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Do Time Limits in the Sickness Insurance System Increase Return to Work?/Pathric Hägglund

Index

Abstract

This paper analyses the effect of introducing a mandatory law for assessing working capacity on the 91st and 181st days of the sick spell. Taking advantage of the quasi-experimental feature of the intervention, increased exit rates are found in the time periods before each of the assessments. This suggests that the positive effect mainly stems from the increased monitoring of the assessments. The results are more positive in big city areas than in smaller municipalities, indicating that larger labour markets create better opportunities, and stronger incentives, to work.

Keywords: Public sickness insurance, policy evaluation, natural experiment

JEL classification: H55, I18, J22, J28

1 Introduction

In 2003, Sweden had the highest reported sick-leave rate in the EU-15 with 4.4% of the working population being sick absent.[1] Together with high inflows to the disability insurance, a large share of the workforce became dependent on income from the public social insurance systems. Despite a positive trend in recent years with fewer sick spells starting and shorter sickness spells, public sickness insurance (SI) underwent a major reformation in 2008. Several changes were introduced with the purpose of reducing excess use of the SI and supporting individuals better in their return to work. The most radical restructuring was the introduction of time-restricted assessments of working capacity for certain sick-spell durations: the so-called *rehabilitation chain*.

A relatively large amount of empirical literature has investigated the correspondence between the generosity of the SI and sickness absence. For example, Johansson & Palme (1996, 2002 and 2005) and Hesselius & Persson (2007) all find evidence of higher compensation levels increasing the costs in the SI system. The negative incentive effects from a generous insurance system could partly be offset by monitoring and sanctions. The effectiveness of these policy instruments is however much less analysed. On Swedish data, Hesselius, Johansson and Larsson (2005) make use of a unique large-scaled experiment in 1988. They find strong evidence of more extensive sick spells as a result of prolonging the medical-certificate-free period from 7 to 14 days. The result is expected from the theory of moral hazard predicting higher insurance costs when the insurance conditions become more generous (see for instance Barr, 2004).

In the relatively large empirical literature on the unemployment insurance (UI), monitoring through stricter enforcement and verification of work-search requirements have generally been shown to reduce benefit periods. Both the Washington Work-Search Experiment (Johnson & Klepinger, 1994) and the Maryland UI Work-Search Demonstration (Klepinger et al, 2002) evaluate the impact of various combinations and degrees of work-search requirements and monitoring. The analyses provide strong evidence that such activities increase the UI exit rate. In Europe, Dolton & O'Neill (1996) find large positive effects of introducing recurrent counseling and monitoring meetings (the British Restart program) for long-term unemployed.

No earlier study has investigated the impact of introducing time limits in the public SI system. The question to be answered in this paper is whether the introduction of repeated working capacity assessments on the 91st and 181st days of the sickness period reduce the sickness absence length and increase return to work. To separate the effect of the assessments from the downward trend in sickness absence, the analysis exploits a quasi-experimental feature implementing the policy. Sick spells initiated only a few days apart (in the last week of June and the first week of July) were treated under different regimes during the first six months. Including spells started in the same weeks one year earlier, a difference-in-difference strategy is used to estimate the reform's impact. Job-search theory predicts that the notification of future monitoring will have an immediate negative effect on the individual's value of remaining absent from work. This is expected to affect the return to work through increased efforts and a higher

[1] Swedish Social Insurance Agency (2009). The EU-15 refers to the members of the EU in 1995. The average sick-leave rate among these countries was 1.9% in 2003.

acceptance level towards alternative income sources. Empirical findings on the UI system confirm pre-intervention behavioral effects, both before program activities (see for instance Black et al, 2003 and Dolton & O'Neill, 1996), and at benefit expiration (see for instance Carling et al, 1996 and Meyer, 1990).

The paper unfolds as follows. The next section outlines the background of the reforms, describing sickness absence in Sweden over time. The following section outlines the Swedish SI system and the details of the rehabilitation chain. Section 4 describes the data and section 5 specifies the empirical model and presents the results of the estimations. Section 6 finally sums up the findings.

