

Does Sick Pay Affect Workplace Absence?

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Abstract

Higher replacement rates often imply higher levels of absenteeism, yet even in generous welfare economies, private sick pay is provided in addition to the public sick pay. Why? Using comparative workplace data for the UK and Norway we show that the higher level of absenteeism in Norway compared to UK is related to the threshold in the Norwegian public sick pay legislation. This threshold's importance is confirmed in a Regression Kinked Design (RKD) analysis on the Norwegian micro-data. Private sick pay is provided as employer-provided non-wage benefits and when training costs are high.

Key-words: absenteeism, public sick pay, private sick pay, comparative

JEL-codes: H31, J22, J28, J32

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1. Introduction

Absenteeism can be expensive to employers when they must pay for non-productive labour and where it disrupts the production of other workers. Absenteeism is often a concern in redistributive welfare regimes with generous public sick pay since the danger of moral hazard is greater than when the cost of sick leave is covered to a larger extent by the individual worker. In Norway, for example, public sick pay constitutes 1.5% of GDP (The government budget, 2010). Even in the UK where the sick pay system is less generous, the direct cost of sick pay was £11.6 billion in 2003 (Barham and Begum, 2005).¹ When the sick pay system is less generous, as in the U.S. or UK, the cost of presenteeism is often a greater concern (Goetzal et al., 2004; Hemp, 2004).²

In this paper we study how absenteeism relates to employer-provided sick pay and publicly provided sick pay, thus shedding light on how societies deal with the costs associated with absenteeism and presenteeism. Our contribution is two-fold. First, we establish the role played by the public sick pay compensation regime by comparing sickness absence in Britain and Norway, using distinctive features in the Norwegian “kink” in compensation that occurs at a particular point in the earnings distribution to identify those effects. In this sense our paper is similar in design to the regression kink design of Böckerman et al. (2014) who identify a strong behavioural absence response from a kink in the Finnish sick pay legislation, implying an elasticity of the duration of sickness absence with respect to the replacement rate is on the order of 1.4. Like Böckerman et al. (2014) we use worker-level data to establish worker responses to the kink. But an important difference is that our study also compares the difference this kink makes to a scenario – Britain – where no such kink exists, using micro workplace data that also nets out heterogeneity across workplaces.³

Second we investigate the factors that are associated with employer-provided supplementation to the public sick pay compensation system. Barmby et al. (2002) show that in

¹ See (http://www.statsbudsjettet.dep.no/upload/Statsbudsjett_2010/dokumenter/pdf/summary_national%20budget_2010.pdf) The European sickness absence insurance schemes are quite similar to the US temporary disability insurance, and temporary disability insurance benefits amounted in California in 2005 to \$4.2 billion, just slightly less than the amount spent on unemployment insurance (Ziebarth and Karlsson, 2010).

² Regardless of system, sick pay can provide sick workers with incentives to take time off to stop the spread of illness (Skatun, 2003). Thus absenteeism and presenteeism are associated with costs, and firms and the society should be concerned about the relative costs and benefits of sick pay. Treble and Barmby (2011) discuss this in detail. In a recent paper, Pichler and Ziebarth (2016) merge absenteeism and presenteeism modelling to present a unified strategy analysing sick leave behaviour.

³ Most empirical evidence clearly indicates that economic incentives matter for absenteeism, regardless whether they are provided publicly (Johansson and Palme, 1996; Johansson and Palme, 2002; Henrekson and Persson, 2004; Ziebarth and Karlsson, 2010; Dale-Olsen, 2013a; De Paolo et al., 2014) or privately (Barmby et al., 1995; Brown et al., 1999; Dale-Olsen, 2012). The heterogeneous effects of monetary labour supply incentives on absence found by Ziebarth (2013) might partially be explained by offsetting private pay schemes and sick pay schemes.

many countries public sick pay legislation is supplemented by additional privately funded sick pay, as might occur if employers use such pay to attract and retain valuable workers. However, with a few exceptions (Barmby, 2002; Dale-Olsen, 2013b), there is little empirical evidence regarding the interaction between public and private sick pay.

The motivation for comparing sick pay regimes in Norway and Britain is two-fold. First, they are polar opposites in terms of redistribution and welfare regimes, as characterised by typologies such as Esping-Andersen's (1990) (he differentiated between the U.S. and Sweden), creating potentially quite different incentives for firms to offer sick pay compensation, and for workers to take absence. Second, and relatedly, these countries are quite different when it comes to absence levels, with Norway on top in Europe and Britain among the countries with among the lowest absence rates (OECD, 2010; Gimeno et al., 2004). Others who have conducted cross-country studies have suggested such differences relate to sick pay systems, rather differences in employment protection legislation (Frick and Malo, 2008).

The structure of the paper is as follows: In Section 2 we describe the sick pay legislation in the UK and Norway. In Section 3 we derive a simple economic model as motivation for our empirical work. The econometric strategy is described in Section 4. Data is described in Section 5. Our empirical findings are presented in Section 6, while Section 7 concludes.

2. The sick pay legislation and privately supplementary sick pay

The British public sick pay legislation (Statutory Sick Pay (SSP)) is relatively simple: each worker receives £81.60 per week for 28 weeks for sickness absence (2011 figures), a figure close to the minimum wage. Norwegian public sick pay, on the other hand, provides for up to one year's full compensation for annual pay up to what is defined as 6G, where G is the baseline figure in the Social Service benefit system (1G is equivalent to £8685).⁴ For pay above this threshold, only 6G is paid in sick pay. As such the Norwegian sick pay legislation is comparable to the Finnish system: both are kinked (the Finns have more than one kink) (Böckerman et al., 2014).

[FIGURE 1 AROUND HERE]

Both in the UK and Norway employers are free to offer top-up publicly provided sick pay compensation. In 2003 40% of the Norwegian private sector workplaces offered additional compensation for those above the threshold (Dale-Olsen, 2012). The employer-provision of top-up sick pay compensation is seen in other welfare countries as well (Barmby et al., 2002). Both in the UK and Norway a worker usually needs a physician to certify his or her illness after a designated number of sick leave days. In the UK this occurs after 7 days, in Norway this is

⁴ All money values in the paper are based on 2011 pounds (PPP-adjusted), where 1£=9.032 Norwegian kroner (NOK).

usually after 3 consecutive absence days. In Norway employees are limited to four self-declared spells after which all absences (regardless of longevity) have to be physician-certified. A minority of firms allow longer and more periods.

During the period under study UK SSP was paid by the employers, but due to a Percentage Threshold Scheme (PTS) employers could recover SSP costs for their employees' sick leaves if the total SSP paid in a tax month exceeded 13 percent of the employer's (Class 1) National Insurance contribution in the same month. In 2016 the PTS was scrapped and replaced or rather reoriented with programs aimed at individuals and not employers. In Norway the first 16 days of the absence spell are covered or paid by the employer. The remaining spell is covered by the public authorities (limited upwards to the 6G-threshold).

3. Economic motivation

Our empirical analyses can be motivated by the following simple model. Although we readily admit that workers mainly take sick leave due to illness, we follow a rich literature focussing on the shirking aspect of absenteeism. In this literature, there is a margin at which employees can choose whether to take sick leave or not, depending on the costs and benefits of doing so. At this margin sick leave can be interpreted as a reduction in worker effort.

By choosing a sick leave level, a , when facing imperfect monitoring, N identical workers maximise expected utility. Let the monitoring probability be $0 < m < 1$. Our focus is privately supplied sick pay, thus we simplify and assume that all firms monitor at the same level and costs. Monitoring intensity is usually treated as a key firm choice variable. Public sick pay is also ignored for simplicity.

a can also be interpreted as the sick leave probability. By staying home on sick leave the worker receives sick pay S . By showing up to work a worker agrees to put up the contracted effort. As is common in "shirking"-models, work effort is assumed to be associated with disutility, i.e., one can derive a cost of effort function, C , expressed as a function of the presence probability $(1-a)$. We assume that C is a convex function, i.e., $C'(1-a) > 0$ and $C''(1-a) > 0$. An absent and monitored worker is fired.⁵ Each worker then maximises:

$$1) \quad (1-a)U(W) + a(1-m)U(S) + amU(R) - C(1-a),$$

⁵ This is a necessary assumption in these kinds of models but empirically unrealistic. In countries with stringent employment protection legislation, even being caught shirking might not end in being fired. However, one might reinterpret this as expressing long-term direct and indirect costs. For example, absenteeism not grounded in illness affects career opportunities and future wages.

where U expresses a Von Neumann-Morgenstern utility function, $U' > 0$, $U'' < 0$, R expresses the workers outside options, and $C(\cdot)$ expresses a convex cost function of providing effort as a function of a ($C' > 0$, $C'' > 0$). Workers' first order condition for maximization is given by:

$$2) \quad U(W) - U(S) + m[U(S) - U(R)] = C'(1-a^*),$$

i.e., the marginal cost of providing effort equals the marginal gain from showing up at work added the marginal loss if caught shirking.

