

## How to reduce workplace absenteeism

### Financial incentives and changes in working conditions are key to many broad and tailor-made programs

Keywords: workplace sickness absence, financial incentives, working conditions

#### ELEVATOR PITCH

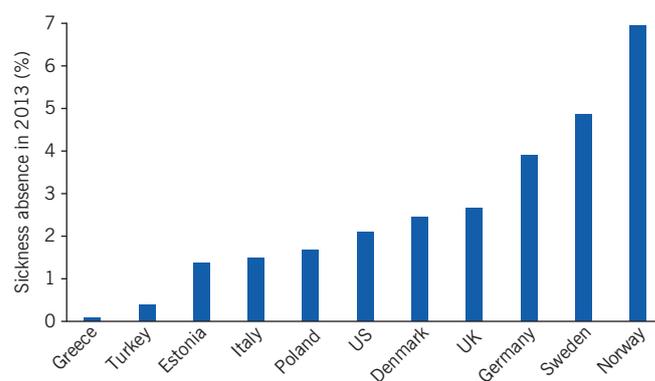
Do workplace programs help reduce worker sickness absence? Many programs are based on the principle that the employee's decision to report an absence can be influenced if it is costly to be absent. Firms can reduce absenteeism by implementing broad programs, including performance pay, general improvements of working conditions, and strengthening workers' loyalty to the firm. Specific programs, such as grading partial absence, seem to be effective at reducing long-term absences. However, firms will be less inclined to implement such programs if they can shift the financial burden to social security programs.

#### KEY FINDINGS

##### Pros

- + There is substantial variation of sickness absences across firms.
- + There is strong evidence that employees respond to negative incentives such as lower sick pay; positive incentives such as bonuses and lotteries also seem to be effective.
- + Absence can be reduced by (costly) improvements of working conditions.
- + Grading policies (e.g. allowing partial sick leave) for the recovery of long-term absentees are effective.
- + Some limited evidence suggests that absence is related to workers' loyalty to the firm.

Incidence of sickness absence in selected OECD countries



Source: Based on Figure 1.

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##### Cons

- It is not valid to dismiss workers in response to their sickness absence; employees may force themselves to go to work while sick, because of fears of excessive financial penalties.
- While increasing worker well-being, management programs for multitasking employees seem to increase short-term absences.
- The willingness of firms to introduce their own incentive schemes depends on the generosity of social security.

#### AUTHOR'S MAIN MESSAGE

Some of the available programs to reduce sickness absenteeism are broad, whereas others are closely connected to actual absence. Firms can introduce financial incentives to affect absenteeism in the workforce, including penalties, bonuses, and lotteries. They can also improve working conditions, e.g. by offering management programs that help employees better cope with multitasking. Finally, firms can apply grading systems to enable long-term absentees to return to work with partial responsibility. The usefulness of such programs depends on the generosity of social security, specific local labor market conditions, and the firm's type of production.

## MOTIVATION

Every workday, a sizable number of employees will report absence from paid work due to illness. It may take a few days before they recover and start working again, although long spells of sickness can also occur. Absentees' temporal inactivity leads to lost workdays that may slow down production. Sickness absence thus has negative consequences for productivity and raises the cost of production. Moreover, frequent and long-term absences decrease a worker's subsequent prospects of employment and earnings [1].

This article examines programs to reduce costly workplace sickness absence. An extensive economics literature is based on the conjecture that employees can, to some extent, decide to take more days of sickness absence than is strictly required from a medical perspective [2]. Consequently, it may be worthwhile for management to administer firm-specific programs, which can differ in scope and effectiveness.