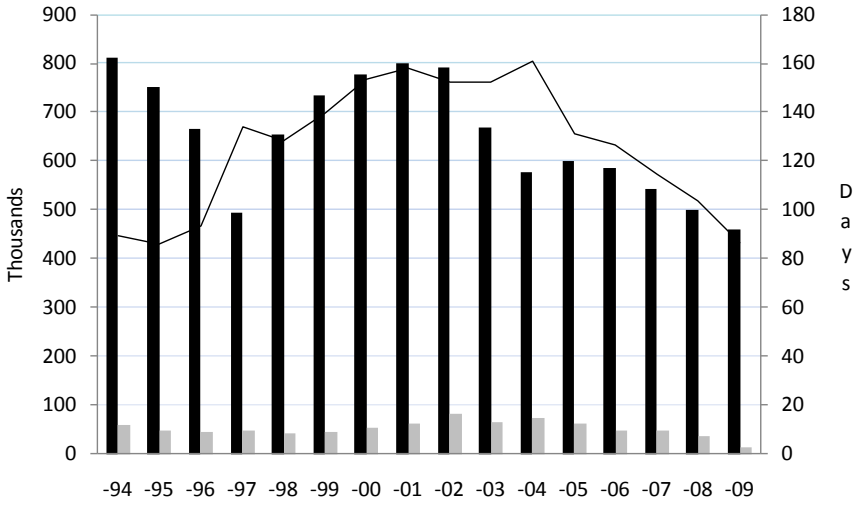
2 Sickness absence in Sweden

The 1990s' economic crisis constituted a shift in the dependence of public social insurance (including the unemployment insurance) in Sweden. Most of the economic recovery late in the decade was offset by a rapidly increased inflow to sick leave and disability benefits. In 2003, Sweden reported the highest sick-leave rate in the EU-15, with almost 4.4% of the employed absent due to sickness. Since then, both the inflow to the SI and the sick-spell durations has dropped (see Figure 1). The high levels, the large variation over time and the strong pro-cyclical pattern have been received as evidence of a dysfunctional SI, inappropriately used and afflicted by considerable levels of moral hazard. The measures taken to reduce sickness absence have correspondingly targeted institutional changes and the strengthening of the incentives among all actors to restrain the use of the SI. For instance, in 2004, the period for which the employer is responsible for compensation was prolonged from 14 to 21 days. This change was reversed in 2005, when besides the first 14 days, the employers also co-financed 15% of the compensation for the remaining days of the sickness absence period. Probably the most important change, however, was the restructuring of the Swedish Social Insurance Agency in 2005, centralizing the 21 semi-autonomous regional offices into one administration. This made possible more consistent and higher quality delivery of frontline services. Together with targeted efforts to change social attitudes and norms associated with reporting sick, this is generally agreed to be the main reason for the fall in the sick-leave rate among policy makers and analysts.

The Alliance of Sweden Government came into office in 2006 with an outspoken aim to restore the work-first principle and to prevent social exclusion due to long-term benefit receipt. The resulting reformation, considered the largest ever in the SI history, was for the most part initiated in 2008 and concerned changes in both the incentives to receive compensation from SI and active measures to support return to work. Negative incentives were introduced with the reduction of the benefit level after one year on sick leave, and the limit for the maximum number of entitlement days. Since an important explanation for the high Swedish sickness absence probably was the lack of a time limit, these changes were expected to stabilize sickness absence at lower levels. Also, people entitled to permanent disability benefits before July 2008 were henceforth allowed to earn up to €4,280 (≈SEK 42,800) per year before their benefit was progressively reduced. This positive incentive reform was motivated by the belief that many in the 1990s and the early 2000s were transferred to disability benefits without a thorough assessment of their working capacity. Finally, to support the individuals' possibilities to return to work, the government introduced a *rehabilitation guarantee program*, offering cognitive therapy and multidiscipline treatment for people diagnosed with mental health conditions.

The most radical change in the SI system, however, was the introduction of the *rehabilitation-chain model*, with eligibility checks at fixed sick-spell durations. The model is described in the following section.

Figure 1: Inflow to sick-leave (black bar) and disability benefits (grey bar), and sick-spell length



3 The SI and the rehabilitation chain

The public SI compensates all employed (and previously employed if registered at the Public Employment Services) unable to perform their regular job due to temporary sickness. The employer is responsible for financing the first 14 days of the sickness period, with a 1-day waiting period. The replacement ratio is 80% up to a benefit cap, €2,563 per month, during the first year. After that, the compensation is reduced to 75% during the remaining period up 2.5 years, which is the maximum entitlement period.[2] Besides the public SI, most workers qualify for additional benefits through agreements between the labour unions and the workers' confederations. The limit to the total compensation is usually 90% of the foregoing income, but varies with the specific agreement.

