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How important are caseworkers – and why? New evidence from Swedish employment offices

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How important are caseworkers – and why? New evidence from Swedish employment offices[*]

by

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Abstract

Caseworkers at the Swedish Public Employment Office (PES) have an important role in helping the unemployed to find a job. In this study, I estimate the effect of caseworkers on jobseekers' future employment rates, earnings, and wages. To take into account that the average characteristics of the unemployed can vary between caseworkers, I only use information from local employment offices that randomly allocate caseworkers to clients. The results indicate that caseworkers have an effect on the jobseekers' future employment and earnings. For example, the probability of being employed within a year is about 13 percent higher if the caseworker is one standard deviation higher in the distribution of caseworkers. Distinctive of a successful caseworker is that they assist in job search rather than assigning their jobseekers to various training programs.

Keywords: Caseworkers, program evaluation, active labour market policy
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1 Introduction

Since the 1930s, an active labor market policy has been a fundamental component in the fight against unemployment in Sweden. This policy is based on measures that are directly aimed at the unemployed, such as job search assistance, classroom training, and various types of employment subsidies (see Calmfors et al, 2001 for an overview). These measures are administered and implemented at about 300 local employment offices, where unemployed can register to receive help with finding work.[1] At an office, the jobseeker is paired with a caseworker who functions as an agent between employers and prospective employees. The caseworker aids the jobseeker search and finds available positions in the appropriate job sector. Jobseekers may also be assigned to training programs, as well as controlled to make sure they stay active in their search for employment.

The purpose of this study is to determine how important the individual caseworker is for jobseekers and what distinguishes successful caseworkers. I use data from 2002 to determine whether caseworker fixed effects explain the future labor market outcomes of the unemployed. In order to correctly measure the significance of caseworkers, it is critical to take into account that the proficiency of jobseekers varies among caseworkers. Such differences may occur if the personal characteristics of the unemployed and their possibilities of employment differ systematically between offices and caseworkers.

I use two strategies to account for such differences between caseworkers. First, I will take advantage of the fact that some offices randomly – often according to day and month of birth – allocate caseworkers to jobseekers. Second, I use detailed registry data to eliminate observable differences between jobseekers at the same office.

The results show that caseworkers have a significant effect on the probability of finding employment; approximately 2-5 percent of the variation in employment status and earnings one year after being registered at the Employment Service is determined by which caseworker the jobseeker is assigned. The effects are also relevant in terms of size: unemployed with a one standard deviation “better” caseworker in the distribution has, after approximately one year, a thirteen percent higher chance of being employed and twenty percent higher earnings. However, caseworkers have no clear effect on

[1] Jobseekers have to register at the Employment office in order to become entitled to unemployment benefits.

wages, suggesting that caseworkers affect primarily employment status and not productivity.

Understanding why some caseworkers are more successful than others is complicated since not all working methods can be observed in the data. The results show that caseworkers who offer basic help in the job search are more successful than those who send their clients to various training programs. However, strong assumptions are required for a causal interpretation of the results.

Although no earlier studies have measured the overall significance of caseworkers, several studies show that caseworkers affect their jobseekers' success on the labor market. For example, studies show that assisting the unemployed in their search for work has positive effects. Delander (1978) found that a group of randomly selected individuals who received extra support had significantly higher employment rates and wages than individuals in a control group. Similar conclusions were reached by Engström et al (1998), who studied the unemployed after a plant closure where certain individuals received more support than others. Many international studies are in line with such positive effects of extra assistance in the search for employment (see Martin and Grubb, 2001).

The rest of this study is arranged according to the following: Chapter 2 shows in more detail how caseworkers can affect the jobseekers' employment possibilities. In chapter 3, I explain how I measure the significance of caseworkers and introduce the data set used in the study. Chapter 4 presents the empirical analysis, while the final chapter will summarize the main conclusions.

2 What do caseworkers do?

A fundamental question at this stage is how do caseworkers affect the jobseekers' chances on the labor market. Intuitively, one could say caseworkers differ with respect to their professionalism – e.g. contacts to various companies – and their personal characteristics – e.g ability to motivate. The more freedom a caseworker has with his clients, the larger the effect of these attributes.