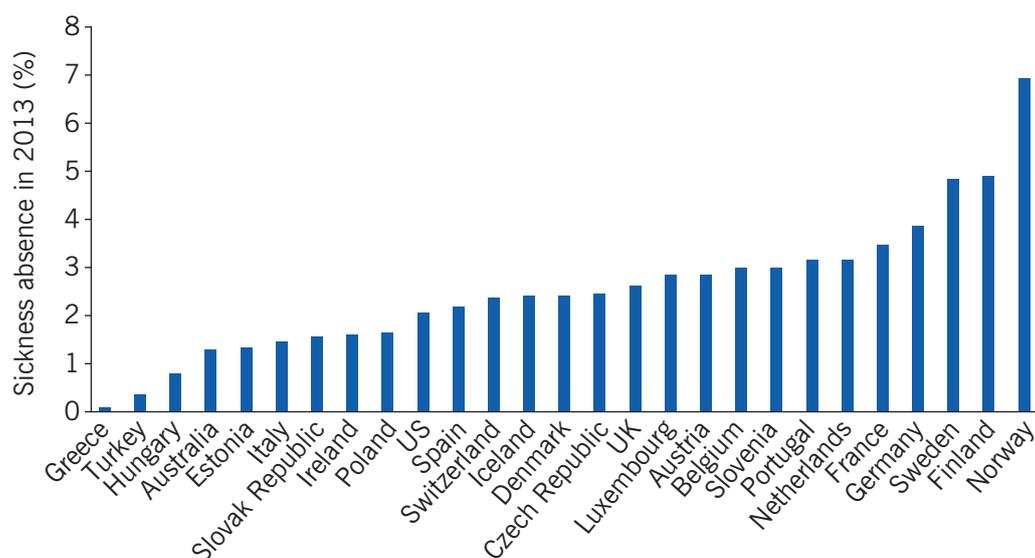
## DISCUSSION OF PROS AND CONS

Several reasons make it difficult for firms to implement effective programs to reduce workplace absence. The International Labour Standards on Employment Security of the ILO stipulate that temporary absence due to illness shall not be considered a valid reason for dismissal. However, employers cannot perfectly monitor and hence fully justify a worker's decision to be absent from work, since they cannot be fully informed about the worker's health condition. In many countries, the possibility of falsely reporting absence is supposedly ruled out by requiring a doctor's certificate for the notification of sick leave, which is required for workers to get sick pay. However, evidence from Norway casts doubt on the robustness of this system by showing that there are differences in leniency in providing sickness certificates across medical practitioners (see some references in [1]).

There are substantial differences in the average rate of sickness absence across OECD countries, as Figure 1 shows. On average, the incidence of sickness absence (defined as the share of employees absent from work due to sickness and temporary disability, for either one or all days of the work week) was about 2.5–3.0% in 2013. In Norway, with its generous system of social security, the average rate was almost 7%, whereas it was only about 0.1% in Greece [3]. Despite this significant variation across countries, sickness absence is typically quite substantial when compared to other groups of inactive persons in the labor market (e.g. the unemployed).

Moreover, the average rate of absence across different organizations can vary considerably. For instance, a study from 2004 concludes that establishment characteristics (e.g. economic sector) are at least as important as worker characteristics (e.g. gender) in predicting sickness absences [4]. Using simple statistical decomposition techniques, the study reports substantial variation in the number of employee sick days in 1991 across Swedish establishments. After statistically accounting for unobserved establishment characteristics, the estimated standard deviation in the annual average number of sick days per worker drops from ten to about five days (based on an overall annual average of 25 days of absence). This outcome suggests that establishment characteristics are related to sickness absence, and hence that employers are able to influence employees' absenteeism decisions.

Figure 1. Incidence of sickness absence in selected OECD countries



Source: Based on data from OECD. *Mental Health and Work: Netherlands*. Paris: OECD Publishing, 2014 [3].

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Seven types of programs for reducing workplace absenteeism will be examined in the following discussion, including considerations with respect to each program's pros and cons.

### Program 1: Negative financial incentives

Evidence shows that workers will reduce their sickness absences in response to negative financial incentives—rewards to workers that are related to the performance of specific activities. There are some drawbacks, however. In many countries, individual firms have limited possibilities to develop their own specific schemes. For instance, in the case of experience rating, they are prevented from doing so because they are legally obliged to meet minimum statutory sick pay requirements [3]. When using an experience rating, employees with many absences have a larger wage reduction, so that they will receive a larger penalty for reporting as absent. Furthermore, negative financial incentives may lead to the undesirable outcome of “presenteeism.” In other words, employees may force themselves to go to work while sick, because of fears of financial penalties.