The rehabilitation chain, despite what the name suggests, does not contain rehabilitation measures. Instead it consists of time-restricted assessments of the individual's work ability and right to benefits. The purpose of the model is to create incentives among all actors to become more active early in their sick leave. During the first 90 days of the sick spell, the working capacity is assessed against the existing job, possibly with some modifications. Between the 91st and 180th days, if the old job is not an option, the worker is expected to try to find another job with the employer. Alternatively, the worker can take leave of absence for up to 6 months to try out another job with another employer. From the 181st day, working capacity and thus the right to benefits are evaluated against all the jobs on the regular labour market. Exceptions from this assessment could be made, for instance if the individual is undergoing rehabilitation and is expected to resume work within 12 months. If the individual is assessed as having remaining working capacity, he or she is expected to resume work with his or her employer.

An important point to make is that the different steps in the rehabilitation chain were already in use by the SI administration. What the rehabilitation chain added was the time limits specifying when at the latest in the sick spells the different assessments had to be executed. Note also that the time limits are relevant only for employed. The working capacity among the unemployed should be evaluated against the regular labour market from day 2 of the sick spell (the first day being uncompensated).

[2] Some exceptions are stipulated granting the sick-reported 80% of their previous income up to 2.5 years.

4 Design and descriptives

The analysis takes advantage of the temporary transition rules applied when implementing the rehabilitation chain on 1 July 2008, when already ongoing sick spells were treated according to the old rules until 1 January 2009. That means that sick spells initiated only a few days apart – in the last week of June and the first week of July 2008 – were subject to different rules/treatment during the first 6 months. Any individual-specific differences in factors potentially correlated with sick-spell length, for instance age or income, will be accounted for in the analysis. By including spells initiated in the same weeks of 2007, any non-observable differences, for instance related to the particular week or month starting the sick spell, will potentially also be captured in the analysis. The final sample consists of 5 512/4 637 sick spells/individuals initiated by employed individuals in June/July of 2008, and 4 795/4 267 spells started in the same months of 2007.

Sick spells are identified and collected from the sick-spell register administered by the Swedish Social Insurance Agency, which contains information on spells exceeding 14 days. The analyses are thus restricted to sick spells at least 15 days long. Besides sick-spell-specific information on medical diagnoses and the percentage on sick leave (100, 75, 50 or 25), the register also contains individual characteristics (gender, age, educational level, country of origin etc.), family situation, sick-spell history and labour market attachment.

Table 1 sums up the characteristics of each group. Both monthly and yearly comparisons reveal small differences. A majority of the sample is women and the average benefit recipient is about 45 years old. More than every fourth person reporting sick is highly educated (university), and 21-25% of the sample receives maximum benefits. About 20% is living in the Stockholm/Gothenburg/Malmö area, and the average sick-reporting history is 9-10 months.

Table 1 Sample descriptives

	July (1st week) 2008	June (last week) 2008	July (1st week) 2007	June (last week) 2007
Women	0.56	0.59	0.58	0.58
Age	44	45	45	44
Born abroad	0.14	0.14	0.15	0.14
University	0.28	0.27	0.27	0.27
% with maximum SI benefit	0.26	0.24	0.21	0.22
Big city areas (Stockholm/Gothenburg/Malmö)	0.22	0.21	0.21	0.20
Sick-leave history (days)	275	301	298	282

Note: Number of observations, June 2007/2008: 5 512/4 795, and July 2007/2008: 4 637/4 267.

Table 2 reports sick-spell descriptives. A comparison suggests that the difference in sick-spell length between the spells started in June and July each year has become somewhat smaller, from -3.0 (56.7-59.7) to -1.2 (56.1-57.3) days. Hence, sick spells initiated in June became shorter between 2007 and 2008 – in correspondence with the downward trend in sick-spell length – but the July spells became even shorter on average during the same period.

