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09:2009 WORKING PAPER

THE EFFECT OF PERFORMANCE RELATED PAY IN EMPLOYMENT SERVICES

ON EMPLOYMENT OUTCOME FOR LONG TERM WELFARE CLAIMANTS

RESEARCH DEPARTMENT OF EMPLOYMENT AND INTEGRATION

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EMPLOYMENT AND INTEGRATION
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Abstract

This paper investigates the effects of performance-related pay (PRP) in Danish local employment administration on unemployed social clients' employment outcomes. PRP implies here that employees in the employment administration are rewarded each time a social client gets a job. There are different schemes involved in the programme – schemes with collective payoffs and schemes with private payoffs and schemes with monetary payoffs and non-monetary payoffs, such as training activities. The main conclusion is that PRP seems to promote employment chances of social clients. Especially it seems that PRP schemes with collective monetary payoffs have a positive effect. Furthermore it seems that the PRP schemes are most productive for social clients with relatively high prior employment opportunities. A skimming effect does not seem to occur. This seems to indicate that the PRP schemes increases productivity of the local employment administrations.

Introduction

Crumbling workforces throughout Europe have induced policy makers to make efforts to increase efficiency of different policy measures. One effort has been to try to make job search among long term unemployed more efficient. Many policy instruments are at play: active labour market measures, cuts in entitlements periods and benefit levels and job search assistance. Most measures are aimed directly at the unemployed or out of work individuals. Few programs are aimed at case workers.

The aim of this paper is to analyse the effects of such a policy measure, namely performance related pay (PRP) in employment administration among case workers.

One of the main the tasks of the Danish municipalities' employment administrations (local Job Centres) is to bring unemployed recipients of social assistance (social clients) into employment. It has proved difficult in spite of the low unemployment rate in Denmark. The work in the Job Centre is performed by different kinds of social workers. In their efforts to bring social clients into employment the social workers may use the following instruments: Different kinds of counselling, treatment and activation (training or job-training in projects or ordinary work places) inside or outside The Job Centre. The may also refer clients to concrete jobs.

During recent decades performance-related pay (PRP) has internationally become more widespread both in business companies and in the public sector where New Public Management has emphasized the use of economic incentives and Management by Objectives (OECD 2005). In Denmark, the reform "New Wage" from 1997 pawed the way for PRP in the public sector.

In this paper PRP is defined as a system where part of the pay for an individual or a group depends on measured output according to a predetermined scheme. For social workers in local employment administration the output is that a social client gets a job. A few municipalities in Denmark have practiced such payment systems for their social workers for some years. Recently PRP was introduced on a much larger scale in the 2-year period from July 2006 to June 2008 as part of a comprehensive programme to bring social clients into employment.

The target group for this programme, labelled "A New Chance", was about 62,000 long-term recipients of social assistance. Government allocated funds reserved for PRP to social workers who

could be given an extra reward every time a person in the target group went into employment for at least 13 weeks. The reward was 1000 DKK (about 134 EURO). It was voluntary for the Job Centres to introduce PRP. If a Job Centre wanted to get some of the money allocated to PRP, the Job Centre would have to make a collective agreement on PRP with the local union for social workers and subsequently inform The Ministry of Employment. 37 of the total of 98 municipalities introduced PRP for their social workers. The PRP related component typically amounted to less that 5 per cent of a social case worker's wage.

In the paper we use hazard rate models to compare employment chances for social clients in the target group in municipalities with and without PRP in the 2-year period July 2006 – June 2008. The data are from administrative registers where all social clients are registered. We control for different characteristics of the clients (e.g. gender, age, previous unemployment, ethnic origin) and local labour market (rate of unemployment). To control for unobserved differences between employment administrations with and without PRP we compare PRP and non-PRP employment administrations two years prior to the implementation of the PRP scheme. In this period we found no significant difference between the two categories of employment administrations with respect to employment chances of their social clients. For the post implementation period of PRP (July 2006 – June 2008) we find that social clients under employment administrations with PRP had better employment chances than social clients under administrations without PRP. As we have controlled for observed characteristics of the social clients and that we did not find any prior differences across administrations that later introduced/ not introduced PRP we interpret this as a causal effect of PRP.

The relevance of the paper stems, among others things, from the fact that despite a comprehensive economic, sociological and psychological literature on work incentives and motivation relatively few empirical investigations on the impact of PRP on employee performance have been undertaken. In particular little research exists on the impact of PRP for professionals in public administration (OECD, 2005) and we know of no systematic investigations on the impact of PRP on employment policy outcomes.

Classical principal agent theory predicts that PRP may increase workers' performance (Milgrom & Roberts, 1992; Gibbons, 1998): Under certain conditions the optimal contract will be a contract where the wage paid consists of a fixed component plus a performance related element. This thesis is to some extent supported by empirical research: In his review Prendergast (1999) mentions eight investigations showing "considerable effects of compensation on performance". The investigations include workers with relatively simple tasks (e.g. Lazear, 2000). For employees with more complex tasks such as professional social case workers one could argue according to Frey (Frey, 1997; Frey & Jegen, 2001) that things are not that simple: PRP might crowd out intrinsic motivation and therefore PRP will not necessarily lead to better performance. Overall our results are more in line with the principal agent argument than with Frey's.

Data

The data used in the study are provided by the Danish National Labour Market Authority (AMS) under the Ministry of Employment. The target group of the New Chance programme includes all individuals who have received at least one week of passive social assistance within the New Chance-period, week 25 2006-week 26 2008, and who have been receiving passive benefits for at

least one year prior to this week[1]. The target group thereby consists of both persons who initially fulfilled the criteria, that is in week 25 2006, and persons who came to fulfil the criteria during the period. During the period, a total of 61,967 persons aged 18-64 upon entrance have been included in the target group.

To obtain background information about the individuals in the target group, the data has been merged with the DREAM-register, also provided by AMS[2]. From the DREAM-register it is possible to divide the target group into persons who are assessed to be: (i) ready for the labour market and (ii) not ready for the labour market. This assessment of the persons' degree of employability is made by the Job Centre[3].

