Workplace health promotion and labour market performance of employees

Martin Huber a,∗, Michael Lechner b,∗∗, Conny Wunsch c,∗∗∗

a University of Fribourg, Department of Economics, Fribourg, Switzerland
b University of St. Gallen, Swiss Institute for Empirical Economic Research, St. Gallen, Switzerland
c University of Basel, Department of Labour Economics, Basel, Switzerland

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A B S T R A C T
This paper investigates the average effects of firm-provided workplace health promotion measures on labour market outcomes of the firms’ employees. Exploiting linked employer–employee panel data that consist of rich survey-based and administrative information on firms, workers and regions, we apply a flexible propensity score matching approach that controls for selection on observables and time-constant unobserved factors. While the effects of analysing sickness absenteeism appear to be rather limited, our results suggest that health circles/courses increase tenure and job stability across various age groups. A key finding is that health circles/courses strengthen the labour force attachment of elderly employees (51–60), implying potential cost savings for public transfer schemes such as unemployment insurance or early retirement schemes.

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1. Introduction

The health of employees is an important cost factor for firms and a key determinant of the productivity of an economy. Rough estimates suggest, for example, that the bad quality of the air in US firms alone lead to annual costs of about 250 bn. USD due to additional medical expenses and lost productivity1. For Germany, the country we study in this paper, BMAS (2014) estimates that in 2012 14 work days per worker were lost due to illness leading to production losses of about 53 bn. EUR (corresponding to 92 bn. EUR in terms of value added). Although such numbers must be interpreted with care, they show the large potential gains that could be realised by improving employees’ health. Thus, it is not surprising that health issues receive considerable attention from national governments as well as from supranational and international agencies2.

Employers are of course also interested in the health of their workforce. They may influence the health of their employees in two different ways: First, they can provide a workplace that fosters, or is at least not detrimental to, health. Second, they may encourage their employees to pursue a healthier life style in general by providing information, (financial and other) incentives, and opportunities (e.g. courses about healthy eating or subsidies for a fitness centre). Many larger firms implement such strategies and the economic benefits for employers and the positive health effects for employees have been documented extensively in the public health literature3. However, to the best of our knowledge the literature


3 For an excellent review of the literature see Kreis and Bödeker (2004), which covers 25 high-quality review articles that summarize more than 400 studies, as
still lacks a thorough investigation of the effects of such measures on the future labour market outcomes of the employees.

There are several reasons why this is important. First, workers with health problems have a higher probability of receiving payments from public transfer systems, such as unemployment insurance, welfare schemes or disability insurance, because they face a higher risk of becoming (and staying) unemployed as well as of leaving the labour market early (e.g. Böckerman and Ilmakunnas, 2009). Therefore, it is of interest for policy makers whether such employer policies reduce dependency rates and if so, whether the effects are sufficiently large to justify their active promotion using public funds. Second, reduced turnover due to improved worker-firm matches does not only reduce turnover costs for firms, but may also stabilize workers’ careers, which has positive effects on their lifetime wealth (especially pension wealth) and on their contributions to the social insurance system. Finally, health-improving measures adopted by firms may increase the labour market (and firm) attachment of elderly workers, thus alleviating the negative effects of the demographic change in terms of both shortage of skilled workers and financial strains on the pension system.

It is the objective of this paper to fill part of this gap. We analyse the impact of selected health promotion measures provided by firms on employees’ medium-term labour market outcomes in Germany. Our study is based on unique linked employer–employee data combining administrative records of individual labour market histories with a panel survey of firm establishments and regional statistics. Among many other characteristics, the panel survey contains information about the establishments’ provision of specific health promotion activities. Based on this information, we separately investigate the effects of two classes of measures which have been introduced by firms between 2002 and 2004: (i) a systematic analysis of sickness absenteeism in the firm, (ii) courses to improve the health knowledge and health-seeking behaviour of the firm’s employees, as well as (iii) so-called health circles where health problems are discussed in groups with the aim of finding ways to alleviate or overcome these problems. The administrative records allow us to assess individual labour market outcomes in terms of employment, unemployment, firm-provided early retirement, inactivity, and turnover from mid-2004 to the end of 2008. Furthermore, they also provide individual worker characteristics as well as information about the composition of the establishments’ workforces prior to any health promotion, which (in addition to the firm characteristics from the survey and the regional information) is available to control for selection into these measures.