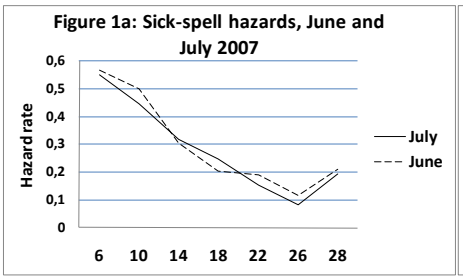
The sickness-spell register lacks information on the cause of ending a sickness period. We would however assume that the vast majority of the individuals ending a sick spell within 6 months returned to their current employer. By analysing the most common alternatives to returning to work – transitions to unemployment and disability benefits – we investigate how good an approximation return to work is for all exits from sickness absence. From Table 2, we note that only 0.3-0.8% of the sample ended the sick period to become unemployed. Even fewer (0.0-0.1%) were granted disability benefits. These small shares make state-specific analysis redundant. In the rest of the paper, I use sick-spell exits and return to work synonymously.

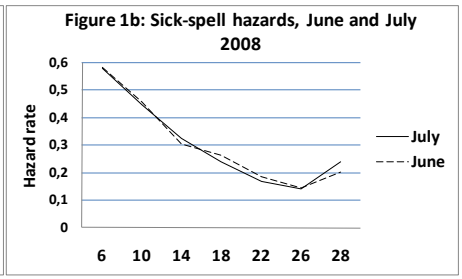
Table 2 Sick-spell descriptives

	July (1st week) 2008	June (last week) 2008	July (1st week) 2007	June (last week) 2007
Share of spells at least (days):				
30	59.9	57.5	61.1	60.0
90	17.9	17.4	19.1	16.8
180	8.7	8.1	10.2	8.6
Average (days)[a]	57.3	56.1	59.7	56.7
Share of spells ending with:[b]				
Disability benefits	0.0	0.0	0.0	0.1
Unemployment	0.5	0.3	0.8	0.6
Unknown (return to work)	92.1	92.5	90.1	91.6
Ongoing spells (28 weeks)	7.4	7.2	9.1	7.7

Note: [a] Spells still in progress at 196 days have been given the spell length 197. [b] Some observations are lost combining different registers; this modified data set contains 18 174 observations instead of 19 211. The transitions refer to full-time exits from sickness payment, in contrast to part-time exits.

Figures 1a-b illustrate the Kaplan–Meier estimates for sick spells started in each year. A positive effect of the rehabilitation chain would be shown in a relatively higher exit rate for the July spells in 2008 compared with 2007, especially close to days 91 (≈13 weeks) and 181 (≈26 weeks) in the sick spell. No such clear pattern is found. However, in correspondence with the results from Table 2, the increase in the exit rate between 2007 and 2008 is higher in the July group than in the June group. In the 26-28 week interval in 2008, the exit rate is even higher in the July group. Whether this is an effect of the introduced time limits or not is investigated in the following section.





5 Analysis

5.1 Empirical strategy

To analyse the time-restricted eligibility checks within the rehabilitation chain, I use a Cox proportional hazard model. Such a model estimates individual *i*:s probability of ending the sick spell at time *t*, given that it is still in progress at *t-1*, according to:

$$\log\theta_i(t) = \alpha(t) + X_i'\beta + \gamma 2008 + \delta July + 2008_i July_i \varphi(t),$$

$\log\theta_i(t)$ is a function of $\alpha(t)$, capturing the general exit from sickness absence during the follow-up period. X_i is a vector of individual characteristics, and β is the coefficient vector reproducing the correlation between X_i and the exit probability at different durations. ”2008” and ”July” are dummy variables of the sick-spell starting year (1=2008, 0=2007) and month (1=July, 0=June). The impact of the rehabilitation chain is identified through the interaction of initiating the spell in July of 2008. Since the effect is expected to vary with the sick-spell length, and be especially visible at 91 and 181 days, the impact is studied in 4-week intervals. The time-dependent impacts are captured in the coefficient $\varphi(t)$. The estimations apply Breslow's approximation.[3] The generated estimates are approximately identical to those generated using more exact estimation methods.