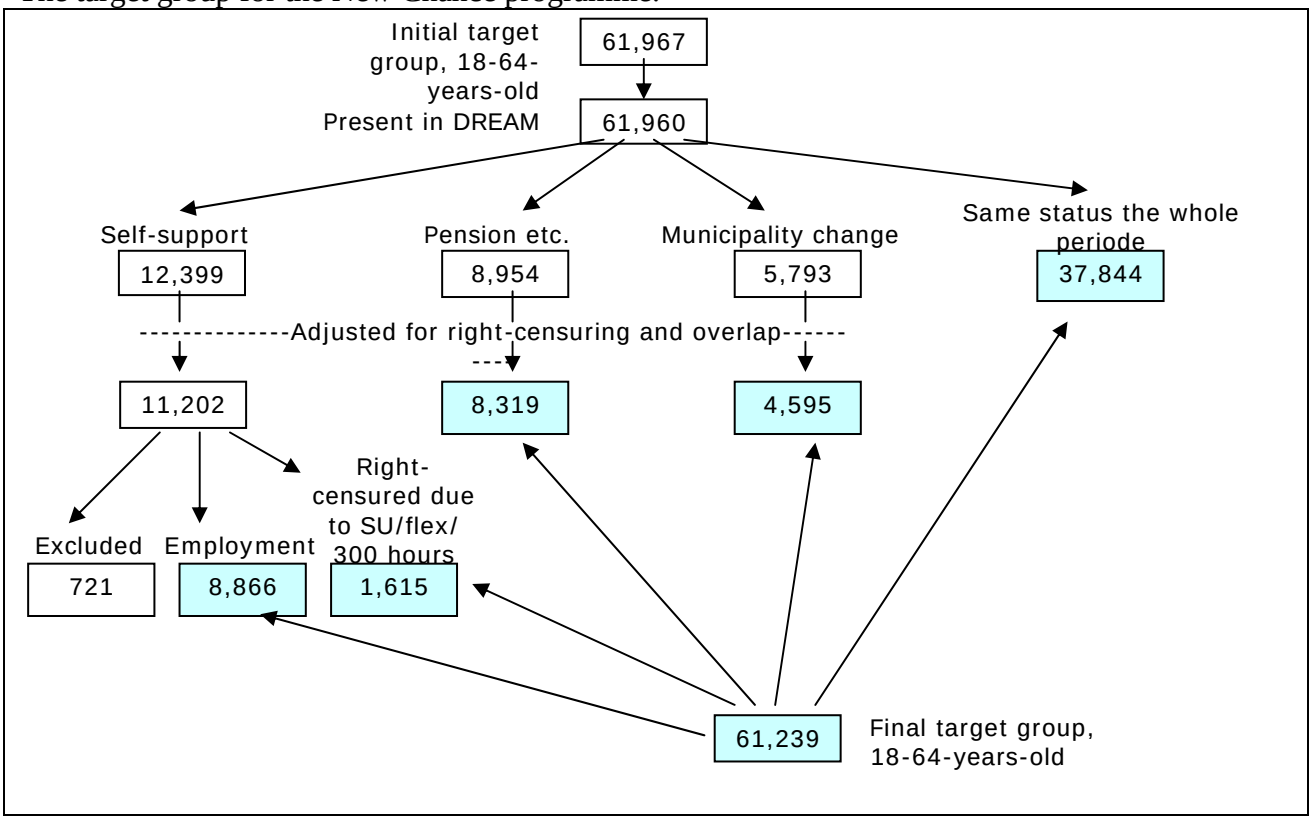
The data on the target group includes information on whether the person has become self-supporting, and when, during the New Chance-period. According to AMS, a person is defined as having become self-supporting the 13th week of maximum 15 weeks that the person

(i) does not receive any social benefits (hereby assuming that the person has went into employment), or
(ii) is employed in a flex job (a permanent wage subsidized job), or
(iii) receives State Educational Support (SU) (ordinary education).

Since we are only interested in "real" employment, persons who fulfil (ii) or (iii) are right-censored as well as persons who do not receive social assistance due to the "300 hours rule"[4]. Furthermore, persons are right-censured if they: i) start receiving early or regular retirement pension, emigrate, or die; ii) change municipality (place of residence). Persons who do not get their unemployment spell terminated due to one of above mentioned reasons, are right-censored when the New Chance period ends. Figure 1 gives an overview:

[1] One year is technically defined as at least 65 weeks out of 69 weeks with passive benefits. By "passive" benefit is understood social assistance (money) without any kind of active measures such as training, job-training or participation is so-called public employment projects for social clients.
[2] Seven persons from the target group were not present in the DREAM-register, and they are therefore eliminated from the analysis.
[3] Every social client in contact with the Job Centre has to be placed in a so-called match-category expressing the person's immediate degree of employability. The assessment is made by the Job Centre and it may change over time. There are five match-categories: 1, 2, 3, 4 and 5. No. 1-3 (persons "ready for the labour market") include, in principle, persons assessed to be available for the labour market in the traditional ILO sense. Persons assessed to be in match-categories 4 or 5 are labelled "not ready for the labour market". They may have different kinds of social, health or personal problems. Danish employment policy is targeted all match-categories. The aim is to bring all people out of work and receiving some kind of monetary unemployment compensation into employment. In our study we have used information on the person's match-category upon entrance to the target group for the New Chance programme. If such category does not exist, the first stated match category is used. For 2,084 persons we have no information on match-category.
[4] Affecting 700 persons whose social assistance has been stopped for administrative reasons. Persons, who have become self-supporting according to AMS but whose type of self-support we cannot determine, are excluded from the analyses (721 persons).

Figure 1:
The target group for the New Chance programme.



Note: See Appendix for more information on data.

In addition to the information about the target group, AMS has provided information on which municipalities that have entered a performance-related pay-agreement (PRP) as well as the time of entrance. A total of 37 municipalities out of 98 have entered PRP during the New Chance period. From interviewing the Job Centres with PRP, we have obtained information about the different types of PRP schemes in the municipalities.

Table 1.
PRP by type.

		Type of payment				Total
		Monetary	Non-monetary	Combination	Unknown	
"Cove-rage"	Individual	2 (1,361)				2 (1,361)
	Collective	22 (26,867)	8 (3,912)	1 (888)		31 (31,667)
	Combination	2 (1,105)				2 (1,105)
	Unknown		1 (495)		1 (411)	2 (906)
Total		26 (29,333)	9 (4,407)	1 (888)	1 (411)	37 (35,039)

Note: Number of persons affected by PRP in parentheses.

Table 2.
Descriptive statistics. The target group for the New Chance programme.

