European Agency for Safety and Health at Work

WORKING ENVIRONMENT INFORMATION

EN

ISSN 1830-5954

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Edited by
Dietmar Elsler, Project Manager, European Agency for Safety and Health at Work (EU-OSHA)
Supported by Terry N Taylor, European Agency for Safety and Health at Work (EU-OSHA)

This report is based on a draft prepared by:
Authors
Introduction: Lieven Eeckelaert, Institut pour la Prévention et le bien-être au travail/Instituut voor Preventie en Welzijn op het Werk (PREVENT), Belgium. Alec Knight, Institute of Work, Health and Organisations (I-WHO), United Kingdom.

Literature Review: Daniela Treutlein, The Netherlands Organisation for Applied Scientific Research (TNO), The Netherlands, Małgorzata Pęciłło, Centralny Instytut Ochrony Pracy – Państwowy Instytut Badawczy (CIOP-PIB), Poland, Johanna Elo-Schäfer, Kooperationsstelle (KOOP), Hamburg, Germany, Sylvie de Meyer (PREVENT), Belgium.

Policy Overview: Lieven Eeckelaert & Nele Roskams, (PREVENT), Belgium – Katariina Röbbelen-Voigt, (KOOP), Hamburg – Daniela Treutlein & Wim Zwinkels, (TNO), The Netherlands – Theoni Koukoulaki & Spyros Dontas, Elliniko Institoyto Ygienis Kai Asfaleias Tis Ergasias, (ELINYAE), Greece – Carsten Brück & Karl Kuhn, Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA), Germany.

Case Studies Review: Nele Roskams & Lieven Eeckelaert, (PREVENT), Belgium – Małgorzata Pęciłło & Zofia Pawłowska, (CIOP-PIB), Poland – Theoni Koukoulaki & Spyros Dontas, (ELINYAE), Greece –, Carsten Brück & Karl Kuhn, (BAuA), Germany –, Roxane L. Gervais, Health and Safety Laboratory, (HSL), United Kingdom –, Anne Kouvonen, (I-WHO), United Kingdom –, Francesca Grosso & Antonio Leva, Istituto Superiore per la Prevenzione e la Sicurezza del Lavoro (ISPESL), Italy, Liliana Frusteri, Fabrizio Benedetti, Claudio Mercuri, Istituto Nazionale per l'Assicurazione contro gli Infortuni sul Lavoro (INAIL), Italy.

Conclusions: Dietmar Elsler, EU-OSHA, Alec Knight, (I-WHO), Lieven Eeckelaert, (PREVENT), Belgium.

EU-OSHA would like to thank the Economic Incentives Expert Group and its Focal Point network for their valuable feedback on the draft report.

Cover photos:
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Cataloguing data can be found at the end of this publication.

Luxembourg: Publications Office of the European Union, 2010

ISBN 978-92-9191-299-5
doi:10.2802/21517

Printed in Luxembourg

PRINTED ON WHITE CHLORINE-FREE PAPER

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Foreword

The European Union strategy 2007-12 on occupational safety and health (OSH) recognises that there is a need to use economic incentives to motivate enterprises to apply good practice in their prevention work. The European Agency for Safety and Health at Work (EU-OSHA) contributes to meeting this need by providing information on the types of economic incentives that are most likely to succeed. Research has shown that external economic incentives can motivate further investments in prevention in all organisations and thus lead to lower accident rates. The report of the project consists of a literature review, a policy overview and a case study report.

The literature review provides scientific research on how organisations can improve occupational safety and health (OSH) by means of economic incentives. For the policy overview the legal and organisational conditions to introduce economic incentives in the EU member states have been surveyed. The political and social framework conditions and current policy initiatives are presented and evaluated. Further the case study report describes successful models of economic incentives schemes, evaluates their effectiveness and identifies success factors. As the social policy framework conditions differ considerably within the EU, the objective is to find out under which framework conditions which kind of economic incentive systems are most appropriate.

The primary target audience are organisations that can provide economic incentives to improve OSH, such as insurance companies, social partners or governmental institutions. These organisations are regarded as important intermediaries to stimulate further efforts in OSH in their cooperating enterprises, e.g. as clients of insurances. Therefore a network of such organisations has been established in the form of an expert group, which supports the project with advice and helps to promote the results.

I would like to take this opportunity to thank our economic incentives expert group and all European partners as well as Agency and Topic Centre Working Environment staff who have contributed to the compilation of the report.

Jukka Takala

Director

European Agency for Safety and Health at Work

Executive summary

The European Commission's Community Strategy on Health and Safety at Work for the period 2007-2012 has the ambitious aim of reducing the European Union's occupational incident rate by 25%. To achieve this, it is not enough for EU Member States to simply transpose and implement EU health and safety regulations into national legislation. Enforcement is essential, especially in small and medium-sized enterprises (SMEs), to bring about behavioural change that will lead to improvements in workers' health and safety. Besides taking direct measures to ensure compliance with legislation, such as inspection and the issuing of penalties, occupational safety and health (OSH) policies can be promoted through economic incentives that reward organisations which develop and maintain safe and healthy working environments.

This report gives an overview, analysis and evaluation of existing systems providing economic incentives for OSH in Europe. It examines how enterprises and employers can be influenced and motivated to improve OSH. The report offers best practice information in the form of case studies to help companies and other organisations in the development and provision of economic incentive schemes.