5.2 Effects on return to work

Table 3 reports the effects of the rehabilitation chain on sick spells up to 28 weeks. The sick-spell length is defined as the number of days between the beginning and the end of the sick spell. No difference is made between part-time and full-time sick spells. Transition to part-time sickness absence is enough to terminate the spell.[4] A test allowing only full terminations of the sick spell reports results very similar to those presented in this paper.[5] Values over “1” indicate the percentage increase in the exit rate, and values below “1” indicate the opposite. The first column gives the estimation results of the simple model without covariates; the second column results adjust for differences in observables. Only small differences appear when comparing the results, which strengthen the casual interpretation of the estimations.

A positive significant effect on the exit rate is found in the 5-8 week interval. The result is somewhat unexpected since it appears 1-2 months before the working ability assessment at 91 days. The effect coincides with the handover between the national and the local administrational level

[3] Allison (1995).
[4] A person could be absent due to sickness for 100, 75, 50 or 25%. Transitions from 100 to 50% sickness absence will terminate the sick spell, as well as a transition from 50 to 25%.
[5] See Hägglund (2010).

within the Swedish Social Insurance Agency. If not before, the individual is then informed of the new SI rules, which could affect his or her incentives to resume work. Another possibility is that the timing of the effect coincides with a typical sick-period length stated in the medical verifications. If the sick reported did not expect to receive compensation beyond the 12th week, they could have ignored the possibility to apply for further benefits.

The positive effect at 5-8 weeks is followed by a corresponding drop in the hazard rate in the subsequent 4-week interval, i.e. the interval immediately before the 91-day assessment. The result could be due to dynamic selection where a subgroup of sick reported with relatively good health ended their sick spell at 5-8 weeks, while a group with relatively poor health remained. Finally, a large (60.7%) positive effect is found at 25-28 weeks, around the 181-day assessment. The positive effect is thus much larger than the significant effect before the 91-day assessment. This is expected since the 181-day assessment is much sharper in the sense that the assessment concerns the entire regular labour market.

Table 3 Effect on the off-SI hazard ratio

	No covariates	Full model
Interval (week)		
3-4	0.997	0.981
	(0.037)	(0.037)
5-8	1.110***	1.104**
	(0.039)	(0.039)
9-12 (91-day assessment)	0.892**	0.886**
	(0.058)	(0.058)
13-16	1.106	1.104
	(0.077)	(0.078)
17-20	1.059	1.052
	(0.107)	(0.107)
21-24	1.057	1.049
	(0.137)	(0.138)
25-28 (181-day assessment)	1.598***	1.607***
	(0.132)	(0.132)
Year 2008	1.019	1.035*
	(0.021)	(0.021)
Month July	0.946***	0.967
	(0.021)	(0.021)
-2 log likelihood	322 236	320 089

Note: 19,211 observations. Standard errors are within parentheses. */**/*** report significance at the 10/5/1% levels. The full model controls for full-time/part-time sickness absence, first day as sick-reported, medical diagnosis, gender, age, educational level, born abroad, parent born abroad, marital status, number of children under 18, sick-reported history, labour market attachment, industry, home county and SI benefits. Effects are estimated as changes in the time patterns in June and July 2008 compared with the same months in 2007.