	Claimants, total	Distribution, per cent	Exit into self-support, per cent
Gender			
Female	34,605	55.85	14.65
Male	27,355	44.15	16.51
Match-category			
1. Claimants with top employment prospects	2,459	3.97	45.67
2. Claimants with second best employment prospects	3,497	5.64	37.37
3. Claimants with third best employment prospects	7,156	11.55	24.76
4. Claimants with fourth best employment prospects	30,714	49.57	11.22
5. Claimants with worst employment prospects	15,026	24.25	4.98
Claimant with no assessment	1,024	1.65	32.03
Unknown	2,084	3.36	41.36
Age			
18-25-year-old	8,570	13.83	20.77
26-35-year-old	17,418	28.11	19.42
36-45-year-old	19,517	31.50	14.87
46-55-year-old	12,042	19.44	9.67
56-64-year-old	4,413	7.12	8.09
Ethnic origin			
Danish	40,289	65.02	15.80
Western immigrants	1,913	3.09	16.31
Descendents of Western immigrants	288	0.46	15.28
Non-Western immigrants	18,877	30.47	14.44
Descendents of non-Western immigrants	593	0.96	23.95
Previous public support (income transfer)			
Less than 1½ year on public support.	3,486	5.63	20.85
1½-3 years on public support	10,507	16.96	21.76
3-5 year on public support	47,967	77.42	13.71
Total	61,960		15.47

In table 2 above we show some descriptive statistics from the data on the target group.

In addition to the above mentioned data sources, we have also made use of various register data from Statistics Denmark and other registers provided by AMS. As an indicator of the local labour market situation we use the variable “local unemployment rate in the municipality”. It is constructed as the total number of recipients of unemployment benefit as well as social assistance,

both passive and active, divided by all employed persons plus the total number of these recipients. This number does not correspond to the ordinary rate of unemployment but is considered more relevant in the present context.

Results

In this section we present estimations results from cox-regression models for the duration until exit out of welfare dependency for benefit claimants in the target group. Our response variable is thus a binary indicator variable indicating whether the individual has left welfare dependency while in the target group of "New Chance", and the exit is dependent on duration in the target group, a number of covariates and whether the claimant live in a municipality with PRP or not in the local Job Centre. The spell length is the duration of stay in the target group. This opens up for initial conditions problems. Both in terms of left-censoring of spells as a welfare claimant as this spell might have initiated before entering into the target group and because even in the absence of left censoring claimants may have very different previous unemployment histories. We return to this issue below.

We present several types of estimates. First we are concerned with possible selection bias of municipalities into PRP. One could expect two types of selection bias. First, one could imagine that municipalities with very efficient Job Centres are more likely to adopt new types of administration, including PRP. Hence a high exit rate of claimants in municipalities with PRP could reflect that Job Centres in these municipalities generally are more efficient - rather than a causal effect of PRP itself. On the other hand one could imagine that municipalities with large and persistent problems with long-term benefits claimants would be more prone to find alternative ways to get their claimants into employment. In this case we could expect PRP Job Centres to perform worse than non-PRP centres. Not because of a negative causal effect of PRP, but because municipalities with PRP would have, on average, benefit claimants with lower employment prospects. Whether either hypothesis is correct is of course an empirical matter. We therefore present cox-regressions of exit rates of claimants for non-PRP and PRP municipalities *before* PRP was implemented. These results are shown in table 3.

In the first column we show results for all claimants. As the introduction of PRP might give case-workers incentives to focus on claimants with good employment prospects we also show in the following, results by claimant's characteristics. More specifically we split the results according to a prior measure of the "employability" of the claimant. This measure is assessed by the caseworkers when the claimants enter the benefit system and basically summarizes the claimant's labour market qualifications (education, experience and abilities), cf. above and note 4 on match-categories.

From the table we find that prior to introducing the PRP there are no differences in the exit rates between claimants living in the future PRP municipalities and claimants that does not, as the odds ratio between PRP and non-PRP municipalities is close to and not significantly different from one. This result is consistent across all types of claimants. Hence, there is no indication that average behaviour and performance in Job Centres in future PRP municipalities are different form non-PRP municipalities prior to the implementation to PRP.

Table 3.
Pre PRP hazard rates in municipalities that later became PRP and non-PRP municipalities. Target group", 2004-2006 - Hazard rates, standard deviation and significance level.

	All			Ready for the labour market incl. unknown			Not ready for the labour market		
"PRP"	0.988	(0.022)		1.008	(0.026)		1.023	(0.045)	
"Non-PRP"									
Male	1.494	(0.021)	***	1.473	(0.024)	***	2.033	(0.045)	***
Female									
18-25-year-old	0.946	(0.029)	*	0.891	(0.033)	***	1.129	(0.063)	*
26-35-year-old									
36-45-year-old	0.786	(0.026)	***	0.937	(0.030)	**	0.717	(0.054)	***
46-55-year-old	0.564	(0.035)	***	0.748	(0.041)	***	0.521	(0.071)	***
56-64-year-old	0.436	(0.064)	***	0.556	(0.075)	***	0.438	(0.124)	***
Danish decent									
Western immigrants	1.080	(0.059)		1.036	(0.066)		0.953	(0.132)	
Descendents of									
Western immigrant	1.116	(0.135)		1.077	(0.144)		0.574	(0.409)	
Non-Western									
immigrants	0.833	(0.025)	***	0.849	(0.028)	***	0.711	(0.054)	***
Descendants of non-									
Western immigrant	1.136	(0.092)		0.943	(0.106)		1.391	(0.186)	*
Weeks with prior									
public transfers	0.993	(0.000)	***	0.994	(0.000)	***	0.994	(0.000)	***
< 30,000 inhabitants									
30,-50,000 inhabitants	1.078	(0.042)	*	1.080	(0.048)		1.053	(0.092)	
50-100,000									
inhabitants	0.962	(0.042)		1.051	(0.048)		0.958	(0.090)	
> 100,000 inhabitants	0.870	(0.045)	***	1.030	(0.053)		0.894	(0.096)	
Local unemployment									
rate	0.977	(0.004)	***	0.977	(0.005)	***	0.962	(0.009)	***
Number of claimants		82,930			35,060			47,870	

Note: Level of significance: * 0.10, ** 0.05, ***0.01.

In the regressions in table 3 and in the following regressions we include a number of covariates. As claimants may have very different previous unemployment histories, we also condition on the accumulated length of previous spell as unemployed or as a welfare claimant (not necessarily immediately prior to the present spell as a claimant). This is obviously an endogenous variable and its effect on the estimates in the model is unclear. Hence the inclusion of covariates has two potential effects. First is might increase efficiency of the estimates of the effect of PRP and second the inclusion of covariates might increase bias in the estimates of the effect of PRP. To test this we have also carried out similar regression without accumulated length of previous spell as unemployed or as a welfare claimant as a covariate. Generally we find that there is not a big difference between the two sets of estimates, but the estimates without accumulated length of previous spell as unemployed yields a somewhat higher effect of PRP.