This simple model then yields different predictions for the UK and Norway on absenteeism. Assume that the cost of providing effort can be represented by a quadric function, $C(1-a) = c(1-a)^2$. The sick pay in the UK could be interpreted as being equal to the outside options, i.e., $S=R$. For Norway, $S=W$ for wage levels below $6G$, but fixed at $S=6G$ above. Thus $(1-a)^{UK} = [U(W) - U(R)]/2c$, implying that $\frac{\partial a^{UK}}{\partial W} = -U'(W)/2c < 0$. For Norway and $W < 6G$ then $(1-a)^{Norway} = m[U(W) - U(S)]/2c$, implying that $\frac{\partial a^{Norway}}{\partial W} = -mU'(W)/2c < 0$. If monitoring of workers in Norway is very low or absent, then for absence will not diminish with wages for wages less than $6G$.⁶ Above $6G$, this becomes equal to the UK, $\frac{\partial a^{Norway}}{\partial W} = -U'(W)/2c < 0$. Thus we should see less or no impact from wages in Norway under the $6G$ -threshold relative to the impact observed in the UK, but for workers earning above the $6G$ -limit the behaviour should be similar in the two countries. For the Norwegian workers we should see that absenteeism becomes more negatively related to wages.

The utility set up above could be interpreted as the utility of a staying worker, $U^{stay} = U$. Then worker mobility could be modelled as: $q = q(W, S) = \Pr(U(\text{wage offer competing firm}) > U^{stay})$.

We easily see that $\frac{\partial U^{stay}}{\partial W} > 0$ and $\frac{\partial U^{stay}}{\partial S} > 0$ ⁷, i.e., since $q(w, a)$, then $\frac{\partial q}{\partial W} < 0$ and $\frac{\partial q}{\partial S} < 0$.

In this modelling framework firms maximize profits by choosing the optimum mix of wages and sick pay (as pointed out we ignore the monitoring aspect, thus these costs are dropped). Firm profits may be described by Equation 3), where workforce size is normalised to 1:

$$3) \quad \Pi = (1-q)[(1-a)P - (1-a)W - (1-m)aS - T(q)] - qT(q),$$

⁶ Note that we focus on physician-certified sick leaves. It might be close to impossible to define such an absence as shirking. In addition, as in the other Scandinavian countries, Norwegian physicians seldom deny sickness certificates (Wahlström and Alexanderson, 2004; Carlsen and Nyborg, 2009).

⁷ This is easily seen differentiating U^{stay} : $\frac{\partial U^{stay}}{\partial W} = (1-a)U'(W) - [U(W) - (1-m)U(S) - mU(R)] \frac{\partial a}{\partial W} > 0$ and $\frac{\partial U^{stay}}{\partial S} = a(1-m)U'(S) - [U(W) - (1-m)U(S) - mU(R) - C'(1-a)] \frac{\partial a}{\partial S} > 0$ (note that the last term in bracket is 0 since it is the FOC).

where P expresses the value of the final product (product price \times quantum produced), W and S denote the wage and sick pay, respectively, a and m express the absence rate and the monitoring-and-found-shirking intensity ($0 < m < 1$), respectively. Finally, we have entered a turnover (training) cost element, T , where $T' > 0$ and $T'' > 0$, in line with Salop (1979). Firm maximizes Π w.r.t. W and S . This yields two first-order conditions (FOCs):

$$4) \quad -\{[(1-a)P - (1-a)W - (1-m)aS - Z(m) - T(q)] + T'(q) + T''(q)\} \frac{\partial q}{\partial S} = (1-q)[(1-m)a + (P-W - (1-m)S)] \frac{\partial a}{\partial S},$$

$$5) \quad -\{[(1-a)P - (1-a)W - (1-m)aS - Z(m) - T(q)] + T'(q) + T''(q)\} \frac{\partial q}{\partial W} = -(1-q)[(1-a) + (P-W - (1-m)S)] \frac{\partial a}{\partial W}.$$

The first FOC expresses that the marginal turnover costs saved by increasing sick pay should be equal to the marginal shirking costs. This shows that firms might rationally increase (or introduce) private sick pay even if it increases absenteeism, if the gains in turnover costs compensate for this. The second FOC expresses that the marginal wage costs (and thus profit) should be equal to the saved marginal turnover and absence costs.

4. Empirical strategy

We apply three empirical strategies in this paper; two address and establish how absenteeism is affected by sick pay, and one targets the provision of private sick pay (above the statutory limit).

First, to identify the role played by public sick pay provision we exploit differences in public sick pay provision across Norway and Britain. As described in Section 2 the Norwegian sick pay is kinked, i.e., fully compensation occur until the earnings threshold of 6G, whereafter no further earnings increases the sick pay. Since no such kink exists in Great Britain, the empirical strategy of directly comparing the relationship between absenteeism and pay between Norway and Great Britain under and above the Norwegian threshold should provide insight into how sick pay affects absenteeism. Since the workplace sick leave rate (following the notation in Section 3, denoted by a is highly non-normally distributed, we use the logit-transform to normalise our dependent variable (i.e., $\ln[a/(1-a)]$). Then we apply simple difference-in-difference OLS regressions of this transformed workplace sickness rate on the workplace average of log hourly wage and interactions with a country dummy and a dummy for pay above the threshold and other controls. This is described by Equation 6):

$$6) \quad \ln\left[\frac{a}{1-a}\right]_i = \alpha_1 \text{Norway}_i + \alpha_2 \ln w_i + \alpha_3 \ln w(>6G)_i + \alpha_4 \ln w \times \text{Norway}_i + \alpha_5 \ln w(>6G) \times \text{Norway}_i + X_i' b + \varepsilon_i,$$

where the $X'b$ -vector expresses different sets of controls, and ϵ expresses a standard error term. Note that due to the logit-transformation one needs to derive the average marginal effects in these regressions, one has to multiply the estimated variable by the average $(1-a)$.

The Norwegian 6G-threshold pertains to individual's sick pay. When aggregating to the workplace level, this threshold could be interpreted as a censoring at 6G for the individuals, and thus affect the workplace average. Therefore, we expect to see less or no impact from wages in Norway under the 6G-threshold relative to the impact observed in the UK, but for workers earning above the 6G-limit the behaviour should be more equal in the two countries. For the Norwegian workers we should see that absenteeism becomes more negatively related to wages. Our analyses might easily incorporate or control for employer-provided sick pay, other benefits and pay systems.

Next, since the Norwegian system is kinked, we can apply a regression kink design a la Böckerman et al. (2014) where, in contrast to previous studies, we can take into account employer-provided sick pay and employer pay systems (even those linking bonuses to absence behaviour). Thus we can identify a causal impact by comparing the sick leave behaviour of workers located below and above the threshold for workers employed under different sick pay and pay regimes. The regression kink design is established by the work of Card, Lee, Pei and Weber (2015, 2016) and of Calonico and Cattaneo and co-authors in a series of studies (Calonico et al., 2014a, 2014b; Cattaneo et al., 2014, 2015, 2016). As pointed out in Section 3 we have good reasons to believe that the any negative relationship between sick leave days and earnings is weak below the public sick pay threshold, since for these workers the replacement rate is 100 percent and the monitoring intensity low. For workers above the threshold, a negative relationship between sick leave days and earnings should become apparent. In the KRD-approach, one identifies the changes in the slope of outcome variable, i.e., sick days, below and above the kink, and divides this on changes in the slope of the running variable, i.e., sick pay. To exemplify, let SD and E denote sick days and monthly earnings, let G denote the 6G-threshold (in monthly terms), and D expresses a dummy taking the value of 1 if earnings is above the kink. Then one estimates:

$$7) \quad SD_i = \alpha_0 + \alpha_1(E-G)_i + \alpha_2(E-G)_i * D_i + \alpha_3(E-G)_i^2 + \alpha_4(E-G)_i^2 * D_i + \dots + \mu_i,$$

on a data-determined interval around the kink. The estimate for α_2 then identifies the impact on the slope of sick days. We follow Cattaneo et al. (2014, 2015, 2016) in identifying the appropriate bandwidth and polynomials. As robustness tests, we base our estimations on half and twice the optimum bandwidth. We also test out different placebo-kinks, by letting the kink-point vary.