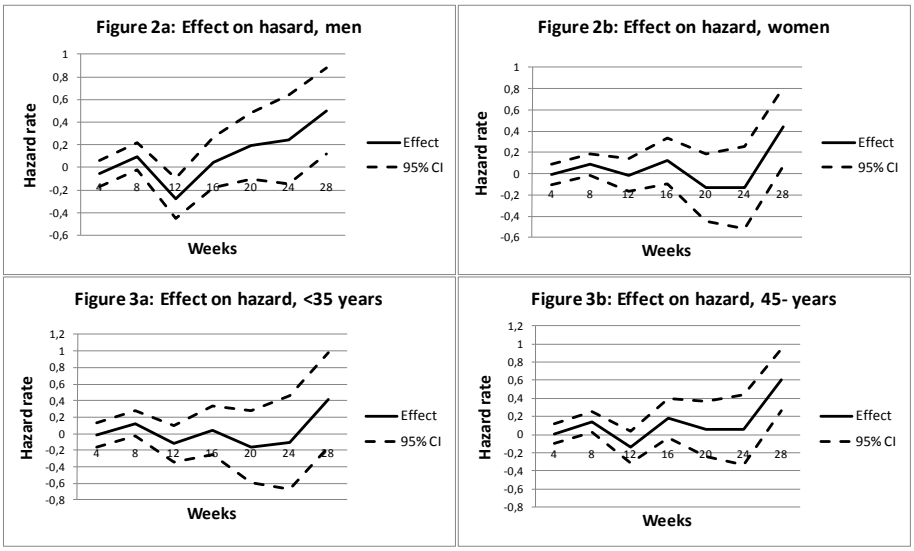
5.3 Effects for different subgroups

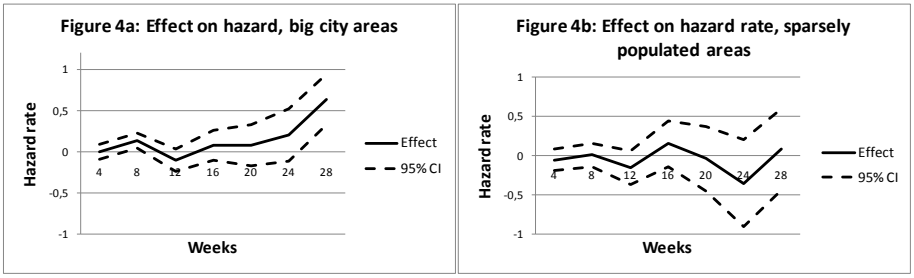
Both the ability and the incentives to work are expected to vary among the sick-reported. We would therefore expect the impact of the time limits to diverge between groups in the sample.

Figures 2a-4b illustrate the effect of the rehabilitation chain at different durations on some chosen subgroups. There are only small differences between men and women (2a-b); both show sharp increases in the exit rate preceding the 181-day assessment. The reform seems to have had a somewhat more positive effect on older (45+) than on younger individuals. In contrast to the older sick reported (3a-b), the impact on younger sick reported is not significant around 6 months. The difference in the results is due to both lower precision and a smaller impact estimate for the younger sick reported. A careful interpretation is that the on average more favorable labour market situation for older involves better opportunities to return to work.

Finally, Figures 4a-b illustrate the importance of the local labour market to the reform impact. Figure 4a reports significant and positive effects before both the 91st and the 181st day of the sick spell for an average of the big-city areas of Stockholm, Gothenburg and Malmö. Similar results are not found in the more sparsely populated municipalities. To some extent, the results are expected due to health differences in different parts of the country. However, a more favorable local labour market situation would also correlate with stronger incentives to work. Comparing unemployment rates, the unemployment rates were 7.3 and 8.1 in the large city areas and small municipalities, respectively.

An alternative hypothesis is that the results derive from differences in norms and attitudes towards sickness absence. Hesselius, Johansson and Nilsson (2009) find that when the sickness absence increases among working colleagues, it positively affects the individual's sick-report rate. Comparing sick leave between different cities shows that the average number of compensated sick days in big city areas was 34, and 42 in sparsely populated areas. The large difference suggests that besides health issues other explanations exist related to the local use of the sickness insurance system. These factors could also affect the potential for the rehabilitation chain to be successful in shortening sick spells.





5.4 The effect on future sick reporting

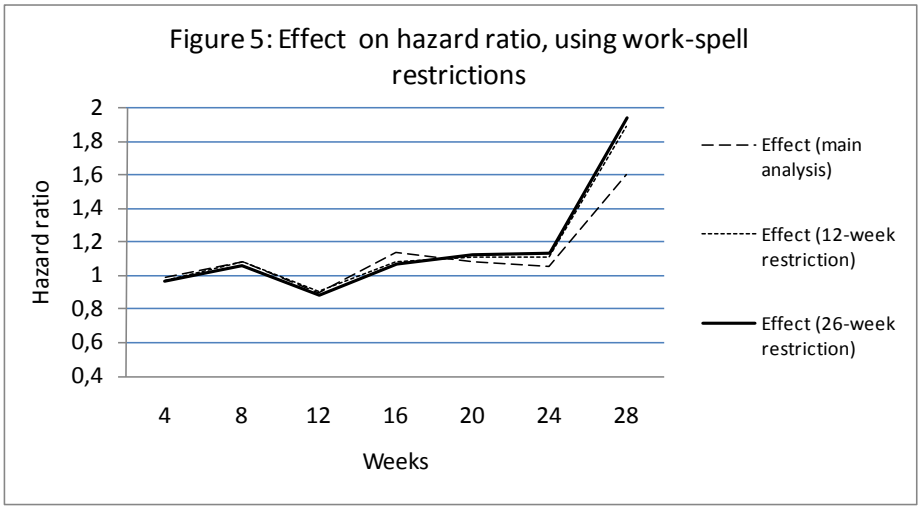
Time limits and stricter enforcement of the SI rules are, besides shorter sick spells, also expected to have an impact on the inflow to the SI system. This could potentially constitute a selection problem in this study comparing sick spells initiated before and after the reform. However, a brief look at the data gives no such indication. Comparing June–July inflow quotes from 2000 onward, the ratio is typically around 1.1 (1.09 on average). The 2008 ratio is 1.03, which is lower than the 2007 ratio of 1.13. The July inflow in 2008 was thus the opposite to what one would might have expected: relatively large compared with previous years.