In 2003, I interviewed caseworkers at 30 offices in order to determine how much freedom they have in allocating jobseekers for specific labor market policy programs. In most cases there are clear selection criteria; e.g. age limits determine eligibility to

participation in youth programs and the duration of unemployment determines participation in long-term unemployment programs. However, many caseworkers claim that they can influence which programs their clients join. National guidelines are seen as unclear and recommendations often contradict each other. For example, caseworkers are recommended to support struggling groups, while some programs, at the same time, explicitly require a percentage of participants to be employed after a certain amount of time.

Several earlier studies also point out that caseworkers have an influence on which activities and programs their clients participate in (Lundin, 2004; Bell and Orr, 2002; Richardson and van den Berg, 2001). Eriksson (1997) found that according to Swedish data, participation in a program is more accurately predicted by which caseworker a jobseeker has rather than the personal characteristics of the jobseeker. In the same vein Lechner and Smith (2003) state that many Swiss caseworkers fail in selecting a suitable participant for programs; they suggest that it is more effective to select program participants based on statistically predicted impacts. A reason why caseworkers operate differently could be that they can choose between maximizing social goals and ensuring the success of a program (Heckman et al, 1999). In order for a program to be seen as effective, caseworkers may select participants with the best chance of finding employment, even if the program is more suitable for other types of participants.

3 Empirical strategy and data

In order to measure how caseworkers affect jobseekers' probability of finding work, it is necessary to control for additional factors that may have an effect on labor market prospects and vary across jobseekers with different caseworkers. While some caseworkers seem to be more successful than others, it is not necessarily due to them being more skilled; the work environment of the caseworker and the background of the jobseeker can have an effect. In this chapter, I will explain how I account for such differences, and present the data set used in the analysis.

3.1 Determining the importance of caseworkers

The first approach for estimating the importance of caseworkers is to use regression analysis and detailed registry data to take into account the effects of observable characteristics of jobseekers. The following model is estimated:

$$y_{ico} = X_i\beta + \tau_{co} + \varepsilon_{ico} \ , \qquad (1)$$

where y_{ico} is the outcome for jobseeker *i* who is assigned to caseworker *c* at the office *o*; X_i is a vector with detailed information about the jobseeker's personal characteristics. These include controls for age, gender, ethnicity, marital status, region of residence, length of unemployment, highest level of completed education, and field of highest education. The variables of most interest in (1) are the caseworker fixed effects, τ_{co}. However, to give these a causal interpretation requires that the specification captures all the systematic differences between jobseekers with different caseworkers.

In another approach, (1) is estimated solely for local employment offices that are using random allocation of caseworkers to jobseekers. In 2003, I contacted managers at 244 local offices and requested them to explain the process by which caseworkers were allocated to jobseekers. 86 percent responded to the request. The majority of offices – approximately 70 percent – had caseworkers that are specialized for specific groups of jobseekers; profession, age, and previous unemployment are examples of factors that determine how caseworkers are assigned. The number of offices that randomly allocated jobseekers to caseworkers was 69. One such method is the “date principle”, whereby caseworkers are assigned according to the jobseekers' date of birth. For example, caseworker A is assigned persons born on days 1-15, while caseworker B receives persons born on days 16-31. However, some groups of jobseekers – long-term unemployed, youths, and handicapped – usually have caseworkers who are specialized for their specific needs, making it hard to evaluate how successful these caseworkers are. Therefore, I exclude jobseekers that have previously been registered at the Employment Service as unemployed, as well as jobseekers that are younger than 25 or have a handicap.

Now the crucial question is whether the employment offices claiming to use a randomized procedure in fact succeed in implementing such a policy. I use two strategies to empirically assess if allocation at these offices was indeed random. First, there is only a small within-office variation in the number of jobseekers per caseworker. Second, including caseworker dummies in regressions explaining the gender, age or ethnic origin of the jobseekers do not increase the explanatory power of the models. Together, these patterns support the view that these offices did indeed practice random allocation.