Still, there are various ways to implement financial penalties for worker absenteeism. Lower levels of sick pay encourage workers to reduce absenteeism because their earnings decrease when earning sick pay instead of regular pay. The strength of such a negative incentive can be measured by the replacement rate, which is defined as the sickness insurance benefit—or sick pay—relative to the employee's earnings. In addition, the strength of an incentive is based on the coverage (or the access to sick pay), the waiting period, and the maximum duration of the sickness benefit. Furthermore, firms can strengthen the effectiveness of financial incentives by implementing better—costlier—monitoring systems, for instance by expensive administrative procedures that precisely register all of the employee's activities throughout the day. A well-thought-out system of monitoring should be a precondition for the use of financial incentives.

A 2011 study describes the US system as largely unregulated [2]. The private provision of paid sick days is the dominant model, although at least 40% of the formal private sector workforce in the US does not receive paid sick days or leave. The Family and Medical Leave Act guarantees unpaid leave for serious illnesses. In Europe, the same study states that there is a “bewildering array of interventions,” with sick pay regulated or even provided by the state in many countries—although the UK is an outlier, with an almost complete lack of state control of sick pay systems. (The UK has a statutory minimum sick pay, which is substantially below the minimum wage. Consequently, contractual sick pay offered by firms often exceeds the statutory minimum.)

In most European countries, sick pay is related to the social insurance system. Governments are involved in mandatory sick pay schemes in which there is statutory insurance for sick employees. In some countries, such as Norway and Luxembourg, the replacement rate is 100%. In others, such as France, there is a mandatory minimum sick pay (a fixed share of monthly earnings), and firms have the opportunity to provide supplementary sick pay [3]. Consequently, firms in many countries are limited in their ability to develop their own sick pay incentive schemes.

There is substantial evidence that a higher statutory sick pay will increase sickness absenteeism. A 2014 study investigates the effect of replacement rates on absenteeism [5]. It examines the effect of an increase in federally mandated sick leave benefits on sick leave in Germany. More specifically, the German statutory sick pay was increased from 80% to 100% of foregone gross wages on January 1, 1999. The law states that German employers are required to provide statutory sick pay for a period of six weeks per illness, starting on the first day of the illness, without any further benefit caps. The difference-in-differences estimates with matched data from the German Socio-Economic Panel indicate a 10–15% increase in the number of annual days of absence due to higher sick leave benefits.

## **Program 2: Performance pay**

Bonuses based on workplace performance can be considered as the reverse of financial penalties for sickness absenteeism. Performance pay gives employers the ability to overcome the drawback of not being able to fully observe their employees’ effort. Individual employees are rewarded for their output, irrespective of how it is accomplished. However, sickness absence comprises just one of the input dimensions into overall worker effort. As such, the introduction of performance pay seems to be a rather undirected—and hence costly—program to reduce sickness absence. Furthermore, the effectiveness of a bonus depends on how the production process is organized. For instance, in the case of team-based production—in which the collective effort of all workers is important—individual bonuses may crowd out the effort of other team members, because one team member is rewarded for the contributions of his or her co-workers. Another disadvantage is that bonuses may be provided annually, so that the employer’s delayed response is not on par with employees’ volatile rates of absence during the year.

Another 2014 study examines an individual management-by-objectives incentive scheme for 177 managers in a large German firm over the period 2000–2005, who had on average 3.9 days of sickness absence per year (managerial roles are associated with reduced sickness rates) [6]. The scheme delivered a multidimensional measure of effort, and the

bonus was based on the extent to which previously set goals were accomplished. On average, the share of bonus payment was more than 15% of total income. The study finds a negative correlation between the annual bonus payment and the number of days of sickness absence, whereas there is no correlation with managers' base pay. This means that absences vary with bonuses, whereas there is no relationship with their regular payments.