The stricter SI rules could especially be expected to affect the sick-leave behavior among those recently reported sick. Setting a restriction on the length of the period following the sick spell, I analyse whether the positive effects found in the main analysis are the effect of short-term or long-term working spells.

Figure 5 illustrates the effect of the rehabilitation chain at different durations when experimenting with alternative definitions of when a sick spell has ended. I analyse the effect using the restrictions 12 and 26 weeks respectively on the subsequent working spells. That means that reporting sick again within 11 and 25 weeks of the last sick spell respectively, does not qualify as ending it.[6]

Only small deviations are found compared with the main analysis, at least up to 24 weeks. The positive impact at 5-8 weeks was thus the result of neither shorter nor longer work spells. The effect at 6 months, on the other hand, seems to have been generated by on average longer work spells. The positive impact increases from 60.7% (main analysis) to 89% using a 12-week restriction, i.e. with approximately 50%. Instead of using a 26-week restriction, the impact increases to about 94%. The effect thus corresponds to almost twice as many sick reported ending their sick spells at this duration compared with the situation without the 181-day assessment. The results indicate that the rehabilitation chain did not only increase the exit rate from the SI system; it also created disincentives to report sick, hence prolonging the subsequent periods of work. This conclusion should however be reserved for the probability that those who ended their sick spell around the 181st day in the treatment group were healthier on average than their comparisons in the non-treatment group. This would then be expected to affect the future risk of sickness absence.

[6] To exemplify: a person is reported sick for 8 weeks and then returns to work for 11 weeks. The person then once again reports sick for another 8 weeks before going back to work for 26 weeks. If the work-spell restriction is set to 12 weeks, the total sick spell becomes 16 (8+8) weeks.



5.5 Model test

If the estimations suffer from unobserved heterogeneity, the results will be misleading. Not finding the same effects analysing a fictitious reform, introduced at another date, would strengthen the reliability of the estimations. Table A1 (appendix) presents the hazard ratio impact estimates from a placebo reform introduced one year earlier (1 July 2007) than the actual reform. The analysis thus compares spell durations between periods initiated in the last week of June 2007 and 2006 with those initiated in the first week of July in the same years. As before, I control for rich individual information potentially correlated with health and the demand for SI benefits.

The results give support to the above conclusion that the introduction of the rehabilitation chain has in fact increased return to work at the time of the work ability assessments. None of the week intervals reports significant impact estimates. The estimate at 25-28 weeks is positive but considerably smaller than the reform estimate.

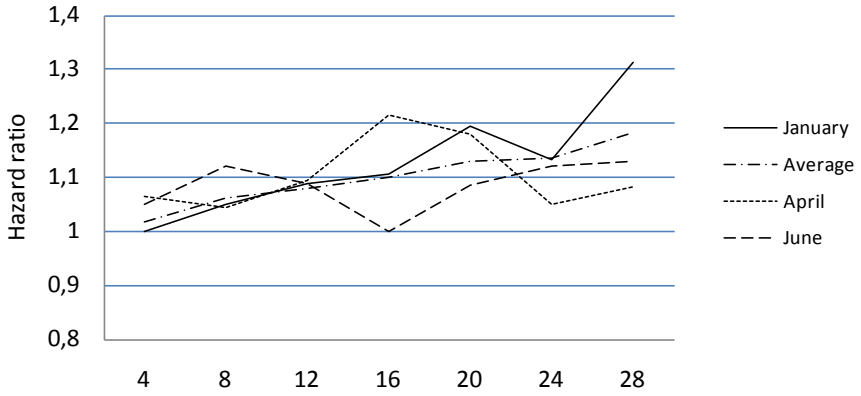
The implementation of the rehabilitation chain, where different rules were applied depending on the first day: reported sick, risks having negatively affected those in the pre-reform group in 2008. If the new sick-leave process involved additional work for the administration, the June group could have received less attention than it otherwise would have received, affecting its outcome negatively. This would violate the condition requiring that the comparison-group outcome should be unaffected by the experiment group treatment.