Note also that below the kink, S increases with W at a rate of 1. Above the kink, S does not change with W , i.e., this slope changes by 1.

Third, to study how the employer provision of sick pay is related to training costs, other work organization measures, non-wage benefits, work characteristics and unions, we estimate simple Logistic regressions models.

5. Data

Our data are the British Workplace Employment Relations Survey 2011 (WERS 2011) and the Norwegian Workplace Employment Relations Survey 2012 (NWERS 2012) supplemented by Norwegian population-wide register data (for the period 2000-2012). Although WERS (NWERS) covers workplaces with at least 5(10) employees in all sectors of the British (Norwegian) economy, we confine our analyses to the private sector, where the market setting means the profit-maximising assumptions invoked earlier are most likely to hold. Information in WERS was acquired through face-to-face interviews which were conducted with the manager at the workplace responsible for employment relations. The response rate in 2011 was 46%. Information in NWERS was acquired through computer-assisted telephone interviews which were conducted with the daily manager at the workplace or the manager responsible for employment relations. The response rate was 54%, but since the main reason for non-response was respondents not being reached by Statistics Norway (36 percentage points) and not by respondents refusing to participate, selection issues are unlikely to be a problem.⁸. WERS is documented in van Wanrooy et al. (2013), while NWERS is documented in Holmøy (2013).

The British WERS survey comprises information on absenteeism at the workplace level, while wage information is available at the worker level (and aggregated to workplace). In addition, WERS contains information on a range of organisational practices, risks, injuries, additional sick pay and pay systems. The Norwegian WERS comprises similar data on organisational issues, pay systems, risk and self-certified absence rates. However, wages and physician-certified sick leaves are collected from the public administrative registers on the worker level (or actually job level), thus allowing analyses of individual behaviour. Note that physician-certified sick spells in Norway might be partial, e.g. 20 or 50 percent on sick leave. We take this into account by creating two measures; one measure based on the observed absence days, and one measure where we weight the absence days by how partial the absence is. For example 1 day on 100 percent sick leave is equal to 2 days on 50 percent sick leave.

⁸ In NWERS 12.7 percent of the issued sample refused to participate. In both NWERS and WERS detectable response biases were corrected using sampling weights.

In addition we have linked monthly wages and bonuses from Statistics Norway' Wage Statistics, to get a more precise measure of monthly earnings (which are important for sick pay). All money values are 2011 pounds (PPP-adjusted) (1£=9.032 Norwegian kroner(NOK)). We pool the Norwegian and British workplace level data, and create an absence measure transformed to normality, the logit of the sick leave rate, similarly to what is done previously in the literature on absenteeism (Heywood and Jirjahn, 2004).

6. Results

6.1 Descriptive aggregate evidence

We start by looking closer on aggregate statistics. In Table 1 we present figures for private sector workplaces with more than 10 employees in the UK and Norway. The first and obvious finding is that the sick leave rate is considerably higher in Norway than in Great Britain.

[TABLE 1 AROUND HERE]
[FIGURE 2 AROUND HERE]

In the table we see that employer-provided sick pay is equally prevalent in Norway as in Britain (48% vs. 44%), but distributed quite differently as expected due to the kink in the Norwegian sick pay scheme. High wage workplaces (defined as workplaces with average wage above 6G (=52110£)), comprise 30% and 37% of the workplaces in Norway and Britain, respectively. Close to 45 percent of the Norwegian workplaces providing additional private sick pay have mean earnings above 6G. Less than 20 percent of the workplaces where only statutory sick pay is provided have mean earnings above 6G. This is natural since statutory sick pay provides total replacement for the majority of workers. In Britain the percentage of workplaces offering sick pay above the statutory minimum is similar above and below the 6G threshold (36% vs. 39%), since no kink in public provision exists at this (or, indeed any other) point in the earnings distribution.

Note that employer-provided supplementary sick pay is only relevant for a minority of the Norwegian workers employed by those employers who provide supplementary sick pay (those earning above 6G), it is potentially relevant for all British workers employed at similar workplaces since the statutory sick pay is so low in Britain. It is also evident that the non-wage benefits such as supplementary sick pay is bundled together with other health-related non-wage benefits such as extended sick leave in the UK and to a certain degree, the provision of private health insurance. The same appears to a lesser extent to be the case in Norway. Two other aspects are worth

considering. First, both in the UK and Norway, employers are more likely to offer sick pay above the statutory minimum where it takes longer for new workers to be trained in their jobs. This indicates that training costs could be important for the provision of sick pay in excess of the statutory minimum. Second, sick pay in excess of the statutory minimum is positively associated with trade union coverage in Britain but not in Norway. Since sick pay in excess of the statutory minimum is a benefit important for most workers in Britain, but only high wage workers in Norway, this is more important for unions in Britain than Norway (high wage workers are less unionised in both countries).

6.2 The impact of the Norwegian sick pay threshold – comparative analyses

Next, we turn to the OLS regression analyses. The results from these are presented in Table 2. In Models 1 – 5 the dependent variable is the logit of the observed sick leave rate, while in Models 6 and 7 we use for robustness checks the sick leave rate adjusted for partial sick leave instead.⁹ In Panel A) we report the parameter estimates associated with our key variables. In Panel B) we report the estimates (and standard errors) of the estimated linear expressions. Finally, in Panel C) we report the estimated marginal effects. First, we establish as expected, that the sick leave level is much higher in Norway than in Great Britain (Model 1). Second, we see that when we take into account wages (and thus implicitly sick pay) (Models 2-7), then Norway is not different from Great Britain.

[TABLE 2 AROUND HERE]

Next, we see that the 6G-threshold matters for sick leave in Norway but not in Britain. Then we show that the elasticity of sick leaves with respect to wages is strongly negative in Britain, but does not differ below and above the Norwegian 6G-threshold, which is to be expected since this threshold does not exist in Britain. For Norway, however, no significant relationship between sick leave and wages is found below the 6G-threshold, but a strong negative elasticity appears for the high wage workplaces, and then particularly when focussing on those workplaces where no additional private sick pay is provided. These relationships survive a wide range of controls which take into account differences with respect to industry, pay schemes (performance and merit pay, employee share scheme (ESS) and Company Share Ownership Programs (CSOPs), and work organisation (e.g., teams). These regressions reveal that the replacement rate matters for Norwegian workers' sick leave behaviour.

⁹ Note in model 2-7, when we allow the relationship between wages and absenteeism to be kinked (at 6G), we do not allow a jump at the kink (thus following the KRD-approach). Incorporating such a jump, would not have qualitatively have changed our results.

6.3 *The impact of the Norwegian sick pay threshold – micro analyses*

In the previous section we provided evidence based on comparative workplace data that the threshold (and implicitly the replacement rate) mattered for sick leaves in Norway. However, this approach might be criticised for comparing two markedly different economies, i.e., UK and Norway, which differ along a series of institutional dimensions in ways that might make causal inference difficult. To test the impact of public sick pay provision further we focus on the Norwegian job level data only and conduct a regression kinked design (RKD) analysis (Card et al., 2012; 2015; Calonico et al., 2014a, 2014b). We apply the RKD-approach to job-level observations of both the observed number of sick days and the number of sick days adjusted for partial sick leaves for Norwegian workers in 2012 employed by workplaces in the NWERS-sample and in Statistics Norway’s Wage Statistics. The analyses are conducted separately for men and women. Previous studies (Dale-Olsen, 2012a, 2012b) have shown that female sickness absence pattern is less responsive to financial incentives.

In Table 3 we present the result of RKD-analyses for men. Except when we focus on male workers working under fixed pay, we see that at above the kink a loss of 1000 Norwegian kroner (NOK) in sick pay results in a reduction in 5 extra days of sick pay. At the kink (at monthly value of 39221 NOK) the marginal replacement rate changes from 1 to 0 (above the kink an absent worker only receives 6G in sick pay regardless of wages). As is seen in Table A1, the average number of sick days for male workers in this sample is around 47 days. Thus the drop is considerable.

[TABLE 3 AROUND HERE]

The effect on male workers is three times greater when they are paid a fixed wage. In the table we also show that these results are quite sensitive to the bandwidth choice (half the optimal and twice the optimal bandwidth yield poor results). The effect of the kink is visually seen in Figure 1. The right figure is just a close-up of the left.

