of commerce (Kamer van Koophandel).
Person 6	A single woman of 32 years old. She has a lot of debts, rent, phone bills, health insurance, mail order companies etc. At the first meeting she arrives late.
Person 7	A single man of 29 years old. He graduated last year and traveled afterwards. Now he is looking for his dream job.

Figure A1: **No instrument applied to client, by duration of the benefits spell**