If the allocation of jobseekers to caseworkers is in fact done randomly, jobseekers with different caseworkers should have on average the same personal characteristics. I will continue, however, to include X_i in the model for two reasons: (1) In practice, some caseworkers have so few jobseekers that systematic differences between caseworkers' clients may occur.[2] (2) Eliminating the effect of varying characteristics among jobseekers enables the estimation of the caseworker fixed effects with greater precision.

3.2 Descriptive statistics of the data material

The analysis is based on all individuals in Sweden who registered as unemployed at the Employment Service in 2002. I use Swedish registry data from the Swedish National Labor Market Board (AMS) and Statistics Sweden (SCB). The AMS data contains date of registration at PES and information on which office the individual registered in and which caseworker she was assigned.

I am excluding jobseekers who 1) are younger than 26 years old or older than 65 years old, 2) have earlier been registered at the Employment Office (since 1991), or 3) have a handicap that makes them unsuitable for the labor market. The reason for excluding these groups from the analysis is that they often receive caseworkers who are specialized for their needs. The finalized data set that the study uses consists of 11 836 jobseekers.

For these individuals, I add detailed information from the SCB registry data that covers the entire adult population of Sweden. I include the following variables: age, gender, region of residence, marital status, citizenship, field of education, and highest level of completed education. I use four different outcome measures to determine the jobseekers success on the labor market. First, I use a binary variable with the value 1 if the individual is employed in November 2003. Second, I create a binary variable with the value 1 if the person has de-registered from PES before November 2005 due to having found regular employment. Third, I am using (log) earnings in 2003 and fourth, the jobseeker's (log) monthly salary for September 2003. However, salary information is only available for public-sector employees and employees in companies with more than 500 employees. *Table 1* gives a summary of the descriptive statistics for the data set.

[2] As a robustness check, I study caseworkers with many clients. This increases the likelihood that there are no systematic differences in client characteristics between caseworkers (see Section 4.2).

Table 1. Descriptive statistics about the characteristics of the unemployed

	Random	All offices	Full population
Outcome variables:			
Employed in November 2003	0.54	0.54	0.61
De-registered from PES prior to November 2005 due to regular employment	0.64	0.63	0.69
Earnings 2003 (SEK)	111 398	111 480	97 953
Personal characteristics:			
Age (years)	42.7	43.0	35.6
Female	0.50	0.49	0.53
Married/Living with a partner	0.59	0.60	0.39
Swedish citizenship	0.79	0.79	0.90
Highest level of completed education:			
Primary	0.24	0.23	0.19
Secondary	0.40	0.41	0.60
Post-secondary	0.36	0.35	0.21
Number of individuals	11 836	33 385	675 056
Number of individuals per caseworker	12.0	15.5	313.5
Number of individuals per office	171.5	136.8	2777.6
Number of offices	69	244	244

Note: Descriptive statistics of all unemployed ages 25-65 who registered at PES in 2002 but have not previously registered as unemployed. Column 1 includes only jobseekers with these characteristics registered at offices that randomly allocate caseworkers to jobseekers. Column 2 includes jobseekers with these characteristics at all offices. Column 3 shows the characteristics of the full population of individuals registered at PES in 2002.

Table 1 shows that offices that assign caseworkers randomly differ from the ones that do not. Column 1 displays the descriptive statistics for unemployed who registered themselves in 2002 at offices that use randomized allocation and fulfill the required criteria. Column 2 shows statistics for similar types of jobseekers registered at all offices, while column 3 shows the stock of all jobseekers registered at all offices.

As seen in *Table 1*, offices with a randomized allocation have more registered jobseekers and fewer jobseekers per caseworker. There do not seem to be any clear differences in the jobseekers' characteristics or later success on the labor market. It also shows that the data set used in the empirical analysis is not representative of all registered jobseekers during the period; unemployed are generally younger and less educated than the group used in this study.

4 Results

The results of this study are presented in this chapter, which show that caseworkers have a statistically significant effect on the jobseekers' employment rates and future earnings. Following this, I will analyze the size of the effects to determine if being

assigned a successful caseworker has an economic significance. The chapter is concluded with an analysis of which working methods successful caseworkers use.

4.1 Caseworker fixed effects

The jobseekers that are included in the analysis were registered as unemployed in 2002. I determine whether caseworkers have a significant effect on four different outcomes for jobseekers: 1) the probability of being employed in September 2003; 2) the probability of being employed in September 2005; 3) log earnings for 2003; and 4) log wages in September 2003.