[FIGURE 3 AROUND HERE]

Potentially one worry in the RD- and RKD-approach is a bunching of workers on one side of the kind, i.e., workers are able to manipulate the running variable. The standard approach to study this is to estimate how other variables are sensitive to the kink or discontinuity. In Table 4 we present the KRD-estimate associated with several other variables (whereof some have previously been used as controls). Table 4 reveals that with one exception, these analyses do not reveal any significant bunching around the kink.

[TABLE 4 AROUND HERE]

Another worry in the RD- and RKD-approach is that results may be driven by factors other than the real incentive difference made by the kink in sick pay replacement rates. Thus we have estimated the models applying several placebo-kinks, i.e., kinks where there in reality is none. In our case we have estimated the model for 10 placebo-kinks; for +/-1-5 percentage points deviation from the true threshold 6G. Figure 4 shows the results from these placebo-analyses.

[FIGURE 4 AROUND HERE]

Note that we expect that a placebo-threshold to the left of the true threshold should yield reduced RKD-estimates (the further away the lower). We similarly expect that placebo-thresholds to the right yields reduced RKD-estimates, but not necessarily so large. Figure 4 shows that when we deviate by more than 3 percentage points to the left of the true kink, the RKD-estimates are no longer significantly different from zero. As we move to the right of the true kink, the RKD-estimates remain approximately the same size and significant.

For women the picture is, however, starkly different. As is seen in Table A2 no significant impact is found regardless of model, and Figure A1 does not reveal a clear kink in the relationship between wages and sick leave days. This is not a big surprise. Dale-Olsen (2012) did not find any evidence in Norway that financial incentives matter for female absenteeism in 2003. Similarly, Ziebarth and Karlsson (2013) did not find any female response following increased generosity of the statutory sickness insurance system in Germany. This lack of response to financial incentives is obviously a robust characteristic of female sick leave behavior.¹⁰

6.4 The provision of supplementary employer-provided sick pay in addition to public sick pay

Finally, we consider the relationship between the provision of sick pay in excess of statutory sick pay and other workplace characteristics. We do this by estimating several Logistic regressions of the probability of providing sick pay. We estimate two sets of models (one with 2-digit industry controls), for both countries and separately for Great Britain and Norway. Table 5 presents our results in the form of marginal effects.

¹⁰ This can also be understood in line with findings from the experimental literature, analysing gender differences associated with competition, hereunder performance and selection. In this literature a common finding is that, at least in a Western patriarchal society, women have a tendency to avoid strong competition and underperform when the competitive pressure increase (Gneezy et al., 2003; Niederle and Vesterlund; 2007)(this relationship might be different in other cultures, as shown by Gneezy, Leonard and List (2008)). See also the survey of Niederle (2015) on gender differences in competitiveness, risk aversion and altruism. Thus financial incentives, such as sick pay, influence female sick leave behavior less than men.

[TABLE 5 AROUND HERE]

First, we see that given our set of controls, the Norwegian employers are 10 percentage points less likely to provide sick pay in excess of statutory sick pay. This is as expected, since the public authorities ensure a 100 per cent replacement rate for workers earning less than 6G. However, the table reveals certain findings that are robust across countries. First, the provision of excess sick pay is strongly related to the health related benefits provided by employers such as health insurance and extended leave, indicating that sick pay above the statutory minimum is akin to a fringe benefit. Second, employers do not provide sick pay in excess of statutory sick pay when their workers are employed under risky working conditions, suggesting that employers are sensitive to the potential costs associated with such provision. Third, trade union agreements and longer training time before workers are fully productive increases the probability that excess sick pay is provided, but these characteristics are strongly related to industry and thus hard to differentiate. Fourth, large firms are more likely to provide excess sick pay.

Then, what findings are specific to countries. First, Norwegian employers do provide sick pay in addition to statutory sick pay when workplace average earnings are above the earnings threshold. This threshold has no meaning in the UK, so this is as expected. Second, employers endorsing intensively high-powered incentive schemes in the UK are more likely to provide excess sick pay.

7. Conclusion

In this paper we have studied the provision of private sick pay in excess of statutory sick pay in Great Britain and Norway, two countries practicing distinctly different welfare regimes. In contrast to the majority of Norwegian workers who face a 100 percent replacement rate when absent from work due to illness, UK workers receive statutory sick pay on a par with the minimum wage. However, due to a 6G-threshold for sick pay in Norway, not all Norwegian face 100 percent replacement rate. We utilize this difference and show that the threshold and pay and thus indirectly sick pay are crucial for explaining the higher sick leave rate in Norway compared to the UK. When pay is no longer fully compensated, the sick leave rate drops. This notion is further supported when applying a regression kinked design to the Norwegian job level data, at least for male workers. Still, although the replacement rate clearly influences absenteeism, employers provide benefits that raise this compared to what is provided by statutory sick pay.

Theoretically we have shown that one reason why employers do provide sick pay in excess of statutory sick pay is related to turnover cost, or rather recruitment and training costs. Since workers appreciate health related benefits, even if these might increase costs related to absenteeism, they might reduce turnover costs. This is partly supported empirically.

Given the generous Norwegian public sick pay it is no big surprise that private sick pay in excess of statutory sick pay is less prevalent in Norway than Great Britain, and Norwegian employers primarily provide for high-wage workforces. However, in both these countries the provision of excess sick pay is clearly part of health related benefits package provided by employers, and employers provide this when recruitment costs are high and the working conditions are beneficial to workers. In addition, trade union agreements likely include paragraphs on sick pay in excess of statutory sick pay.

Appendix

[TABLE A1 AROUND HERE]
[TABLE A2 AROUND HERE]
[FIGURE A1 AROUND HERE]

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Table 1 The private sector sick leave rate and sick pay regimes. UK 2011 and Norway 2012.

	UK			Norway		
	All	Public sick pay only	Additional private sick pay	All	Public sick pay only	Additional private sick pay
Sick leave rate	0.044	0.045	0.042	0.068	0.069	0.066
Sick leave rate-adjusted	-	-	-	0.055	0.057	0.053
Ln hourly wage	2.199	2.053	2.353	3.110	2.957	3.220
Over 6G in earnings	0.369	0.358	0.386	0.299	0.178	0.449
Private sick pay	0.484	0	1	0.477	0	1
Extended leave	0.480	0.256	0.720	0.189	0.182	0.405
Private health insurance/GP	0.156	0.095	0.220	0.190	0.233	0.341
Risky work	0.342	0.382	0.299	0.262	0.337	0.226
Work control index (Design, discretion, pace)	1.751	1.680	1.841	1.585	1.574	1.598
Short time before new recruits perform as well as more experienced workers	0.321	0.385	0.253	0.387	0.456	0.269
Log workforce size	2.683	2.486	2.893	2.948	2.783	3.089
Trade union agreement(s)	0.172	0.063	0.289	0.793	0.688	0.711
High powered incentive index	0.671	0.511	0.876	0.739	0.667	0.845

Note: Population: 2680(1858) WERS2011- and 1888 (1107) NWERS2012-workplaces (private sector workplaces in parentheses). All observations are weighted to be representative for the population of workplaces with at least 10 employees.

Table 2 The relationship between sick pay and absenteeism in UK and Norway.

	Observed sick leave rate					Sick leave rate adjusted	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
A) Parameter estimates							
Norway(N)	0.903** (0.073)	-0.046 (0.477)	0.090 (0.554)	0.211 (0.546)	0.797 (0.758)	-0.425 (0.657)	0.577 (0.736)
Lnw		-0.605** (0.158)	-0.642** (0.159)	-0.577** (0.154)	-0.150 (0.202)	-0.668** (0.160)	-0.160 (0.222)
Lnw>G6		0.170 (0.106)	0.146 (0.122)		0.081 (0.128)	0.138 (0.118)	0.090 (0.127)
NorXLnw		0.514** (0.199)	0.461* (0.227)	0.396 ^x (0.219)	0.052 (0.284)	0.542* (0.256)	0.034 (0.284)
NorXLnw>G6		-0.263** (0.113)	-0.233 ^x (0.129)	-0.087** (0.029)	-0.130 (0.142)	-0.238 ^x (0.124)	-0.124 (0.139)
B) Estimated linear expressions							
UK:Lnw<G6		-0.605** (0.158)	-0.642** (0.159)	-0.577** (0.154)	-0.150 (0.202)	-0.668** (0.160)	-0.160 (0.222)
UK:Lnw>G6		-0.435** (0.160)	-0.496** (0.176)	-0.577** (0.154)	-0.068 (0.223)	-0.530** (0.167)	-0.070 (0.231)
N:Lnw<G6		-0.091 (0.082)	-0.181 (0.112)	-0.181 (0.112)	-0.097 (0.150)	-0.127 (0.172)	-0.126 (0.139)
N:Lnw>G6		-0.184** (0.070)	-0.268** (0.098)	-0.268** (0.098)	-0.228 (0.159)	-0.364* (0.184)	-0.250 (0.160)
C) Estimated marginal effects ($\partial sr/\partial w$)							
Norway(N)	0.056**	-0.003	0.005	0.013	0.048	0.021	0.029
UK:Lnw_<G6		-0.036**	-0.038**	-0.034**	-0.009	-0.033**	-0.008
UK:Lnw_>G6		-0.026**	-0.030**	-0.034**	-0.004	-0.026**	-0.003
N:Lnw_<G6		-0.005	-0.011	-0.011	-0.006	-0.006	-0.006
N:Lnw_>G6		-0.011**	-0.016**	-0.016**	-0.014	-0.018**	-0.012
Controls:							
Basic			Yes	Yes	Yes		Yes
Industry			Yes	Yes	Yes		Yes
Selection		No	No	No	Additional private sick pay only	No	Additional private sick pay only
R2	0.058	0.057	0.075	0.075	0.069	0.070	0.066
Observations	2150	2150	2082	2082	1297	2082	1297

