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Does experience rating reduce sickness and disability claims? Evidence from policy kinks[☆]

Tomi Kyyrä[a,*], Tuuli Paukkeri[b]

[a] VATT Institute for Economic Research, Helsinki, Finland, and IZA, Bonn, Germany
[b] VATT Institute for Economic Research, Helsinki, Finland

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ABSTRACT

We study whether the experience rating of employers' disability insurance premiums affects the inflow to disability benefits in Finland. To identify the causal effect of experience rating, we exploit kinks in the rule that specifies the degree of experience rating as a function of firm size. Using comprehensive matched employer–employee panel data, we estimate the effects of experience rating on the inflow to sickness and disability benefits. We find that experience rating has little or no effect on either of these outcomes.

1. Introduction

In many countries, disability benefit costs are increasing rapidly and reforming disability programs is high on the policy agenda. Several studies have analyzed effects of reforms intended to discourage program entry by reducing the generosity of disability benefits or tightening eligibility criteria that are directed at the potential program applicant. Less attention has been paid to the role of employers and their incentives to reduce the risk of employees claiming disability benefits. The employer can invest in workplace health and safety, and allocate the workload evenly between employees in an attempt to reduce the onset of health problems at the workplace. When a worker develops a medical condition that reduces work capacity, the employer has discretion over the provision of physical aid or retraining, and whether to modify job assignments. However, the employer's incentives to implement disability-reducing measures can be weak even when the costs to the employer are considerably less than the fiscal costs of a new disability benefit claim. Experience rating of disability insurance (DI) premiums may help to mitigate this incentive problem. We study the effects of such a program on inflow rates to disability and sickness benefits in Finland.

With experience rating, the employer's DI premium is adjusted to reflect the costs of its workers' past disability benefit claims in comparison to other employers. Employers with high disability costs are penalized through a surcharge on top of the base premium, while employers with low disability costs are rewarded with a discount. If successful, experience rating helps employers to internalize the societal costs of disability benefit claims and encourages them to implement cost-effective disability-reducing measures, leading to lower disability benefit enrollment.

Although experience rating is used in other forms of social insurance, such as in workers' compensation and unemployment insurance schemes, it is still rare in the context of disability insurance.[1] To the best of our knowledge, DI premiums are cur-

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* Corresponding author.
E-mail addresses: tomi.kyyra@vatt.fi (T. Kyyrä), tuuli.paukkeri@vatt.fi (T. Paukkeri).

[1] Workers' compensation (WC) programs cover the medical cost of work-related injuries and cash payments to injured workers. Several authors have found that experience rating in WC reduces on-the-job injuries and the duration of injury spells (Ruser, 1985, 1991; Krueger, 1990; Bruce and Atkins, 1993; Lengagne, 2016), but may also induce "claims management", where firms attempt to reduce their WC

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rently experience rated only in the Netherlands and Finland. In some other countries, experience rating has attracted interest as a potentially effective means to curb growth in the disability caseload. Autor (2015) and Burkhauser and Daly (2011), for example, have proposed that the U.S. Social Security DI program should be financed by an experience-rated payroll tax. Their proposals were motivated by anecdotal evidence from the Netherlands, where experience rating was introduced in 1998. This change applied to all firms, and it was part of a series of disability and sickness program reforms implemented over the past two decades. Following these reforms, both the disability inflow and the share of the Dutch population on disability benefits declined considerably (see e.g. García-Gómez et al., 2011; Koning and Lindeboom, 2015).

In Finland, employers are subject to different degrees of experience rating depending on their size. The smallest firms are not subject to experience rating at all, whereas the largest firms only pay experience-rated DI premiums. Among the mid-sized firms the degree of experience rating increases linearly from 0 to 1 with firm size. As such, the rule that specifies the degree of experience rating as a function of firm size has discontinuities at the threshold values of small and large firms. Under the assumption that the effect of unobservables on disability risk is smooth through these thresholds, we can distinguish the causal effect of experience rating from the firm size effect using a regression kink design (e.g. Nielsen et al., 2010; Card et al., 2015).

In the first step of the analysis, we construct firm-year disability inflow measures that account for differences in the characteristics of employees across firms and over time. As outcomes we consider the inflow to sick leave, which typically precedes receipt of a disability benefit, and the inflows to different types of disability benefits (fixed vs. indefinite duration, and partial vs. full benefit), which all affect the employer's DI premium rate differently. Since our data contain medical diagnoses for those who were awarded a disability benefit, we also consider the disability outcomes by main diagnosis category. In the second step, we examine to what extent differences in the adjusted disability risks between firms can be explained by differences in the degree of experience rating.