Other empirical research further suggests a negative relationship between sickness absence and performance pay [7]. Using Norwegian panel data on firms over the periods 1996–1998 and 2003–2005, for which 50–54% of the workers received performance pay (39% received group-based performance pay and 23% individual performance pay), there is a negative correlation between sickness absence and performance pay after controlling for differences across jobs. Furthermore, the estimates indicate a stronger negative correlation for group-based incentive schemes of group-level production, which provide weak incentives from the perspective of individual employees.

### **Program 3: Lotteries**

As an alternative positive reward, employers may provide workers with access to a firm-organized lottery, for which participants have to meet specific minimum requirements regarding their previous sickness absence. This may provide individual workers with an additional financial reward, but the non-monetary gains may be larger if the names of the winning workers are announced company-wide—for instance as “the employee of the month”—in terms of best performing employee. In addition, the prospect of the thrill of participating in a lottery may be appreciated by the workers. However, the question is whether such a thrill is sustainable in the form of extra motivation. Furthermore, if the financial incentive is too strong, sick workers may show up at work in order to qualify, which may negatively affect the health of their co-workers.

A 2009 study investigates employees in a Dutch manufacturing firm which had about 380–420 employees and an average rate of sick leave of 3.8% over the period July 2001–July 2003 [8]. In June 2002, the firm established a monthly lottery to reduce absenteeism. The criterion for participating in the lottery was that employees had not been on sick leave in the previous three months. Previous lottery winners were also excluded from future lotteries. The seven randomly selected winners received a relatively modest financial bonus of €75, which was about 4–6% of their net monthly pay. The probability of winning the lottery was about 3–4% for eligible employees.

The lottery was beneficial to the firm: estimates indicate that in the first seven months after the lottery was established there was a 2.4 percentage point decrease in the rate of absence, though the negative effect weakened to one percentage point in the subsequent seven months. In addition, the study found that lottery winners' absence rates increased after having won.

### **Program 4: Working conditions**

All countries have specific working conditions legislation. For instance, in the Netherlands there is the Working Conditions Act, which outlines general provisions on how to deal with

occupational safety and health, giving minimum requirements for a safe work environment [3]. Absences may be lowered by general improvements in working conditions, since adverse working conditions can be related to poor employee health. Such improvements cover a broad range of options, including the use of better and safer machines or more productive assembly lines. Overall, these can lead to productivity gains as well as a decrease in sickness absenteeism, though they can be very costly.

Firms should also pay attention to the contribution of psychological factors to sickness absences, and of the response of workers' mental health to poor working conditions and stressful circumstances. For instance, a period of downsizing or mass layoffs may have negative impacts, both due to employees' fear of job loss as well as disappointment due to their co-workers leaving the firm. Increased workloads in such circumstances might also lead to higher rates of sickness absence due to stress. In such a specific case, it is important that management has a greater awareness of this issue.

An example of the impact of improved working conditions is shown in a US study [9], with the relocation of a firm in Milwaukee between 1992 and 1994. This involved an investment of \$92 million to build a new upgraded facility. Worker productivity increased substantially due to the improved production lines, which resulted in a decrease in the monthly incidence of absence of about 25 percentage points.

A study from 2005 utilizes employer-reported and survey data for a sample of 331 large Norwegian firms over the period 1990–1998 and finds a negative correlation between the number of days of absence and the quality of the work environment (as measured by, for example, exposure to noise and dust in the working area, and the use of chemicals by the firm) [10]. Furthermore, it finds that long-term absence is higher if firms experience many accidents. Although the estimates cannot be interpreted as reflecting causal effects, the study gives some indication of the importance of working conditions for sickness absenteeism.