As with any such study, it is most interesting to estimate the effects of the health interventions on labour market outcomes rather than merely uncovering statistical associations between interventions and outcomes. In the absence of experimental evidence (which is apparently more difficult and expensive to obtain because labour market outcomes take longer to materialize than many health outcomes) or any other exogenous variation influencing the establishments’ implementation of health promotion measures, our identification strategy has to rely on a different approach. First, we eliminate the potential problem that workers may select themselves into establishments offering health services: On the one hand, we focus on establishments that had no such offerings by mid-2002, thus ‘equalising’ firms in that respect. On the other hand, we only consider workers who joined the respective establishments at least two years prior to mid-2002 to avoid that individuals selectively choose their employers based on anticipating the introduction of health services. Second, by conditioning on a rich set of firm, worker, and regional characteristics coming from the various data sources, we account for the selective introduction of such measures in some firms between 2002 and 2004. Third, we use the panel structure of the data and take-out unobserved factors and differential trends that determine labour market performance by conditioning on long-run pre-implementation individual labour market outcomes as well as pre-treatment measures of firm performance. Some placebo-like tests implicit in our results support our strategy.

The results suggest that the investigated health promotion activities have mixed effects on employees’ labour market outcomes. Analysing sickness absenteeism, an intervention that only passively involves the employees, is found to have a rather limited impact. This measure merely reduces the number of employer changes of younger and mid-aged workers after 3–4 years to some extent. In contrast, health courses and health circles, which activate employees directly, increase tenure in the studied firm and reduce overall turnover. Moreover, in particular for older workers, who are most likely to suffer from health problems, these measures strengthen their labour market attachment. They significantly increase employment by reducing unemployment and thus reduce unemployment insurance payments, as well as by reducing exits from the labour market via a specific type of firm-provided early retirement scheme. Thus, besides the beneficial effects on firms and employees’ health documented in the previous literature, there are additional long-run benefits for both employees and social insurance systems.

The paper proceeds as follows: In the next section, we briefly describe several aspects of the health policies of German firms. Section 3 is devoted to data and measurement issues and provides selected descriptive statistics. Section 4 contains the discussion of the identification strategy and presents the estimator used. Section 5 empirically characterises the establishments implementing the different measures and presents the estimated effects for the health promotion activities considered in this paper. Section 6 concludes. Appendix A contains extensive descriptive statistics, while Appendix B contains additional results omitted from the main body of the paper.

2. Firms’ health policies in Germany

The Initiative for Health and Work (Initiative für Gesundheit und Arbeit, IGA) provides a summary of legally required and voluntarily provided measures of German firms to ensure and improve the safety and health of employees at their workplace (IGA, 2009). Our study focuses on voluntary measures that we will describe in more detail in the following. With one exception, the German measures are largely comparable to those of other countries⁴. Comprehensive and internationally comparable data on the use of health promotion measures at the work place is, unfortunately, rare. One of the few data sources that provide at least some information is the European Survey of Enterprises on New and Emerging Risks, which has been conducted by the European Agency for Safety and Health at Work in 2009.

The left panel of Fig. 2.1 shows the share of establishments that implemented different health and safety procedures in Germany and Europe. 54% of German and 75% of European establishments have at least some formalized health and safety procedure, 35% of German, and 50% of European establishments routinely analyse sickness absenteeism and, respectively, 15% and 26% have some procedure to deal with work-related stress. Moreover, the right panel of Fig. 2.1 shows that the prevalence of the measures quite strongly increases with establishment size with differences

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⁴ See the compilation of measures on [http://www.enwhp.org/european-toolbox.html](http://www.enwhp.org/european-toolbox.html).
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