Not all municipalities joined the PRP when it was initially introduced. Hence in our data we have two types of PRP municipalities – those who joined PRP when it was introduced and latecomers,

which adopted PRP after some time. In order to assess whether there is selection into PRP according to whether the municipality joined initially or is a late comer into PRP we show results in table 4 with dummy variables indicating whether the municipality was in PRP initially or whether it was a latecomer. In order to compare the exit rates for claimants before and after introduction of PRP we identify claimants with the same unemployment characteristics before introduction of PRP as those in the target group after introduction of PRP.

Table 4.
Pre PRP hazard rates in PRP and non-PRP municipalities by early and late entrants into PRP. Hazard rates, standard deviation and significance level.

	All			Ready for the labour market incl. unknown			Not ready for the labour market		
”PRP – initially”	0.978	(0.026)		1.070	(0.031)	**	1.082	(0.052)	
”PRP – later”	0.998	(0.026)		0.958	(0.030)		0.958	(0.055)	
”Non-PRP”									
Male	1.494	(0.021)	***	1.474	(0.024)	***	2.034	(0.045)	***
Female									
18-25 year-olds	0.945	(0.029)	*	0.891	(0.033)	***	1.130	(0.063)	*
26-35 year-olds									
36-45 year-olds	0.786	(0.026)	***	0.937	(0.030)	**	0.717	(0.054)	***
46-55 year-olds	0.564	(0.035)	***	0.747	(0.041)	***	0.522	(0.071)	***
56-64 year-olds	0,436	(0.064)	***	0.557	(0.075)	***	0.440	(0.124)	***
Danish descent	1.080	(0.059)		1.035	(0.066)		0.955	(0.132)	
Western immigrants									
Descendants of Western immigrant	1.115	(0.135)		1.085	(0.144)		0.578	(0.409)	
Non-Western immigrants	0.833	(0.025)	***	0.847	(0.028)	***	0.709	(0.054)	***
Desecendants of non-Western immigrant	1.135	(0.092)		0.945	(0.106)		1.395	(0.186)	*
Weeks with prior public transfers	0.993	(0.000)	***	0.994	(0.000)	***	0.994	(0.000)	***
< 30,000 inhabitants									
30,-50,000 inhabitants	1.079	(0.042)	*	1.075	(0.048)		1.041	(0.092)	
50,-100,000 inhabitants	0.960	(0.042)		1.060	(0.048)		0.971	(0.090)	
> 100,000 inhabitants	0.870	(0.045)	***	1.031	(0.052)		0.892	(0.096)	
Local unemployment rate	0.976	(0.004)	***	0.980	(0.005)	***	0.966	(0.009)	***
Number of claimants		82,930			35,060			47,870	

Note: Level of significance: * 0.10, ** 0.05, ***0.01.

In table 5 we show an overall assessment of the effect of PRP.

Table 5.
Hazard rates by PRP and non-PRP municipalities. Hazard rates, standard deviation and significance level.

	All	Ready for the labour market, incl. unknown	Not ready for the labour market
PRP Job Centre	1.059 (0.022) ***	1.156 (0.029) ***	1.095 (0.034) ***
Non-PRP Job Centre			
Number of claimants	61,239	15,822	45,417

Note: Level of significance: * 0.10, ** 0.05, ***0.01.

From the table we find that both for claimants with god and bad employment prospects there is a significant and sizeable effect of being covered by the PRP scheme. For both groups we find the effect to be in range of a 5 – 15 percent increase in the odds of exiting the benefit system. The somewhat odd finding that the average effect for both groups combined is lower than the separate estimates is due to the fact that claimants with good employment prospects have shorter durations until exits compared to claimants with bad employment prospects. Hence, when we look at average exit rates we average effects for high exit rates and effect for low exit rates the result is overall low exit rate. Anyhow, the separate analysis shows that PRP municipalities perform between 10-15 percent better in terms of the odds of exiting out of welfare dependency.

In table 6 we show the effect of PRP conditioned on a number of covariates. As there are no differences between claimants in PRP and non-PRP municipalities we do not expect the estimates of the effects of PRP conditioned on covariates to be different from the non-conditioned.

As it can be seen from table 6 there is no significant difference in the effect of PRP compared to the results in table 5 where we did not condition on covariates. Actually we do neither obtain smaller standard errors on the effect of PRP – so condition on covariates do not have any impact on our assessment of the effect of PRP.

Fundamentally individuals can exit out the target group into employment, full time education, permanent pensions and out of labour force. In the above analysis we have treated all exits alike. Obviously exits into employment are of primary concern in this analysis and most of the exit is in fact into employment, while a small minority of exits is into full time education or out of the labour force. To assess how much our results are affected by mixing exit states we have carried out some further analysis in the appendix. Due to limitations in our data we cannot in our data distinguish between exit to employment and exit out of the labour force. We can however, observe exit to full time education and exit to permanent pensions. In the appendix we have carried out cox-regression similar to those presented in table 4, but right censored all exits to permanent pensions and full time education and where the data is furthermore restricted to males and females in the age group 25-50 as these groups are very unlikely to exit out of the labour force. For both sexes we find that estimates on the restricted sample are very similar to those obtained from the entire sample and we there fore conclude that our findings on the effects of PRP relates to transitions into employment.

There are differences across municipalities in respect to how the PRP schemes are organized. In some municipalities the pay offs are individual and in some municipalities they are collective in the sense that a group of case workers share the pay off. There are also differences in the nature of the

pay off. In some municipalities the pay of is in monetary terms and in some municipalities the pay off is in terms of on the job-training or departmental courses.

Table 6.
Hazard rates by individual characteristics (creaming). Hazard rates, standard deviation and significance level.