I begin by only including unemployed registered at offices that use randomized allocation of clients to caseworkers. In *Table 2*, I present the adjusted R^2-value when specification (1) is estimated with and without the caseworker fixed effects. The model is estimated using OLS. An F-test is also reported, which shows to which extent caseworkers as a group account for the respective outcome variables.

Table 2. Estimates of caseworker fixed effects, offices with random allocation of caseworkers to clients

	Employment Nov. 2003		Employment Nov. 2005		Earnings 2003		Wages Sep. 2003	
Caseworker fixed effects	No	Yes	No	Yes	No	Yes	No	Yes
Observations	11 836	11 836	11 836	11 836	8 270	8 270	2 954	2 954
R-squared adjusted	0.1678	0.2056	0.1344	0.1861	0.0957	0.1337	0.3280	0.3244
F-test on fixed effects for caseworkers		1.590		2.030		1.397		0.974
p-value		0.000		0.000		0.000		0.655

Note: Specification (1) is estimated using the ordinary least square model. Controls for all variables in *Table 1* are included in addition to controls for county of residence, field of education, and length of unemployment. The outcome variable in column 1 is 1 if the individual is employed in November 2003 (0 otherwise); in column 2 the outcome is 1 if the individual has de-registered from PES prior to November 2005 due to a regular job (0 otherwise). Earnings and wages, respectively, denote log earnings during 2003 (only for individuals with earnings>0) and log wages in September 2003 (only for individuals with wages>0).

The results show that caseworkers have a statistically significant effect on earnings and both short and long-term employment rates. Including the caseworker fixed effects in the model results in the adjusted R^2-value increasing by approximately four percentage points; however, no such increase is evident for wages.

Column 1 in *Table 2* shows that caseworkers affect the probability of these individuals being employed in September 2003; the F-test shows that the caseworker

fixed effects are statistically significant. Column 2 shows that caseworkers also affect the jobseekers' probability of being employed in the long-term; the F-test is statistically significant when employment in November 2005 is used as an outcome. The results for earnings a year after being registered at PES are presented in column 3. We can observe that the model's explanatory power increases significantly when the caseworker fixed effects are included. Contrarily, the wages shown in column 4 are not affected by caseworkers. A possible reason to this could be that caseworkers affect primarily employment status and number of working hours. However, it could also be due to the wage effects being estimated from a smaller data set, as information on wages is only available for employees in the public sector and in companies with over 500 employees.

An alternative method for determining caseworkers' significance is to estimate the same specification but include the unemployed at all employment offices. These results are based on the assumption that specification (1) successfully takes into account all the systematic variations between jobseekers with different caseworkers. As before, I am including only unemployed ages 25-65, who are not handicapped or previously registered as unemployed. *Table 3* shows the results.

Table 3. Estimates of caseworker fixed effects, all offices

	Employment Nov. 2003		Employment Nov. 2005		Earnings 2003		Wages Sep. 2003	
Caseworker fixed effects	No	Yes	No	Yes	No	Yes	No	Yes
Observations	33 385	33 385	33 385	33 385	23 482	23 482	8 325	8 325
R-squared adjusted	0.1634	0.1887	0.1390	0.1788	0.1074	0.1321	0.3343	0.3345
F-test on fixed effects for caseworkers		1.491		1.805		1.379		1.000
p-value		0.000		0.000		0.000		0.492

Note: Specification (1) is estimated using the ordinary least square model. Controls for all variables in Table 1 are included in addition to controls for county of residence, field of education, and length of unemployment. The outcome variable in column 1 is 1 if the individual is employed in November 2003 (0 otherwise); in column 2 the outcome is 1 if the individual has de-registered from PES prior to November 2005 due to a regular job (0 otherwise). Earnings and wages, respectively, denote log earnings during 2003 (only for individuals with earnings>0) and log wages in September 2003 (only for individuals with wages>0).