Note: Population: WERS2011- and NWERS2012-workplaces. All observations are weighted to be representative for the population of workplaces with at least 10 employees. OLS regressions. Dependent variable: $\ln(a/(1-a))$ (= the logit of the sick leave rate). Lnw expresses log hourly wage measured in pounds. Lnw>G6 expresses $\ln w * I(\text{earnings} > 6G)$, i.e., the interaction between log hourly wage and the dummy for whether earnings are above 6G (the earnings threshold for public sick pay in Norway). "NorX" then expresses the interaction with the Norway dummy. Basic control vector: dummy for trade union agreement, working conditions such as risk (1), pollution (1), and physical (1), pay regimes (4), benefits (3), worker discretion and design (2), team (1) and recruitment costs (1). The industry control vector takes into account 2-digit SIC industry differentials. See Table A2 for parameter estimates. Industry clustered standard errors presented in parentheses. ^x, *, and ** denote 10, 5, and 1 percent level of significance, respectively.

Table 3 The impact of public sick pay on the duration of sick leaves. 2012. Men.

	Model 1		Model 2		Model 3	
	Sick days	Sick days adjusted	Sick days	Sick days adjusted	Sick days	Sick days adjusted
Kinked RD (C)	-5.294*	-4.175*	-5.737*	-4.714*	-14.788*	-13.912*
	(2.492)	(1.731)	(2.766)	(2.368)	(6.170)	(4.671)
Kinked RD-robust/bias-corrected(RB)	-6.747*	-5.261*	-7.424*	-5.944*	-18.881*	-17.688*
	(3.270)	(2.265)	(3.610)	(3.098)	(8.314)	(6.074)
Total observations	19990	19990	18613	18613	6920	6920
Bandwidth(bw)	12.113	13.243	11.414	10.775	9.785	10.090
Obs. left cutoff	8452	9698	7061	6438	1959	2102
Obs. right cutoff	2820	2970	2609	2544	1160	1160
KRD-50%bw-C	0.519	2.274	0.218	4.323	-21.554	-15.656
	(6.831)	(4.711)	(7.639)	(6.515)	(18.715)	(13.787)
KRD-200%bw-C	-2.047*	-1.708*	-1.961 ^x	-2.166*	-4.118	-3.678 ^x
	(1.044)	(0.738)	(1.161)	(0.980)	(2.682)	(1.778)
Selection and covariates						
Selection	All	All	All	All	Fixed pay	Fixed pay
Covariates	No	No	Yes	Yes	Yes	Yes

Note: Population: workers employed 2011 and 2012 in private sector NWERS-workplaces and sampled by Statistics Norway's Wage Statistics survey. Table elements express the parameter estimate of the kinked regression line (above the cutoff) based on the kinked regressions design approach of Cattaneo et al. (2014, 2015, 2016). Dependent variable is sick leave days. The running variable is measured in 1000 Nok. Two sets of estimates are presented: standard estimates based on the optimal bandwidth of Imbens and Ka (2009), and one sets of bias-corrected and robust estimates based on Cattaneo et al. (2014). KRD-50% and KRD-200% denote the parameter estimates and bias-corrected and robust standard errors based on half the optimal bandwidth and twice the optimal bandwidth, respectively. Cutoff (=threshold for public sick pay) is defined at 6 times the monthly baseline Social Service figure G (6G=41064 NOK=5493.9€=4453.8£). Pay is measured by the monthly base wage (i.e., excluding bonuses and overtime compensation). Selection: Fixed pay denotes that observations of workers employed by workplaces providing performance or merit pay are discarded from the analyses. Covariates: log workforce size and dummies indicating whether additional private sick pay is provided, risky work, trade union agreement, short training time needed, extended leave allowed, private health insurance provided, workers have large influence over work organization/design, pace and discretion. *, **, and *** denote 10, 5, and 1 percent level of significance, respectively.

Table 4 Robustness checks. Kinked Regression Design-estimates on other variables. Male workers.

	All		Fixed Pay	
	Estimate	Robust S.E	Estimate	Robust S.E.
Log Work hours	-0.052	(0.044)	-0.050	(0.076)
Log Work days	0.001	(0.023)	0.033	(0.029)
Log workplace wage observations	0.061	(0.068)	-0.084	(0.111)
Additional sick pay	-0.024	(0.020)	0.073	(0.052)
Trade union agreements	-0.020	(0.021)	0.023	(0.015)
Short training time	0.002	(0.019)	-0.129	(0.044)
Private health insurance	-0.031	(0.043)	0.050	(0.045)
Extended leave	-0.037	(0.029)	0.048	(0.042)
High-powered incentive index	-0.002	(0.029)	-	-

Note: Population: workers employed 2011 and 2012 in private sector NWERS-workplaces and sampled by Statistics Norway's Wage Statistics survey. Table elements express the parameter estimate of the kinked regression line (above the cutoff) based on the kinked regressions design approach of Cattaneo et al. (2014, 2015, 2016). The table reports estimates and robust standard errors following Cattaneo et al. (2014). Cutoff (=threshold for public sick pay) is defined at 6 times the monthly baseline Social Service figure G (6G=41064 NOK=5493.9€=4453.8£). Pay is measured by the monthly base wage (i.e., excluding bonuses and overtime compensation). Selection: Fixed pay denotes that observations of workers employed by workplaces providing performance or merit pay are discarded from the analyses. *, **, and *** denote 10, 5, and 1 percent level of significance, respectively.

Table 5 Why do employers provide additional private sick pay? Marginal effects.

	All		UK		Norway	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Norway	-0.101 [*]	-0.104 ^{**}				
	(0.041)	(0.038)				
Over 6G in earnings	0.059	0.048	0.005	0.020	0.237 ^{**}	0.203 ^{**}
	(0.064)	(0.070)	(0.062)	(0.060)	(0.034)	(0.040)
Over 6G in earningsXNorway	0.177 ^{**}	0.155 ^{**}				
	(0.062)	(0.065)				
Trade union agreement(s)	0.135 ^{**}	0.145 ^{**}	0.203 ^x	0.154	0.135 ^{**}	0.145 ^{**}
	(0.045)	(0.041)	(0.120)	(0.104)	(0.045)	(0.041)
Risky working conditions	-0.151 ^{**}	-0.116 [*]	-0.084 [*]	-0.065 ^x	-0.151 ^{**}	-0.117 ^{**}
	(0.040)	(0.038)	(0.036)	(0.038)	(0.040)	(0.038)
Short time before new recruits perform as well as more experienced workers	-0.122 ^{**}	-0.116 ^{**}	-0.071 ^x	-0.032	-0.122 ^{**}	-0.116 ^{**}
	(0.036)	(0.032)	(0.041)	(0.039)	(0.036)	(0.032)
Extended leave	0.173 ^{**}	0.159 ^{**}	0.286 ^{**}	0.264 ^{**}	0.172 ^{**}	0.158 ^{**}
	(0.040)	(0.042)	(0.037)	(0.034)	(0.040)	(0.042)
Health insurance	0.067 ^x	0.087 [*]	0.149 ^{**}	0.166 ^{**}	0.066 ^x	0.087 ^x
	(0.036)	(0.032)	(0.051)	(0.055)	(0.035)	(0.032)
Control index	-0.017	-0.022	0.046	0.012	-0.017	-0.022
	(0.025)	(0.030)	(0.034)	(0.030)	(0.055)	(0.030)
High-powered incentive index	-0.008	0.010	0.070 ^{**}	0.063 ^{**}	-0.009	0.010
	(0.030)	(0.028)	(0.022)	(0.021)	(0.031)	(0.028)
Log workforce size	0.215 ^{**}	0.043 ^x	0.034	0.050 ^{**}	0.045 [*]	0.043 ^x
	(0.085)	(0.025)	(0.021)	(0.019)	(0.018)	(0.025)
Other controls						
Industry		Yes		Yes		Yes
Pseudo-R2	0.131	0.231	0.216	0.295	0.130	0.232
N	2304	2304	1283	1283	1021	1021
Predicted probability reference	0.529	0.517	0.195	0.270	0.409	0.394