### **Program 5: High-involvement management**

High-involvement management (HIM) refers to a program that is specifically related to improving individuals' working conditions. The focus is on the way jobs are designed in order to produce increases in workers' mental and physical well-being. The concept is based on greater worker control of job tasks, and is applicable in firms that have a multitasking work environment. Individual employees have the possibility to switch from one activity to another as needed. Consequently, this makes it less urgent for the firm to bring in replacement employees. Another advantage is that employees can improve their physical well-being by reducing exposure to unsafe work practices. Using this knowledge, a firm's management can build in better working conditions and improve workers' well-being. A disadvantage with this type of program is that it will lead to an intensified use of labor to fulfill all of the tasks—employees work harder. It can also lead to an increase in short-term absences due to sickness.

A study from 2012 investigates the effect of HIM on absences among firms in Finland using survey data for 3,755 workers [11]. These data are linked to register data on the annual length of sickness absences over the period 1995–2006. The study finds a positive correlation between the presence of HIM practices and employees' well-being.

Furthermore, there is a positive correlation between HIM practices and short spells of sickness absence (of a maximum three days), and no correlation between such practices and longer duration absences.

### **Program 6: Loyalty**

Firms can exploit workers' commitment and loyalty to the organization to reduce absenteeism. Worker morale dampens the effect that adverse changes in the cost to workers of performing paid work activities has on their absences. Hence, a program that improves worker morale could reduce absenteeism.

The importance of worker morale can be demonstrated for the effect of commuting time on sickness absence. As mentioned, if it becomes more costly for workers to go to work, in this case due to a longer commute, they are more likely to be absent. During periods when workers face increasing costs, firms may benefit from their workers' loyalty. Consider the above-mentioned empirical study of a natural experiment in which a Milwaukee firm relocated from the city's central business district to the area's suburban ring in 1992 [8]. The study makes use of the exogenous change in the adjusted commuting distance among 252 workers who remained with the firm during the observation period. Some workers experienced unforeseen costs due to increased commuting time, whereas others benefited from an unexpected gain. There was a positive effect of commuting distance on absences for workers who had low morale prior to the shock (i.e. those whose commute was shortened were absent less often, and vice versa for those whose commute was lengthened). In contrast, there was no change in absences among previously high-morale workers.

### **Program 7: Return to work**

Graded—or partial—absence certification is a Norwegian program, which can be considered an activation strategy (or firm-run return-to-work program) to encourage absentees to return to work. It is based on the notion that during a period of sickness there may be a reduction—instead of a complete elimination—of work capacity. The program aims at exploiting the remaining work capacity of sick-pay claimants with long-lasting sickness spells. Graded sick leave is implemented through the substitution of a non-graded for a graded absence certificate, in which the physician assesses and reports the fraction of work capacity that is lost due to illness. During a period of so-called part-time absence, employees can gradually recover by enjoying reduced work hours. Alternatively, they will have no reduction in working hours, but their productivity will be expected to be lower than usual. Their sick pay is proportional to the extent of their reduced work capacity, whereas the wage covers the remaining work capacity.

According to a study on Norway's system, grading can have several consequences for both workers and firms [1]. With respect to absentees, grading may imply health improvements after returning to the workplace, and it brings unmotivated absentees back to work. In addition, firms are forced to undertake adaptations in the work process to facilitate a return to work.

The same study investigates the consequences of graded sick leave of all sickness spells in Norway between 2001 and 2005 [1]. It shows that most of the short-term spells were

dominated by respiratory infections, viral diseases, and gastrointestinal diseases, so that grading would not be relevant because a return to work might spread infections among co-workers. However, the estimates imply that grading leads to a decrease in the loss of full-time working days by at least 50% for long-term absentees. Furthermore, it has implications for the number of days of receipt of social security after long-term absence has ended—grading raises the probability to work by about 16 percentage points.

One study investigates a Scottish program using survey data from 11,000 hospital employees [12]. The focus of the program is on early intervention of absentees, to facilitate a faster recovery. It emphasizes communication between absentees, their managers, and firms' human resource departments. All employees are required to contact their manager when reporting absent from work due to illness. Managers are obliged to inform human resources on the first day of absence. Human resource and occupational health advisors support each manager and employee, and they discuss work adaptations for a full, or phased, return to work. The survey information suggests that the effects on absences are promising, although the conclusion is based on weak empirical evidence.