These show a similar pattern; i.e. caseworkers have a significant effect on future employment and earnings, but wages are not affected. Surprisingly, the addition of the caseworker fixed effects leads to a smaller increase of the adjusted R^2-value when all offices are included in the analysis. A potential explanation for this is that the average

number of jobseekers per caseworker is higher when all offices are included. If the number of jobseekers per caseworker is small, a few good or bad clients can have a large effect on the estimated caseworker fixed effects (see Rockoff, 2004).

4.2 Sensitivity analysis

To determine whether the results are robust, I have done more analysis on caseworkers with numerous clients. I have also estimated a more flexible model, as well as studied if caseworkers had a significant effect during other periods of time as well. These results are presented in *Table 4*.

In panel A, only caseworkers with more than 40 clients are included, which reduces the risk of the caseworker fixed effects capturing remaining non-observable differences among the unemployed that belong to different caseworkers. When I exclude caseworkers with few jobseekers, caseworkers as a group explain slightly less of the total variation, but the effects are still significant.

A possible objection to the results could be that the model is not flexible enough to correctly capture any remaining differences between jobseekers with different caseworkers. Therefore, panel B shows the results from specification (1), which has been expanded to include a number of interaction effects. These include interactions between gender and education, age and education, and length of unemployment and age and gender. Using this more flexible form does not affect the conclusion that caseworkers have a significant effect on future employment and earnings.

Another question could be whether these results are valid during other periods, and for other types of jobseekers than those that are included in the data set. Therefore, I have investigated if caseworkers affected the outcomes of their jobseekers who registered in another period. Panel C shows that these caseworkers had a statistically significant effect on the jobseekers that registered at PES during 2001; however, it is not possible to exclude the possibility that the results would be different during other phases in the business cycle. Also, *Table 1* showed that individuals in the study are older and more educated than the unemployed in general; therefore, it is not certain that caseworkers have the same effect on other types of jobseekers. It is, however, not clear why caseworkers would be less important for the long-term unemployed, handicapped, or youths than for the jobseekers in this study.

Table 4. Estimates of caseworker fixed effects, offices with random allocation of caseworkers to clients

		Employment Nov. 2003		Employment Nov. 2005		Earnings 2003	
A.	Caseworker fixed effects	No	Yes	No	Yes	No	Yes
Caseworkers with >40 clients	Observations	5 440	5 440	5 440	5 440	3 780	3 780
	R-squared adjusted	0.1538	0.1710	0.1470	0.1700	0.0840	0.1044
	F-test on fixed effects for caseworkers		2.506		3.116		2.198
	p-value		0.000		0.000		0.000
B.	Caseworker fixed effects	No	Yes	No	Yes	No	Yes
More flexible functional form	Observations	11 836	11 836	11 836	11 836	8 270	8 270
	R-squared adjusted	0.1702	0.2088	0.1434	0.1945	0.0994	0.1379
	F-test on fixed effects for caseworkers		1.578		1.752		1.406
	p-value		0.000		0.000		0.000
C.	Caseworker fixed effects	No	Yes	No	Yes	No	Yes
Other time period (2001)	Observations	10 187	10 187	10 187	10 187	5 648	5 648
	R-squared adjusted	0.1611	0.2202	0.1235	0.1909	0.0920	0.1652
	F-test on fixed effects for caseworkers		1.652		1.717		1.671
	p-value		0.000		0.000		0.000

Note: Specification (1) is estimated using the ordinary least square model. Controls for all variables in *Table 1* are included in addition to controls for county of residence, field of education, and length of unemployment. The outcome variables are binary variables with the value 1 if the jobseeker is employed in November 2003 and November 2005, respectively. In the last column the outcome is log earnings in 2003 (only for individuals with earnings>0). In Panel C, the outcome variables are employment in November 2002, employment in November 2004 and earnings in 2002.

4.3 Do differences between caseworkers matter?

The analysis has so far shown that caseworkers have a statistically significant effect on both the jobseekers' future employment and earnings. An additional question that could be asked is whether these effects are also economically significant. Therefore, I analyze the distribution of caseworker fixed effects: For example, how much more likely is it to find employment within a year if the caseworker belongs to the upper half of the distribution rather than the lower?