Note: Population: WERS- and NWERS-workplaces. The table elements report estimated marginal effects and standard errors based on Logit-regressions of the probability of providing additional private-financed sick pay. All observations are weighted to be representative for the population of workplaces with at least 10 employees. The industry control vector takes into account 2-digit SIC industry differentials. The predicted probability for the reference case takes zero as value for all explanatory variables reported in the table except for log workforce which takes the value of 4. Industry clustered standard errors presented in parentheses. ^x, ^{*}, and ^{**} denote 10, 5, and 1 percent level of significance, respectively.

Table A1 Descriptive statistics

	UK		Norway		Norway KRD - Men		Norway KRD- Women	
	Mean	St.Dev.	Mean	St.Dev.	Mean	St.Dev.	Mean	St.Dev.
Sick leave rate	0.051	(0.076)	0.0680	(0.055)	-	-	-	-
Logit sr	-3.515	(1.212)	-2.786	(0.731)	-	-	-	-
Sick days	-	-	-	-	47.58	(74.17)	58.128	(81.867)
Ln hourly wage	2.312	(0.462)	3.176	(0.430)	-	-	-	-
Monthly fixed pay	-	-	-	-	-5.300	(15.018)	-9.430	(13.235)
Additional sick pay	0.659	(0.474)	0.583	(0.493)	0.798	(0.401)	0.765	(0.424)
Trade union agreements	0.316	(0.465)	0.763	(0.426)	0.905	(0.293)	0.878	(0.327)
Short training time	0.268	(0.443)	0.359	(0.480)	0.320	(0.467)	0.356	(0.479)
Priv. health insurance	0.218	(0.413)	0.328	(0.470)	0.400	(0.490)	0.401	(0.490)
Extended leave	0.621	(0.485)	0.360	(0.480)	0.480	(0.500)	0.462	(0.499)
High-powered incentive index	0.958	(1.093)	0.875	(0.886)	1.113	(0.954)	1.120	(1.056)
Log workforce size	4.173	(1.669)	3.822	(1.313)	4.770	(1.098)	4.823	(1.319)
Observations	1062		1033		18484		10210	

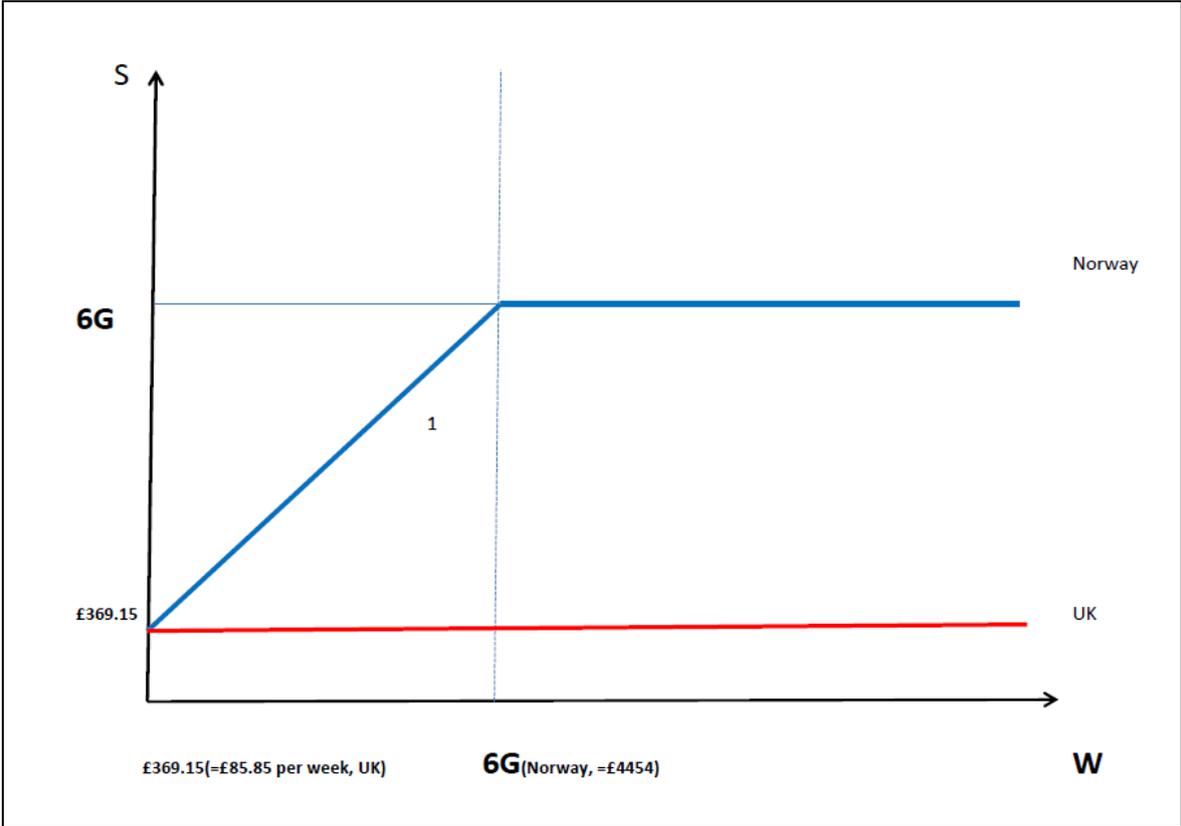
Note: Populations: UK and Norway=private sector WERS2011- and NWERS2012-workplaces; Norway KRD=workers employed 2011 and 2012 in private sector NWERS-workplaces and sampled by Statistics Norway's Wage Statistics survey. Log hourly pay for UK and Norway is based on 2011 pounds (PPP-adjusted), where 1£=9.032 Norwegian kroner (NOK). Monthly fixed pay is measured in Norwegian kroner as the deviation from monthly 6G-threshold (39221 NOK).

Table A2 The impact of public sick pay on the duration of sick leaves. 2012. Women.

	Model 1		Model 2		Model 3	
	Sick days	Sick days adjusted	Sick days	Sick days adjusted	Sick days	Sick days adjusted
Kinked RD (C)	-3.676	-1.695	-2.137	-0.717*	-6.001	-4.420
	(4.761)	(3.061)	(4.708)	(3.044)	(10.958)	(6.799)
Kinked RD-robust/bias-corrected(RB)	-5.326	-2.563	-3.351	-1.474	-10.943	-9.682
	(6.943)	(4.579)	(6.926)	(4.573)	(15.748)	(9.973)
Total observations	11052	11052	10281	10281	4128	4128
Bandwidth(bw)	10.976	11.760	11.112	11.967	10.789	12.542
Obs. left cutoff	3567	3912	3456	3801	1051	1490
Obs. right cutoff	1163	1218	1123	1173	314	343
KRD-50%bw-C	-9.503	-5.309	-8.756	-4.258	-4.022	-10.616
	(14.486)	(9.811)	(14.511)	(9.731)	(31.232)	(24.166)
KRD-200%bw-C	0.715	0.781	0.984	1.135	4.006	3.712
	(1.899)	(1.268)	(1.895)	(1.265)	(4.289)	(2.745)
Selection and covariates						
Selection	All	All	All	All	Fixed pay	Fixed pay
Covariates	No	No	Yes	Yes	Yes	Yes