Our descriptive analysis shows that the disability risks vary little with firm size. In the regression analysis of the full population, we find no evidence that experience rating affects any of our disability outcomes. Subgroup analysis reveals a negative effect on the inflow to full disability pensions only for men under the age of 50. Within this group, the maximum degree of experience rating reduces the likelihood of being awarded a full disability pension by one-half compared to the counterfactual case of no experience rating. For the same group, we also find a less robust negative effect on the likelihood of receiving a rehabilitation benefit (awarded for a fixed period because recovery is expected) compensating for mental and behavioral disorders. These estimated effects of experience rating on men younger than 50 are statistically significant only at the 5% level with no correction for multiple hypotheses testing. Given the large number of the effects we estimate, the apparent effects for men below 50 should be interpreted with caution, as they would almost surely loose their significance under a stricter significance threshold accounting for the multiple comparisons problem.

Overall our results suggest that experience rating has little or no effect on the disability inflow. This is somewhat surprising, given that the expected cost of a new benefit claimant to the employer can be quite large. One interpretation is that the employer's chances to influence the disability outcomes of its employees are so slim that economic incentives do not work, or that the effect is so small that we cannot detect it due to limited statistical power even using administrative data on the universe of DI entrants. The complexity of the Finnish experience rating system that may leave some firms unaware of its details may also contribute to the null effect. A simpler system with more transparent costs might be more effective.

Our findings contribute to a small literature on experience rating in DI. All previous studies have analyzed a single country (the Netherlands) and considered a time period during which other related institutions were reformed simultaneously. Using quarterly data, van Sonsbeek and Gradus (2013) estimate that the introduction of experience rating in the late 1990s reduced the disability inflow by 13% in the Netherlands. de Groot and Koning (2016) find that the removal of experience rating from small Dutch firms (<25 employees) in 2003 increased the disability inflow by 7% over the years 2003–2004. Due to confounding reforms, they only use the years 2003 and 2004 as the post-treatment period in their main analysis. Interestingly, the experience-rated DI premiums for the small firms were re-introduced in 2008. de Groot and Koning (2016) find no change in the disability inflow among small firms following this reform, a result that seems to be in sharp contrast to the estimated effect of the removal of experience rating five years earlier. They argue that the lack of incentive effects in the later years is attributable to an extension of the sickness benefit period that precedes receipt of DI benefits in 2005.[2] This highlights the importance of the institutional context when evaluating the effects of experience rating in DI.

The most convincing previous analysis informs on the short-term behavioral responses among very small Dutch firms and produces mixed results (de Groot and Koning, 2016). We complement the literature by providing evidence on the effects of experience rating among mid-sized and large firms (about 50+ employees) in Finland. Our analysis covers the period 2007–2015. In these years, the experience rating system remained unchanged and there were no confounding reforms.

The remainder of the paper proceeds as follows. Section 2 discusses the sickness and disability benefit schemes and the determination of the DI premiums in Finland. Section 3 describes our data and reports some descriptive statistics. Section 4 discusses the statistical method and Section 5 reports the empirical results. Section 6 contains concluding remarks.

2. Institutional framework

2.1. Sickness and disability benefits

When a worker falls ill and receives a doctor's statement certifying incapacity for work, they are entitled to a compensation for wage loss. For the first weeks (typically one to three months depending on the collective agreement), the worker is fully compensated and receives payment from the employer, after which a claim for *sickness benefit* can be filed with the Social Insurance Institution.[3] The sickness benefit can be received for a maximum of about one year (300 working days, Saturdays included).

Depending on the medical condition, the applicant's rehabilitation needs are assessed in a more extensive medical examination during the sickness benefit period. In case of prolonged disability, the individual may qualify for one of four possible disability bene-

costs by disputing workers' benefit claims rather than by investing in proactive health and safety measures (Thomason and Pozzebon, 2002).

[2] The Dutch employers are responsible for sickness benefit costs of their employees. Moreover, separate disability benefit schemes for those who are permanently and fully disabled, and for those who are only partially and/or temporarily disabled were introduced in 2006, and since then the experience-rated DI premiums have only covered the latter group.

[3] For part of the fully compensated period that exceeds 9 working days, the Social Security Institution pays the sickness benefit to the employer, so the employer's direct cost for this period is the difference between the wage rate and sickness benefit.