Table 5 shows descriptive statistics in the form of the median and the standard deviation for each distribution of caseworker fixed effects that were estimated in (1).[3] One problem when assessing the impact of the effects is that the variation of the estimated caseworker effects also capture random sampling variation and therefore overestimates the true variation in caseworker fixed effects. I take this into account by using a shrinkage estimator that is used, for instance, in Leigh (2010), and explained in Rockoff (2004) and Thompson and Sharp (1999). This results in the adjusted standard deviations which are shown in the table, along with the unadjusted standard deviations. Noteworthy here is that the adjusted standard deviations are approximately 30-45 percent smaller than the unadjusted.

Table 5. Size distribution of caseworker fixed effects

	Median	Adjusted standard deviation	Unadjusted standard deviation
Employment (November 2003)	0.001	0.070	0.113
Employment (November 2005)	0.005	0.094	0.129
Earnings (2003)	0.040	0.206	0.365

Note: The fixed effects are retrieved from the regressions reported in *Table 2*. Column 1 reports the median fixed effect for each outcome variable. Column 2 reports the standard deviation of the fixed effects adjusted for estimation error, whereas column 3 reports the unadjusted standard deviation of the fixed effects.

The unemployed in the data set registered themselves at the PES in 2002. The first outcome measure captures whether the individual is employed in November 2003. The adjusted standard deviation in this case is 0.07; thus, moving one standard deviation up in the distribution of caseworkers results in a 7 percentage points higher probability of

[3] Previous sections showed that caseworkers have no significant impact on wages. Therefore, *Table 5* only reports size distributions of caseworker fixed effects from employment and earnings regressions.

being employed in November 2003. Since 54 percent of individuals were employed at this moment, the effect corresponds to an increase of about 13 percent.

Caseworkers also have an economically significant effect on employment rates in the long-term: the probability of the individual being de-registered from the PES by November 2005 due to having found regular employment is 9 percentage points (equivalent to 14 percent) higher if the caseworker is situated one standard deviation higher in the distribution. When it comes to earnings for 2003, we can observe that unemployed with caseworkers that are situated one standard deviation higher up in the distribution have approximately 20 percent higher earnings for the year.

4.4 What distinguishes successful caseworkers?

As shown, caseworkers have a significant effect on the future employment rates and earnings of jobseekers, but why are some caseworkers more successful than others? By analyzing how caseworkers worked with the clients in the data set, we can get an indication for the answer. The PES has information on which programs each jobseeker participated in. Additionally, information on the geographical search area and the amount of jobs that the caseworker assigned to their client is also included. The first column in *Table 6* provides descriptive statistics for unemployed sample individuals who are registered at offices that allocate caseworkers randomly, while the second column includes unemployed sample individuals at all offices.

Table 6. Descriptive statistics of caseworkers' working strategies

	Offices with random allocation	All offices
Program assignments:		
Classroom training services	0.136	0.124
	(0.247)	(0.231)
Labor market training	*0.086*	*0.080*
	(0.194)	*(0.181)*
Computer / activity centers	*0.034*	*0.032*
	(0.127)	*(0.114)*
Activities within Counseling Guidance and Placement Service	*0.043*	*0.037*
	(0.154)	*(0.139)*
Wage and employment subsidies	0.075	0.072
	(0.183)	(0.172)
Employability Rehabilitation Program	*0.013*	*0.011*
	(0.084)	*(0.069)*
Work experience scheme	*0.061*	*0.061*
	(0.165)	*(0.156)*
Projects with Employment Policy Orientation	*0.009*	*0.009*
	(0.063)	*(0.069)*
Self-employment services	0.020	0.017
	(0.091)	(0.083)
Self-employment grants	*0.020*	*0.017*
	(0.091)	*(0.083)*
Job Assignments:		
Applying for work outside the close vicinity of home	0.080	0.091
	(0.173)	(0.188)
Number of job assignments	0.498	0.520
	(1.259)	(1.190)
Number of jobseekers	11 836	33 385
Number of caseworkers	990	2 155
Number of offices	69	244

Note: Descriptive statistics of all unemployed ages 25-65 who registered at PES in 2002 but have not previously registered as unemployed. Column 1 includes only jobseekers with these characteristics registered at offices that randomly allocate caseworkers to clients. Column 2 includes jobseekers with these characteristics at all offices. Standard deviations in parentheses.