	All match categories			Ready for the labour market, incl. unknown			Not ready for the labour market		
PRP Job Centre	1.137	(0.023)	***	1.189	(0.031)	***	1.141	(0.035)	***
Non-PRP Job Centre									
Male	1.306	(0.022)	***	1.399	(0.030)	***	1.491	(0.033)	***
Female									
18-25 year-olds	0.864	(0.033)	***	0.856	(0.042)	***	0.802	(0.055)	***
26-35 year-olds									
36-45 year-olds	0.745	(0.026)	***	0.930	(0.036)	**	0.713	(0.039)	***
46-55 year-olds	0.463	(0.036)	***	0.759	(0.050)	***	0.431	(0.052)	***
56-64 year-olds	0.398	(0.058)	***	0.566	(0.088)	***	0.439	(0.078)	***
Danish descent									
Western immigrants	1.248	(0.060)	***	1.117	(0.080)		1.187	(0.092)	*
Descendants of Western immigrant	0.983	(0.153)		0.866	(0.209)		1.061	(0.225)	
Non-Western immigrants	1.050	(0.024)	**	0.926	(0.032)	**	0.977	(0.037)	
Desecendants of non-Western immigrant	1.130	(0.090)		0.913	(0.116)		1.176	(0.145)	
Weeks with prior public transfers	0.994	(0.000)	***	0.997	(0.000)	***	0.995	(0.000)	***
< 30,000 inhabitants									
30, -50,000 inhabitants	0.798	(0,041)	***	0.796	(0.050)	***	0.934	(0.071)	
50,-100,000 inhabitants	0.693	(0,041)	***	0.753	(0.051)	***	0.834	(0.071)	**
> 100,000 inhabitants	0.575	(0,044)	***	0.748	(0.058)	***	0.758	(0.074)	***
Local unemployment rate	0.985	(0,007)	**	0.955	(0.009)	***	0.984	(0.010)	
Number of claimants		61,239			15,822			45,417	

Note: Level of significance: * 0.10, ** 0.05, ***0.01.

In table 7 we show the effect of PRP by whether the pay off is monetary or not and whether it is private or collective. A small fraction of schemes are impossible to categorize by whether it is monetary or not nor whether it is collective or not. These schemes are there indicated by a separate dummy indicator variable.

Table 7.
Hazard by type of PRP, only for PRP municipalities. Hazard rates, standard deviation and significance level.

	All match categories			Ready for the labour market incl. unknown			Not ready for the labour market		
Monetary agreement	1.159	(0.040)	***	1.173	(0.054)	***	1.084	(0.062)	**
Collective agreement	1.037	(0.039)	**	1.090	(0.052)	*	1.076	(0.061)	
Mixed agreement	0.831	(0.095)	*	0.851	(0.129)	*	0.938	(0.141)	
Male	1.306	(0.022)	***	1.397	(0.030)	***	1.492	(0.033)	***
Female									
18-25 year-olds	0.863	(0.033)	***	0.855	(0.042)	***	0.801	(0.055)	***
26-35 year-olds									
36-45 year-olds	0.746	(0.026)	***	0.930	(0.036)	**	0.714	(0.039)	***
46-55 year-olds	0.463	(0.036)	***	0.759	(0.050)	***	0.431	(0.052)	***
56-64 year-olds	0.398	(0.058)	***	0.564	(0.088)	***	0.438	(0.078)	***
Danish descent									
Western immigrants	0.979	(0.081)	**	1.114	(0.080)		1.188	(0.092)	**
Descendants of Western immigrant	1.249	(0.197)		0.859	(0.209)		1.061	(0.225)	
Non-Western immigrants	1.052	(0.031)		0.926	(0.032)	**	0.979	(0.037)	
Descendants of non-Western immigrant	1.135	(0.105)		0.913	(0.116)		1.182	(0.145)	
Weeks with prior public transfers	0.994	(0.000)	***	0.997	(0.000)	***	0.995	(0.000)	***
< 30,000 inhabitants									
30,-50,000 inhabitants	0.797	(0.064)	***	0.797	(0.051)	***	0.935	(0.072)	
50,-100,000 inhabitants	0.666	(0.068)	***	0.728	(0.053)	***	0.819	(0.074)	**
> 100,000 inhabitants	0.550	(0.073)	***	0.707	(0.061)	***	0.745	(0.076)	***
Local unemployment rate	0.982	(0.012)		0.954	(0.009)	***	0.981	(0.010)	***
Number of claimants		37,014			8,802			28,212	

Note: Level of significance: * 0.10, ** 0.05, ***0.01.

From the table we find that overall the monetary schemes has more effect than the non-monetary schemes. There also seems to be a small effect of collective schemes is compared to private schemes. The reason for this could be spill over effects in the teams of case-workers.

The effects of the different schemes are largest for the claimants with the best employment prospects and less pronounced for the claimants with less favourable employments prospects. Hence we find evidence that some schemes, those with monetary pay offs has a tendency of directing the attention of the case workers towards claimants that are easier to help into employment.

Discussion

In paper we have demonstrated that public performance related pay (PRP) in Danish employment offices across municipalities has an effect on the exit rate into employment for long term welfare

claimants. We have ruled out selection effects in terms of better functioning employment offices selecting into PRP schemes as we have compared employment offices within municipalities adopting PRP with municipalities not adopting PRP in the period prior to introducing PRP. In this period there is no difference between exit rates for welfare claimants in future PRP and non-PRP municipalities. Hence the difference between PRP and non-PRP municipalities does first show up after the introduction of the PRP scheme and we have therefore demonstrated that the effect of PRP on exit rates is not a selection effect.

We have furthermore demonstrated that there are no creaming effects in the sense that the case workers in the PRP municipalities might concentrate effort on claimants with good employment prospects. However, we have found that the effect of PRP covers both claimants with good and less favourable employment prospect.

Finally we have looked into whether different types of pay-schemes have different effects on the claimants exit rates into employment. It turns out that monetary payments have somewhat larger effect than non-monetary payoffs. The latter comes in terms of training courses and departmental arrangement. There is no clear evidence on whether private versus collective payments has different effects. This may partial be due to fact that private pay-offs are limited in numbers.

Table Appendix

Table A1.
Males, age 25-50 - Hazard rates, standard deviation and significance level.

	All match categories			Ready for the labour market, incl. unknown			Not ready for the labour market		
PRP Job Centre	1.134	(0.038)	***	1.146	(0.055)	**	1.170	(0.054)	***
Non-PRP Job Centre									
Danish descent									
Western immigrants	1.231	(0.105)	**	1.336	(0.135)	**	0.900	(0.167)	
Descendants of Western immigrant	1.253	(0.214)		0.944	(0.355)		1.505	(0.269)	
Non-Western immigrants	1.136	(0.038)	***	1.054	(0.052)		0.880	(0.057)	**
Descendants of non-Western immigrant	1.770	(0.142)	***	1.387	(0.207)		1.816	(0.195)	***
Weeks with prior public transfers	0.994	(0.000)	***	0.997	(0.000)	***	0.994	(0.000)	***
< 30,000 inhabitants									
30,-50,000 inhabitants	0.828	(0.071)	***	0.824	(0.089)	**	1.008	(0.120)	
50,-100,000 inhabitants	0.710	(0.072)	***	0.777	(0.092)	***	0.917	(0.119)	
> 100,000 inhabitants	0.617	(0.075)	***	0.835	(0.101)	*	0.864	(0.122)	
Local unemployment rate	0.972	(0.011)	**	0.946	(0.016)	***	0.967	(0.016)	**
Number of claimants		19,854			4,371			15,483	

Note: Level of significance: * 0.10, ** 0.05, ***0.01.