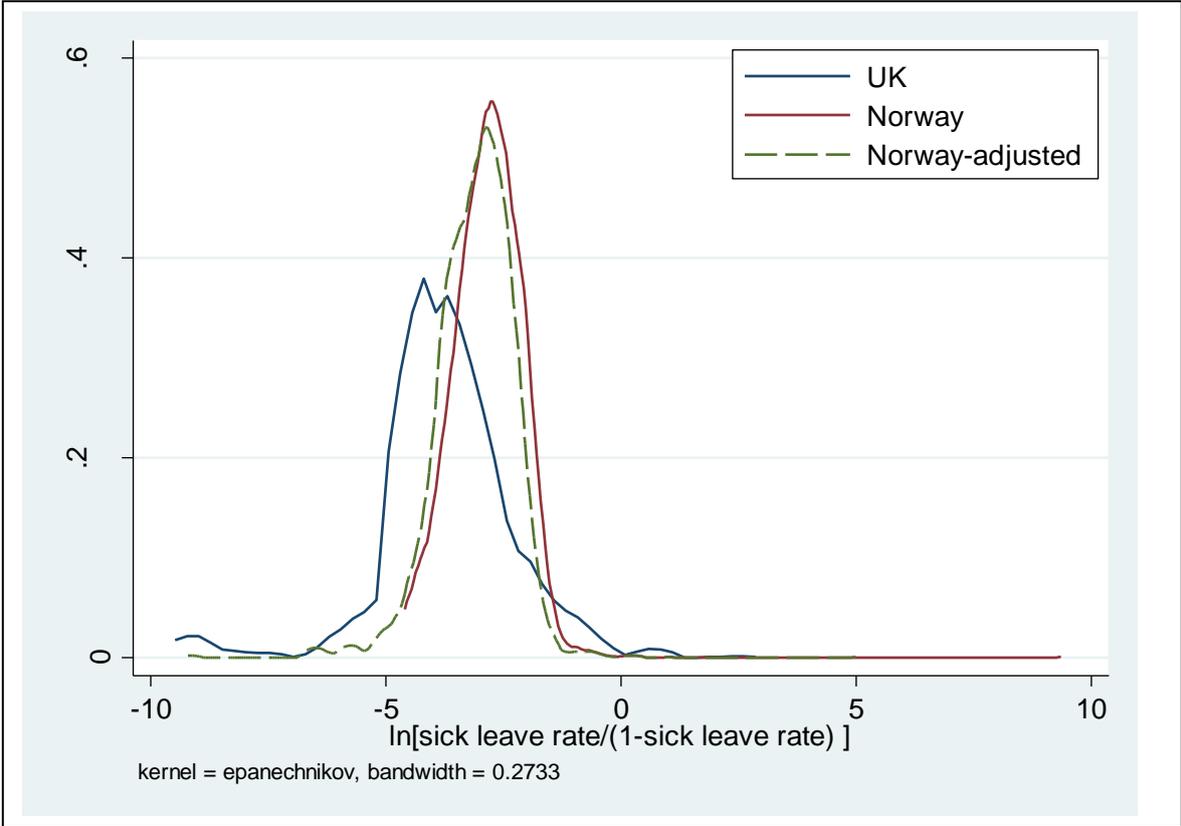
Note: Population: workers employed 2011 and 2012 in private sector NWERS-workplaces and sampled by Statistics Norway's Wage Statistics survey. Table elements express the parameter estimate of the kinked regression line (above the cutoff) based on the kinked regressions design approach of Cattaneo et al. (2014, 2015, 2016). Two sets of estimates are presented: standard estimates based on the optimal bandwidth of Imbens and Ka (2009), and one sets of bias-corrected and robust estimates based on Cattaneo et al. (2014). KRD-50% and KRD-200% denote the parameter estimates and bias-corrected and robust standard errors based on half the optimal bandwidth and twice the optimal bandwidth, respectively. Cutoff (=threshold for public sick pay) is defined at 6 times the monthly baseline Social Service figure G (6G=41064 NOK=5493.9€=4453.8£). Pay is measured by the monthly base wage (i.e., excluding bonuses and overtime compensation). Selection: Fixed pay denotes that observations of workers employed by workplaces providing performance or merit pay are discarded from the analyses. Covariates: log workforce size and dummies indicating whether additional private sick pay is provided, risky work, trade union agreement, short training time needed, extended leave allowed, private health insurance provided, workers have large influence over work organization/design, pace and discretion. *, **, and *** denote 10, 5, and 1 percent level of significance, respectively.

Figure 1 The public sick pay in UK and Norway



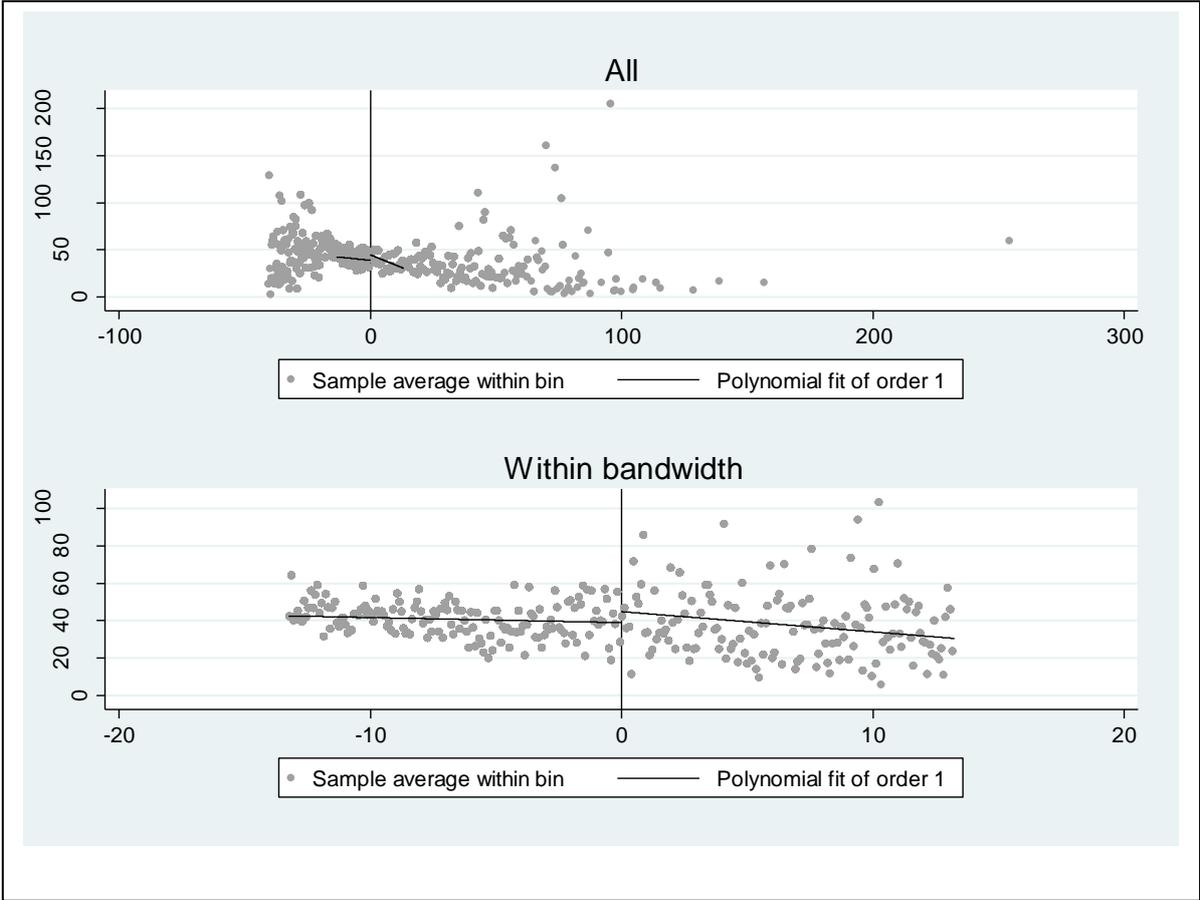
Note: The figure is based on 2012-legislation and a currency exchange rate of 1£=9.22Nok.