### **The importance of context**

The effectiveness of programs intended to address worker absenteeism due to sickness is affected by the settings in which firms operate and the responsiveness of employees to financial incentives. For instance, it is harder to implement programs with negative financial incentives in countries with a generous system of social security. Furthermore, effects may be dampened by an increase in potential job offers from alternative employers, implying that general economic conditions in the labor market are important. Similarly, programs will be more effective in local labor markets in which there are many unemployed job seekers.

Moreover, firms are less inclined to implement such programs if they can shift the financial burden of sickness absence to social security systems. This was investigated for Norway, where employers are financially responsible for sick pay costs for the first 16 days of absence [13]. After a 2002 reform removed firms' liability for sick-listed pregnant workers, firms experienced weaker incentives to reduce those workers' sickness absences. Estimates over the period 2001–2005 indicate that firms had a higher short-term rate of absence for this specific group. Moreover, the study's estimates imply that increasing firms' responsibility by about one-third of overall sick pay costs leads to a 2.7% reduction in overall absence.

Finally, the effectiveness of such programs depends on the specific production process inside the firm. For instance, firms are likely to provide stronger financial incentives if they sell products on demand, without having a large inventory of products, in which case absenteeism is more expensive to the firm [1]. Within the firm, absences will be lower for more specialized jobs, for which the tasks cannot be taken over by replacement workers within the firm.

## **LIMITATIONS AND GAPS**

The studies surveyed differ with respect to the thoroughness of the empirical evidence. Some studies are based on statistical outcomes of a single firm, meaning that one

should be cautious of generalizing the empirical outcomes to other firms. Furthermore, correlations are only mentioned if the studies are not based on empirical design that can be brought back to a statistical treatment-control setup. Finally, the different definitions applied to sickness—e.g. the incidence of sickness and the fraction of the number of sick days—makes it difficult to compare outcomes across studies.

## SUMMARY AND POLICY ADVICE

The picture emerging from the analysis is that there are three main categories of programs to reduce workplace absenteeism. Overall, the different workplace programs are complementary to each other, and their usefulness depends on the specific type of production process inside the firm.

The first category consists of financial incentive programs. There is strong evidence that workers respond to negative incentives. The extent to which firms can implement negative incentives may be limited though (at least in many European countries) due to the presence of minimum statutory sick pay imposed by governments. Furthermore, although there is some evidence that bonus schemes can be used by firms to reduce absence, the bonus depends on many indicators of the worker's output, with absence due to sickness being only one of them. Hence, bonuses are a costly way of reducing absences. A specific lottery for which participation is related to absence in the past months seems to be more effective. A well-designed system of monitoring by co-workers or supervisors may strengthen the application of financial incentives to reduce absence. However, a disadvantage of financial incentives may be that, if the incentives are too strong, employees may be wrongly encouraged to show up for work. Consequently, the company may run the risk that these workers may spread contagious diseases, thus leading to increased absence and deteriorated health of their co-workers.

A second category of workplace programs focuses on the quality of working conditions. There is ample evidence that absence is higher in risky and noisy work environments. However, improving these conditions requires broad and costly programs. Surprisingly, short-term absence seems higher in firms that apply HIM, where multitasking employees can switch between activities. A focus on work conditions could also improve worker morale, dampening the negative effects on absence if performing paid work activities becomes more costly for the worker.

The third and final category includes firms initiating specific programs to enable faster recovery by their employees. One example is a grading program, in which long-term absent employees can partially take up their job tasks, while still being absent part-time. There is some limited indication that a focus by firms on the early return of absentees to work is effective.

All in all, there are sufficient opportunities for firms to lower absence, although the effectiveness very much depends on the specific type of production inside the firm and the institutional and economic context in which it operates.

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## Competing interests

The IZA World of Labor project is committed to the *IZA Guiding Principles of Research Integrity*. The author declares to have observed these principles.

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### Further reading

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