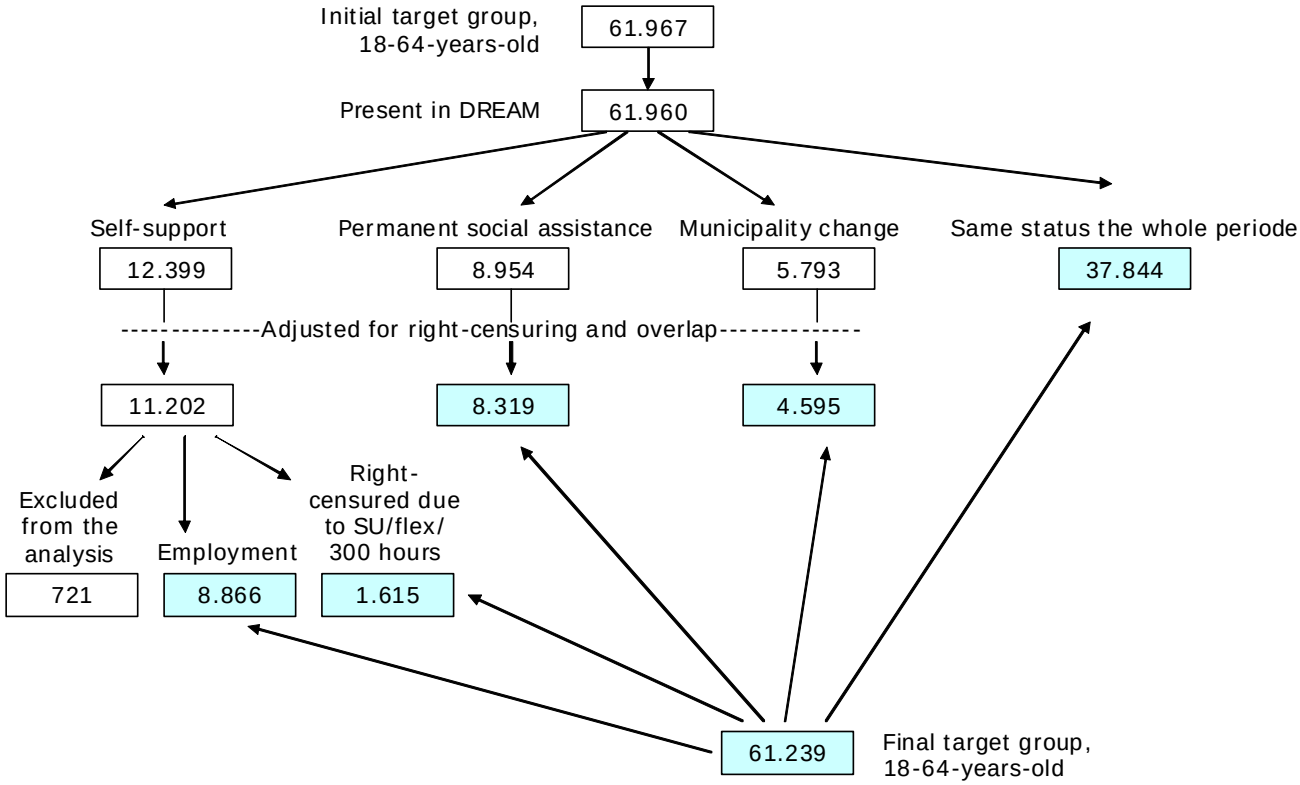
Table A2.
Females, age 25-50 - Hazard rates, standard deviation and significance level.

	All match categories			Ready for the labour market, incl. unknown			Not ready for the labour market		
PRP	1.131	(0.037)	***	1.238	(0.048)	***	1.089	(0.058)	
Non-PRP									
Danish descent									
Western immigrants	1.163	(0.094)		1.085	(0.119)		1.177	(0.153)	
Descendants of Western immigrant	0.852	(0.268)		0.828	(0.335)		0.834	(0.449)	
Non-Western immigrants	1.007	(0.037)		0.872	(0.049)	***	1.069	(0.058)	
Descendants of non-Western immigrant	1.475	(0.156)	**	1.018	(0.177)		1.164	(0.336)	
Weeks with prior public transfers	0.994	(0.000)	***	0.996	(0.000)	***	0.994	(0.000)	***
< 30,000 inhabitants									
30,-50,000 inhabitants	0.827	(0.064)	***	0.827	(0.078)	**	0.913	(0.113)	
50,-100,000 inhabitants	0.726	(0.065)	***	0.794	(0.079)	***	0.808	(0.113)	*
> 100,000 inhabitants	0.578	(0.070)	***	0.710	(0.091)	***	0.733	(0.119)	***
Local unemployment rate	0.991	(0.010)		0.972	(0.013)	**	0.981	(0.017)	
Number of claimants		25,105			7,055			18,050	

Note: Level of significance: * 0.10, ** 0.05, ***0.01.

Data Appendix

Overview of data



1. Target group

The target group of "A New Chance for Everyone" is administered and updated by Sirius IT A/S on behalf of the National Labour Market Authority (AMS). The target group includes all persons who fulfil the following criteria[5]:

- Receive passive social assistance according to the "law of active social policy" within the "New Chance"-period.
- Have received passive social benefit in terms of
  - Social assistance
  - Introductory allowance
  - Unemployment benefit
  - Sickness benefit
  - Unemployment allowance (for unemployed persons with reduced capacity for work) during minimum 65 of the 69 weeks prior to receiving passive social assistance within the period.

The target group thereby consists of both person who fulfilled the criteria upon the beginning of the "New Chance"-period, as well as persons who came to fulfil the criteria during the period. During the "New Chance"-period, the target group came to consist of a total of 61.967 persons aged 18-64 upon entrance.