In order to simplify the results, I have divided the policy programs into three categories according to what can be considered an international standard (Heckman et al, 1999). The programs are arranged in the table according to the amount of training included.[4]

Column 1 shows that approximately 14 percent of the unemployed in the study participated in programs with a focus on classroom training services, while around 8 percent participated in programs with wage and employment subsidies and 2 percent received funding to start their own companies. Most jobseekers search for employment in their local region. The amount of assigned jobs was very low – on average only 0.5.

[4] Carling and Richardson (2004) describe the programs in more detail.

Noteworthy here is that there are no significant differences in working methods between offices where caseworkers are allocated randomly and those that do so systematically.

The standard deviations indicate that working methods vary greatly between caseworkers. A closer look indicates that one in four caseworkers sends one fourth of their clients to programs consisting of classroom training, while the same fraction of caseworkers assign none of their clients to these programs. The existence of large differences in working methods could be an explanation why some caseworkers appear to be more successful than others. Therefore, I study if there is a link between caseworkers' working methods and their success.[5] The following link is estimated:

$$\hat{\tau}_c = \mathrm{f}(\mathrm{S}_c) + \varepsilon_c \ , \qquad (2)$$

where $\hat{\tau}$ is the predicted caseworker fixed effects from (1) for caseworker *c*, *S* is the caseworker's working methods (such as the number of allocated jobs), and ε is a residual that captures all the remaining factors that affect the caseworker fixed effects.

Giving the results of the estimation of (2) a causal interpretation is dubious. Caseworkers affect their clients in several ways, of which only a few can be observed in the data. For example, caseworkers could improve their clients' chances of finding work by both assigning them to a program and by motivating them to search more intensively. If caseworkers who are proficient at motivating also assign many of their clients to programs, specification (2) has to take into account differences in caseworker motivation skills in order to not attribute the effect solely to the programs.

A potential method to mitigate this problem is to utilize information on how caseworkers have worked with *other* jobseekers during *earlier* time periods, and then analyze the correlation between these caseworker specific time-invariant strategies and the estimated caseworker fixed effects from *Table 2*.[6]

The first step is to estimate how inclined each caseworker has been to try different work strategies during earlier years. I use data from 2001 and estimate – for each observable work strategy – the following model by OLS:

$$S_{ico,2001} = \lambda_0 + X_{i,2001}\theta + \pi_{co,2001} + \upsilon_{ico,2001} \ , \qquad (3)$$

[5] Unfortunately, the data has no information on caseworker characteristics, such as qualifications and experience.
[6] A similar kind of identification strategy is used by Frölich and Lechner (2004) to estimate the importance of caseworkers and by Sweetman et al (2003) to investigate the effect of receiving disability insurance.

where $S_{ico,2001}$ is a binary variable with the value 1 if the individual *i* with caseworker *c* at office *o* used the strategy in 2001; $X_{i,2001}$ is the same vector with the personal characteristics that were used earlier in the analysis and v is a residual that captures all remaining factors that affect the probability of the individual participating in the strategy. The caseworker fixed effects, $\pi_{co,2001}$, capture the differences between caseworkers' strategy preferences. *Table 7* shows to what extent these caseworker fixed effects can predict which measures jobseekers at the PES participate in.

Table 7. Linear probability models of working strategies

	F-test (caseworkers)	p-value
Program assignments:		
Classroom training services	3.310	0.00
Wage and employment subsidies	2.511	0.00
Self-employment services	3.901	0.00
Job assignments:		
Applying for work outside the close vicinity of home	1.224	0.00
Number of job assignments	1.220	0.00
Number of jobseekers	10 187	
Number of caseworkers	1 173	
Number of offices	69	

Note: The outcome variables are the probabilities of participating in the programs and the number of job assignments. Controls for caseworker fixed effects and a vector of all variables in Section 3 are included. The individuals are all unemployed ages 25-60 who registered at PES in 2001 but have not previously registered as unemployed. Only offices that randomly allocate caseworkers to clients are included.