Figure 2 Distribution of the sick leave rate. 2011/2012. Kernel densities. Uk and Norway



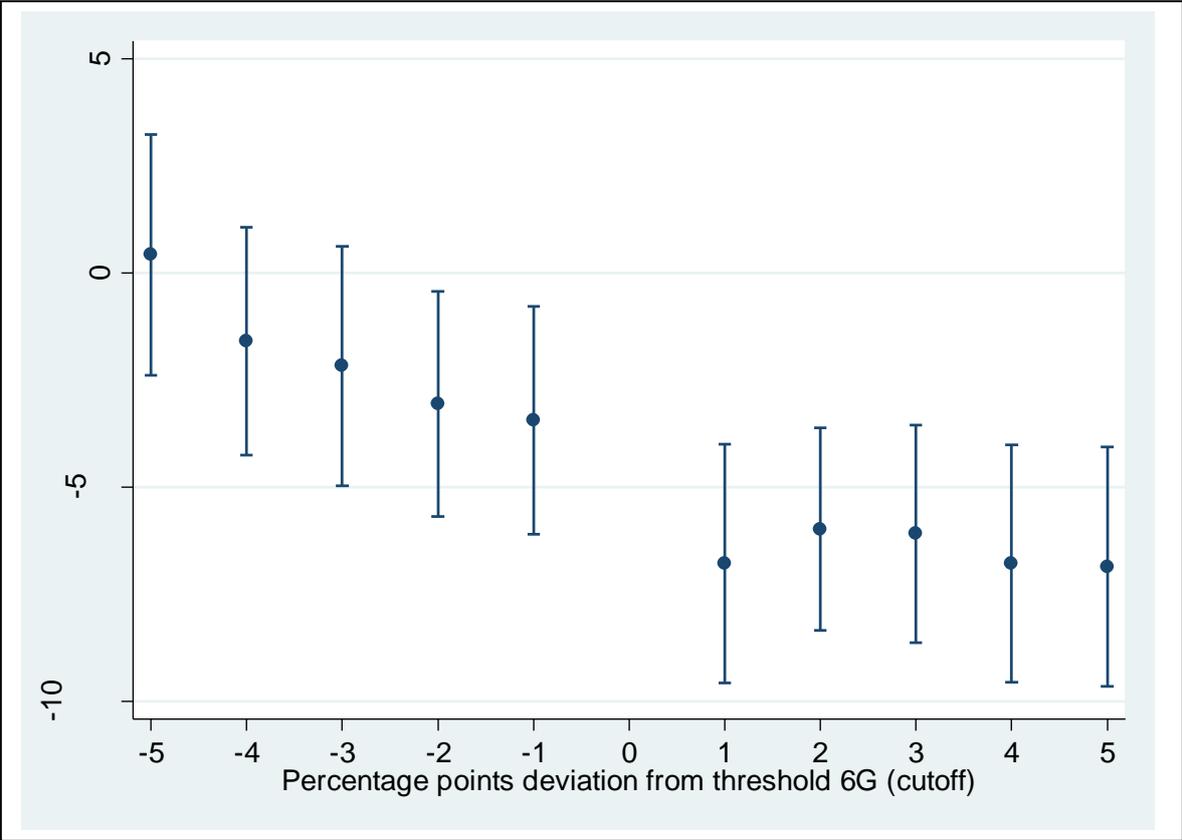
Note: The sick leave rate is measured by: $\ln(sr/(1-sr))$ (= the logit of the sick leave rate). The adjusted sick leave rate take into account graded sick leaves, i.e., when workers are partly on sick leave (for example, 50%).

Figure 3 The kink at 6G in the Norwegian sick pay legislation. 2012. Men.



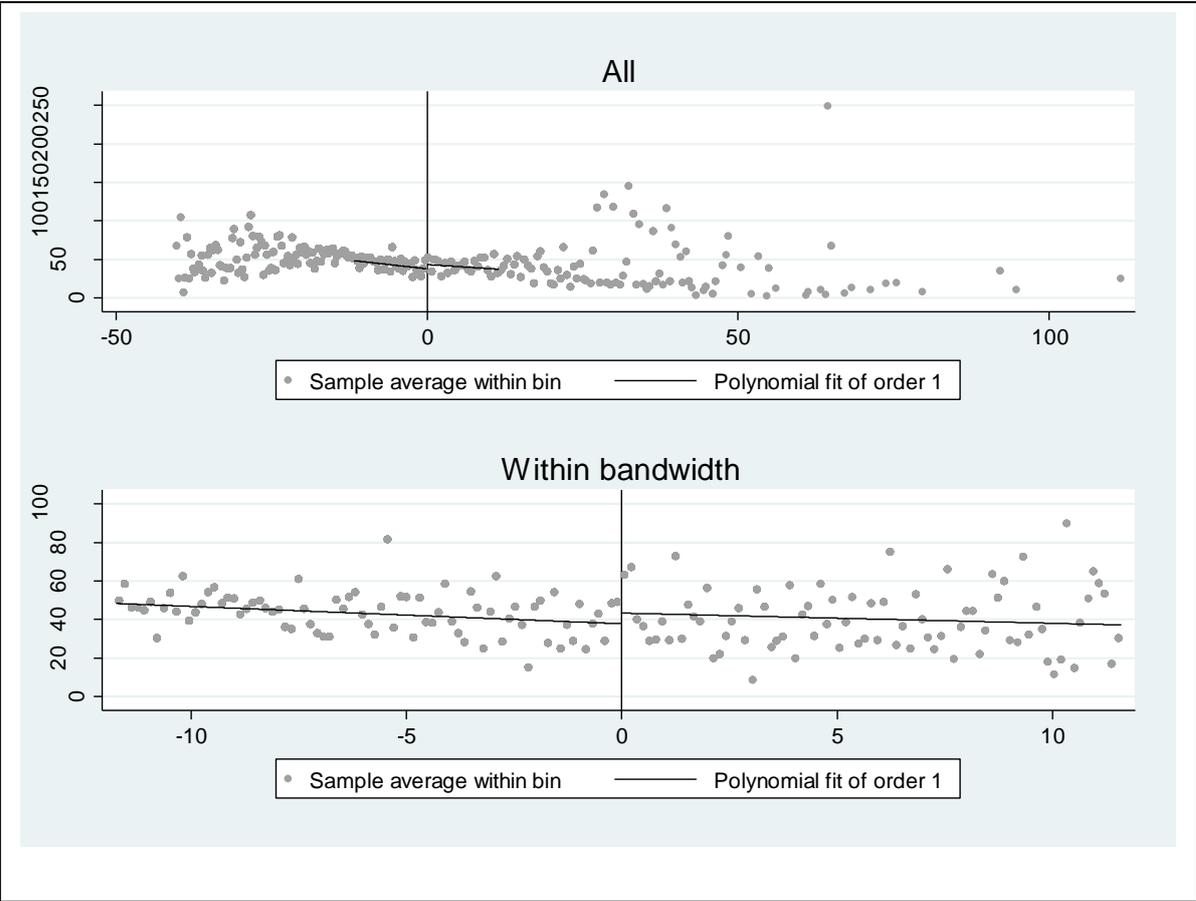
Note: Note: Population: workers employed 2011 and 2012 in private sector NWERS-workplaces and sampled by Statistics Norway’s Wage Statistics survey. Table elements express the parameter estimate of the kinked regression line (above the cutoff) based on the kinked regressions design approach of Cattaneo et al. (2014, 2015, 2016). Dependent variable is sick leave days. The running variable is measured in 1000 Nok. Cutoff (=threshold for public sick pay) is defined at 6 times the monthly baseline Social Service figure G (6G=41064 NOK=5493.9€=4453.8£). Pay is measured by the monthly base wage (i.e., excluding bonuses and overtime compensation). See text for more details.

Figure 4 The kink at 6G in the Norwegian sick pay legislation. 2012. Men. Placebo thresholds



Note: Population: workers employed 2011 and 2012 in private sector NWERS-workplaces and sampled by Statistics Norway's Wage Statistics survey. Table elements express the parameter estimate of the kinked regression line (above the cutoff) based on the kinked regressions design approach of Cattaneo et al. (2014, 2015, 2016). Dependent variable is sick leave days. The running variable is measured in 1000 Nok. Original cutoff (=threshold for public sick pay) is defined at 6 times the monthly baseline Social Service figure G (6G=41064 NOK=5493.9€=4453.8£). This is indicated by zero on the x-axis. Pay is measured by the monthly base wage (i.e., excluding bonuses and overtime compensation). See text for more details.

Figure A1 The kink at 6G in the Norwegian sick pay legislation. 2012. Women.



Note: Note: Note: Population: workers employed 2011 and 2012 in private sector NWERS-workplaces and sampled by Statistics Norway’s Wage Statistics survey. Table elements express the parameter estimate of the kinked regression line (above the cutoff) based on the kinked regressions design approach of Cattaneo et al. (2014, 2015, 2016). Dependent variable is sick leave days. The running variable is measured in 1000 Nok. Cutoff (=threshold for public sick pay) is defined at 6 times the monthly baseline Social Service figure G (6G=41064 NOK=5493.9€=4453.8£). Pay is measured by the monthly base wage (i.e., excluding bonuses and overtime compensation). See text for more details.