[5] Source: http://nychance.bm.dk/graphics/Documents/Lovmateriale/Bekendtgoerelse%20om%20indsatsen.pdf

To be able to get some more information about the persons in the target group, the data from Sirius is merged with the DREAM-register (version dream0806c – with week 26 2008 as last week). 7 persons from the data received from Sirius are not registered in DREAM, and these persons have been erased from the target group, reducing the target group to a total of **61.960 persons.**[6]

Comparison with DREAM

When using the definition of the target group on the DREAM-register, 63.037 persons were found to be in the target group. 61.537 persons corresponded to the persons registered by Sirius. The differences in the target groups found by Sirius and by DREAM are primarily due to the fact that a more *conservative registering-praxis* is used for DREAM compared to Sirius[7].

It is important to remember that Sirius does not necessarily enter a person into the target group the exact week the criteria are fulfilled. According to Asger Varnild, Sirius, this is due to the continuous backward updating of data. When data is updated, DREAM is changed backwardly, whereas Sirius just adds the new information. For example, if information about a person is updated such that the person actually fulfilled the criteria 20 weeks before, this is corrected in DREAM, but Sirius just enters the person into the target group at the week they become aware of the changes. Especially in February 2007 there were a number of changes in data, resulting in an exceptional high number of persons entering the target group in week 6 2007 (1.715 compared to no more than 900 in any other week). Therefore, the entrance week of a person is not necessarily the same in the data from Sirius and in the data based on DREAM. Of the 61.537 persons who entered both according to Sirius and to DREAM, 50.228 persons are entered in Sirius the same week as they fulfil the criteria in DREAM, while 3.098 persons are entered earlier by Sirius than in DREAM, and the reverse is the case for 8.211 persons. In the following analyses, **the entrance week provided by Sirius is used**, because these are the data that have been available for the municipalities.

2. Self-support

A person is defined as being self-supporting the 13th week of maximum 15 weeks that the person:

(i) does not receive any social benefits (hereby assumed that the person is ordinarily employed)
(ii) employed in a flex job
(iii) receives State Educational Support (SU) (participating in an approved education).

According to Sirius a total of **12.399 persons** became self-supporting within the "New Chance"-period. Using the week stated as the 13th week of self-support by Sirius to find the status in DREAM yields a distribution of 78 per cent not receiving any social benefit, 11 per cent receiving SU, and 4 per cent being employed in a flex job. The remaining 7 per cent are receiving other kinds of benefits such as social assistance and maternity leave. The inconsistencies with the definition are, as described in section 1, mainly due to Sirius not being able to backwardly update data.

Comparison with DREAM

Using the definition on the 61.537 persons found in DREAM, only 11.906 persons are found to have become self-supporting. – this may be because Sirius considers persons who do not receive social assistance due to the 300-hours-rule as having become self-supporting, whereas they are not in DREAM.

11.590 persons have become self-supporting according to both Sirius and DREAM. Of these, 9.952 have become self-supporting in the same week by both registers, while 1.193 persons have become self-supporting later in Sirius than in DREAM, and the reverse is the case for 445 persons. Of the 1.638 persons whose self-support was not registered in the same week, 65 per cent only differed by 1 week.

[6] Of the 7 persons erased, 6 had become self-supporting within the "New Chance"-period, and one of these has resulted in PRP. None would have been right-censured due to starting receiving permanent social benefit or to change of municipality.
[7] Source: Evaluering af Ny Chance for Alle, Bilagsrapport, januar 2008.

The distribution of the 11.590 persons found in both registers is, when using the week of self-support found in DREAM, 83 per cent no longer receiving social benefits of any kind, 11 per cent receiving State Educational Support (SU), and 5 per cent being employed in a flex job.

3. Permanent social assistance

A person is defined as starting receiving permanent social assistance the first week that the person:

(i) receives early retirement pension
(ii) receives regular retirement pension
(iii) dies
(iv) emigrates.

(even though (iii) and (iv) cannot really be defined as assistance). The label "*permanent social assistance*" is used, because persons characterized by (i)-(iv) are not expected to return to the (Danish) labour force, and therefore they are no longer covered by the employment effort of the Job Centres.

According to Sirius, a total of **8.954 persons** have started receiving permanent social assistance. Using the starting week stated in Sirius to find the status in DREAM yields a distribution of 84 percent receiving early retirement pension, 1 per cent receiving regular retirement pension, 4 percent having emigrated, and 1 per cent having died. The remaining 10 per cent are stated as receiving other social benefits, with social assistance constituting the biggest part.

Comparison with DREAM

Using the definition on the 61.537 persons found in DREAM, 8.960 persons are found to have started receiving permanent social benefit.

8.886 of these persons are found as having started receiving permanent social assistance according to both registers. Of these, 7.966 started in the same week in both registers, while 916 started later according to DREAM compared to Sirius, and the reverse is the case for 4 persons. Of the 920 persons who start receiving permanent social assistance in different weeks according to Sirius and DREAM, 66 per cent only differed by 1 week, and less than 1 per cent differed more that 5 weeks.

The distribution of the 8.886 persons found in both registers is, when using the starting week found in DREAM, 84 per cent receiving early retirement pension, 5 per cent receiving regular retirement pension, 3 per cent having emigrated, and 7 per cent having died during the period.

4. Municipality changes

A total of 16.233 persons are registered by Sirius as having changed municipality at least once within the period. However, 11.861 of these changes, corresponding to 73 per cent, took place in week 51 2006 (compared to less than 1 per cent in any other week). The exceptionally high number of changes in this week is due to the Structural Reform put into effect January 1st 2007, where the number of municipalities was reduced from 270 to 98. This means that a majority of the municipality changes in this particular week is not due to actually moving but due to the fact that a number of municipalities are merged into new municipalities.

To measure only the actual moves, all changes in week 51 2006 is annulled, thereby implicitly assuming that all changes in this week are due to the Structural Reform – slightly overrated, but most likely by less than a 100 cases. This yields a total of **5.793 persons** actually moving at least once within the period (this is including persons whose municipality change in week 51 2006 is annulled, but who has moved at a later time within the period).

5a. Right-censured observations

Observations are right-censured if the person:

(i) moves from one municipality to another (**4.595 persons**)
(ii) starts on permanent social assistance (early or regular retirement pension, of if the person dies or emigrates) (**8.319 persons)**
(iii) does not become self-supporting within the time frame (**37.844** persons).

The person is right-censured when the first of the above occurs. A total of 50.758 persons are right-censured.