Table 7 shows that the caseworker fixed effects have a significant effect on the probability of participating in various types of programs and the probability of being assigned to an expanded search, as well as the amount of jobs assigned. However, it should be stressed that the effects are not large; caseworkers can only account for a small part of the total variation in work strategies.

With the help of caseworker fixed effects from (3), I will now predict the probability of participating in each strategy. In other words: To what degree is the probability of participating in a measure influenced by the caseworker that the client was randomly assigned to? Following this, I will study the link between a caseworker's success – measured as caseworker fixed effects from (1) – and their inclination to use each strategy.[7] Therefore, I estimate specification (4) by OLS and present the results in *Table 8*.

[7] Since the first step equation uses individuals in the previous year, only individuals with caseworkers working in both years are used in the analysis.

$$\hat{\tau}_c = \mathrm{f}\left(\hat{\mathrm{S}}_c\right) + \varepsilon_c, \quad (4)$$

Table 8. Ordinary Least Squares estimates of the caseworker fixed effects

	Estimated caseworker fixed effects from		
	Employment Nov. 2003	Employment Nov. 2005	Earnings 2003
Program assignments (ref. no program assignment)			
Classroom training services	-0.181***	-0.177***	-0.657***
	(0.038)	(0.036)	(0.113)
Wage and employment subsidies	-0.044	-0.245***	0.083
	(0.045)	(0.044)	(0.142)
Self-employment services	-0.013	-0.026	0.086
	(0.079)	(0.078)	(0.240)
Job assignments:			
Applying for work outside the close vicinity	-0.075	-0.022	-0.129
of home	(0.063)	(0.062)	(0.198)
Number of job assignments	0.001	0.003	-0.007
	(0.005)	(0.005)	(0.015)
Number of observations	819	819	761
R-squared	0.045	0.102	0.051

Note: Specification (4) estimated using the ordinary least square model. The dependent variables in the columns are the predicted caseworkers fixed effects from (1). The explanatory variables are the predicted working strategies using only the caseworker vector from equation (3). Robust standard errors in parentheses. * Significant at 10%; ** significant at 5%; *** significant at 1%.

Table 8 shows that the caseworker who send their clients to classroom training services are less successful than those that do not assign to programs but choose instead to support and help their clients in their search for employment. The effect is significant in both the short and long-term employment rates, as well as for earnings one year after registering at the PES. The results are, however, not statistically significant for the other strategies.

These results agree with several previous evaluations of program effects (see Carling and Richardson, 2004, for an overview). Many evaluations of classroom training programs find insignificant or significantly negative effects. Calmfors et al (2001) summarize the literature and conclude that classroom training programs in the 1990s did not improve the participants' chances of finding employment, whereas some forms of subsidized employment seem to have had positive effects. However, it is important to note that a causal interpretation of the results in *Table 8* is based on strong assumptions and that the results therefore should be interpreted carefully. It must be the case that

unobservable time-invariant caseworker strategies do not affect the jobseekers' chances of finding work *or* that these are uncorrelated with observable constant working strategies.

5 Conclusions

Caseworkers at the Employment Service are often considered key in helping jobseekers to find appropriate employment. I base the analysis on individuals who registered as unemployed in 2002, and investigate if caseworkers have a significant effect of these jobseekers' future employment rates, earnings, and wages. To take into account that the average characteristics of the unemployed can vary between caseworkers, I use information from offices that randomly allocate caseworkers to clients, and include detailed controls in a regression framework. The study finds that caseworkers have a clear effect on the jobseekers' future employment rates and earnings; about 2-5 percent of the variation in employment status and earnings one year after being registered at the Employment Service is determined by which caseworker the jobseeker is assigned to. The effects are also relevant in terms of size: unemployed with a caseworker who is situated one standard deviation higher in the distribution has, after approximately one year, a thirteen percent higher chance of being employed and twenty percent higher earnings. However, the data does not show any effects on wages.

Understanding why caseworkers matter is harder since only few working strategies can be observed in the data. Interviews show that caseworkers find themselves with a discretionary power to decide how to work with their clients, which is supported in the data showing a large variation across caseworkers in the way they provide placement services and assign clients to programs. The results show that caseworkers who assign their clients to classroom training programs tend to not be as successful as those who concentrate on supporting their clients in the actual process of searching for work.

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