By comparing sick spells initiated in June 2007 and 2008 with sick spells initiated earlier in the same years, we test whether it is likely that the June group was affected by the rules implemented in July 2008 or not.

Figure 6 illustrates the impact of initiating a sick spell in a certain month (January, April and June) of 2008 compared with initiating it in the same month of 2007. The estimations are adjusted for the same background information as in the previous analyses. The exit rate is on average 2-18% higher for the spells of 2008 at different durations. The impact is larger for longer sick spells, which suggests that the more extensive sick spells have become relatively shorter than the not-so-long spells.

There are no indications that the reform has negatively affected the outcome of the comparison group in this study, i.e. those initiating a sick spell in June. The effect of initiating a sick spell in June is in fact larger compared with earlier months, at least up to 12 weeks. After that, the effect is lower than average. There is no significant impact of having initiated the spell in June 2008, compared with having initiated it earlier in the same year.

Figure 6: Effects on the hazard ratio of initiating a sick spell in 2008 compared to 2007, per month



6 Conclusions

The main finding in this paper is that introducing time-restricted working capacity assessments in the public SI system have strengthened the downward trend in sickness absence in Sweden. This seems to be the result of people with relatively better health and better opportunities to work returning to work at a higher rate. Analysing the effect of benefit eligibility checks on the 91st and 181st sickness days, large and significantly positive effect on the exit rate – which is approximately synonymous with return to work – are found around the assessment on the 181st day. Smaller, but significant, positive effect are also found before the working capacity assessment at 91 days. The fact that the exit rate increased before the actual assessments suggests that the positive effects primarily stem from the increased monitoring, rather than from the stricter enforcement of the SI rules themselves.

Perhaps the effects would have been even more pronounced had the new rules been applied more consistently from the start. A survey performed on sick episodes initiated in the autumn of 2008 shows that the 91-day assessment had been performed in fewer than 20% of the spells. We can therefore assume that the assessments were not in fact performed in a significant portion of the July group in this study.

In total, the reform reduced the average number of compensated days in the SI system by 0.27 days. This might appear to be a small impact for such a considerable change in policy. However, the vast majority of those reporting sick are not directly affected by the time limits. Fewer than 20% of the sick spells reach 91 days and fewer than 10 % are still in progress at 181 days. The large reform impact on return to work at 6 months thus concerns too few to have an impact on the overall average of all sick spells. However, since long-term sickness often works as a first step towards permanent disability benefits, the impact of the reform on the public budget should not be underestimated.

The results demonstrate a regional pattern, with large positive effects in big city areas and no effects in small municipalities. The result is possibly due to the larger labour markets offering more opportunities and stronger incentives to work. The result could also be due to region-specific differences in norms and attitudes towards reporting sick. For instance, sickness absence is considerably higher in the regions reporting a zero effect from the reform.

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Appendix

Table A1 Effect of a placebo reform on the off-SI hazard ratio: full model

Interval (week)	
3-4	0.983 (0.036)
5-8	0.995 (0.039)
9-12 (91-day assessment)	1.027 (0.054)
13-16	1.118 (0.074)
17-20	1.060 (0.102)
21-24	0.915 (0.137)
25-28 (181-day assessment)	1.104 (0.140)
Year 2007	1.039* (0.020)
Month July	0.969 (0.021)
-2 log likelihood	338 450

Note: 20,399 observations. Standard errors are within parentheses. */**/*** report significance at the 10/5/1% levels. The full model controls for full-time/part-time sickness absence, first day as sick-reported, medical diagnosis, gender, age, educational level, born abroad, parent born abroad, marital status, number of children under 18, sick-reported history, labour market attachment, industry, home county and SI benefits. Effects are estimated as changes in the time patterns in June and July 2007 compared with the same months in 2006.

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