(i) is necessary to prevent having to account for people changing back and forth between being in the treatment and in the control group. Right-censuring persons when moving means that a person only can shift from being control to being treated if the municipality (local job centre) decides to enter a Performance-Related-Pay (PRP)-agreement.
(ii) is necessary because these people are not expected to ever join the (Danish) labour force again, and they are therefore no longer covered by the employment effort of the Job Centres.
(iii) is standard.

Adjusting self-support

Of the 12.399 persons having become self-supporting according to Sirius, 32 persons have previously been registered as starting receiving permanent social assistance, and 1.165 have preciously moved from one municipality to another. These 1.197 persons have been annulled as having become self-supporting, thereby reducing the number to a total of **11.202 persons**.

Adjusting permanent social assistance

Of the 8.954 found having started receiving permanent social assistance, 148 have started before even having entered the target group, 217 persons have previously become self-supporting, and an additional 270 persons have previously moved from one municipality to another. These 635 persons have been annulled as having started receiving permanent social assistance, thereby reducing the number to a total of **8.319 persons**.

Adjusting moving municipality

Of the 5.793 persons having moved municipalities, 798 persons became self-supporting and 400 have started receiving permanent social assistance prior to moving. These 1.198 moves have been annulled, thereby reducing the number of actual moving to a total of **4.595 persons**.

Comparing the adjusted numbers to DREAM

It is *not* possible to take right-censuring into account for observations in DREAM, since information about municipality changes only are registered the 1st of January each year. A change could therefore be in week 1 as well as in week 52 within the year.

Of the 11.202 persons having become self-supporting in Sirius, taking right-censuring into consideration, 10.468 persons have become self-supporting according to DREAM as well (93 percent)[8]. The distribution between the different types of self-support is the same as without right-censuring.

Of the 8.319 persons having started on permanent social assistance according to Sirius, taking right-censuring into consideration, 8.274 of the persons are found in DREAM as well (more than 99 per cent)[9] These persons are distributed the same way as the data without censuring.

[8] 255 of the persons having become self-supporting according to Sirius, were not defined as being in the target group according to DREAM, and the self-support could, therefore, by construction not be found.

5b. Right-censured observations – only employment is of interest

When only employment is of interest, persons having become self-supporting in a flex job, or receiving SU, or lost benefit due to the 300 hours rule, must be right-censured. This is done by censuring persons whose week of self-support according to Sirius corresponds to either flex job, Su or 300 hours rule in DREAM. This is the case for 1.615 persons.

In addition, 721 of the remaining persons have at some point during the "New Chance"-period been employed in a flex job, received SU, or lost benefits due to the 300 hours rule. Since it is unknown whether this has triggered the self-support according to Sirius, these persons have been *erased* from the analysis.

The total target group now consists of 61.239 persons, where 8.866 persons have become self-supporting and the rest are right-censured.

6. Performance Related Pay (PRP)

The number of municipalities with a PRP-agreement is updated every half year.

	# of municipalities with PRP-agreement
2nd half 2006	21 (26)
1st half 2007	33
2nd half 2007	37
1st half 2008	37

The Structural Reform reducing the number of municipalities from 270 to 98 was put into effect January 1st 2007. The number of old municipalities with a PRP-agreement was 26, but due to the reform these only corresponded to 21 new municipalities.

None of the 26 old municipalities is united into a municipality without an agreement. Once a municipality has entered a PRP-agreement, the agreement is valid for the remains of the "A New Chance for Everyone"-period.

It is assumed that the municipality enters a PRP-agreement in the *first week* of the half-year-period.

21.725 persons entered the target group residing a municipality that already had a PRP-agreement. Due to the expansion of PRP-agreements, a total of 35.408 were at some point during the "New Chance for Everyone"-period resided in a municipality with a PRP-agreement (when accounted for right-censuring).

Different types of PRP

The PRP can be given individually, to a group, or a mix between the two. It can be disbursed as a cash-payment, as competence-development/improving qualifications, or as a mix between the two.

7. Duration

The duration is the number of weeks from the person enters the target group until the person becomes self-supporting or right-censured, according to the weeks registered by Sirius – not by DREAM.

[9] 13 of the persons having started receiving permanent social assistance, according to Sirius, were not defined as being in the target group according to DREAM, and the start on permanent social assistance could, therefore, by construction not be found.

From the definition of self-support, the duration until self-support should at least be 12 weeks; however, this is not the case for 410 persons. Of these, 150 has a duration of 0, meaning that they are stated as having entered the target group the same week as they have become self-supporting.

Similarly, 9 of the persons that are right-censured due to permanent social assistance have durations of 0 weeks, corresponding to having entered the target group the same week as having started on permanent social assistance.

These inconsistencies with the definitions are due to the fact that data is backwardly updated– as also mentioned in regard to the target group-definition. As also mentioned earlier, a lot of changes were made in week 6 2007 which is reflected by almost 80 per cent of the 159 cases with 0 week duration were registered in week 6 2007. ***There has <u>not</u> been done anything to correct for these inconsistencies****, meaning that it is accepted that some of the durations might be too short.*

8. Previous social benefits

The explanatory variable, *off_fors*, is calculated as the number of weeks with social benefits within the last 5 years prior to entering the target group. In this definition, social benefits cover all weeks with passive social benefits and activation. The entrance week stated by Sirius is used as the starting point and then the DREAM register is used to calculate the number of weeks. According to the definition of being in the target group, all persons should have a period of social benefits of at least 64 weeks (since the entrance week is counted), however, this is not the case. This inconsistency is might be due to Sirius not being able to change the entrance week back in time, as mentioned previously. *Note* that this way of defining previous social benefits is slightly misleading when comparing young persons with older persons. This is due to the fact that there is a lower limit for when a person can receive social benefits, and young persons will therefore automatically have fewer weeks of social benefits.

9. Municipality data

All data regarding the municipality is linked to the new municipality (after the Structural Reform January 1st 2007).

The Structural Reform creates no problems in regard to persons who entered the target group in week 51 2006 or later on, since these persons all have stated the new municipality. Further, it does not create any problems in regard to persons who reside a municipality that is not affected by the Structural Reform, e.g. Copenhagen Municipality (60.816 persons).

For persons who entered the target group before week 51 2006 and who resided a municipality that later on was *united* with other municipalities, the new united municipality is used as reference (688 persons). For persons who have entered the target group when being a resident in a municipality that later on is *split* among different new municipalities, the new municipality that is assigned the “biggest part” of the old municipality, according to Statistics Denmark, is used (33 persons).