Summary: literature review

Overall, there was a strong argument for the benefits of economic incentives arising from sources outside a company to improve occupational health and safety. This finding is tempered by methodological difficulties in evaluating the effectiveness of various incentive schemes, and it was suggested that further research is required to clarify ambiguous results in the research literature.

With regard to the enforcement of economic incentives, specific deterrents were found to have a significantly higher impact upon sick leave than more general deterrents. However, the effectiveness of specific government (external) incentives was not always clear. Findings included that: (1) Tax reductions can be effective in helping an organisation invest more in OSH. This type of incentive can, obviously, only be effective for organisations paying corporate tax. (2) Linking economic incentives to audits/intervention programmes was another promising way of improving OSH. (3) Matching funds – where governments provide a grant proportional to the amount of money spent by an organisation on workplace health – are a potential method to improve OSH. This type of economic incentive has high administrative costs for both the organisation involved and the government.

Insurance-related economic incentives were an effective way to motivate organisations to invest in OSH. Evidence suggests that economic incentives alter employees' behaviour or incident rates in organisations. There has been a reasonable amount of research regarding experience rating in worker's compensation, which usually consists of a bonus-malus system for insurance premiums based on the individual accident rates of a company. The literature review analysed several research papers about the effectiveness of experience rating and found at least moderate evidence that it reduces the number of insurance claims.

Summary: policy overview

Regarding the basic criteria of social insurance systems and worker's compensation approaches there are not very many differences in Europe. The social security systems in Europe are either predominantly Beveridgean (11 countries, including the UK, Spain, Italy and Greece: mainly tax-based contributions) or Bismarckian (16 countries, including Germany, France, Austria and most of the former Eastern bloc countries: mainly insurance-based contributions). The second criterion specifically concerns the accident insurance system, which is either a state-run monopoly or a private competitive market. In the EU 27 there are two dominating models: a state-run monopoly or a competitive market in a Beveridgean system. There are also several mixed forms.

In a number of EU countries (Denmark, Estonia, Greece, Spain, Sweden, UK) insurance-based incentives (i.e. incentives relating to insurance tariffs) do not exist. In these countries insurance premiums may be set, for example, using a risk category system. Methods for setting premiums cannot, however, be regarded as true economic incentives, which should aim to motivate enterprises to comply with (or exceed) legal minimum requirements. Other EU countries (Belgium, Bulgaria, Czech Republic, Germany, France, Italy, The Netherlands, Poland, Portugal, Finland), have a type of economic incentive where premium variation is based on experience rating (the bonus-malus system).

An additional way of persuading employers to invest in OSH is through insurance-related incentives, where specific prevention efforts are rewarded according to a predetermined model. Such approaches exist for example in Germany (which has a unique sectoral occupational insurance approach), and The Netherlands (specific insurance-related incentives are set within the framework of contracts between employers, private insurers, and safety and health services). Although insurance-related economic incentives are important to promote the prevention of accidents and diseases in the workplace, they are not the only alternative and should, therefore, be regarded as a single strategy within a group of initiatives, including tax incentives and funding schemes.

Tax-related incentives in OSH are very rare within the European Union. Funding schemes for OSH, on the other hand, are found in nearly every EU country. Funds (subsidies, grants) are provided for a wide range of practices, from the purchase of certain materials and tools to the implementation of OSH management systems. These funding schemes are established mainly by public bodies.

These differences between countries and economic incentive schemes naturally have an influence on the potential transferability of incentive models in OSH. Subsidy systems, tax incentives and non-financial incentives should be theoretically possible in all EU countries. Experience-rating approaches can be found in both competitive and monopolistic markets. However, there are differences when it comes to the funding of future-oriented prevention efforts, such as training or OSH investments. This should be no problem for monopolistic approaches, because the insurance company can be sure it will benefit from the positive effect that investments will have on the claims rate. In a competitive market, however, the insurance company runs the risk that enterprises could change their insurance provider at short notice and therefore investments in prevention efforts could benefit its competitors rather than the original insurer. A possible solution for competitive markets could be the

introduction of long-term contracts over several years or the creation of a common prevention fund which is financed equally by all insurers.

Nearly all larger EU Member States are rather active in offering economic incentives. Germany, France, Italy and Poland all offer various incentives through their public insurance system, often not only insurance premium variations, but subsidy programmes for specific investments in OSH as well. In Spain insurance incentives are planned in the national OSH strategy and a great variety of OSH subsidy programmes is offered on a national as well as regional level. Of the smaller Member States Belgium, Finland and The Netherlands are the most active, showing that economic incentives are also possible in private accident insurance systems.

All in all the overview shows that economic incentives can be offered in all Member States, regardless of their social security system traditions or whether the accident insurance system is private or public.

Summary: case studies review

This collection of successful case studies shows that economic incentives can be effective in a wide variety of settings in order to promote OSH. All incentive schemes presented were managed efficiently and underwent some kind of evaluation. Six case studies even yielded quantitative indicators for positive effects on the working conditions for the participating companies:

- In the German butchery sector participating enterprises have seen a 25% drop in notifiable accidents since the introduction of the incentive scheme in 2001.
- In the Finnish agricultural sector the accident rate dropped by more than 10%.
- In a German health insurance incentive scheme sick pay and absenteeism decreased significantly when enterprises introduced a modern health management system.
- Of the Polish enterprises that introduced a funded OSH management system, 70% had fewer accidents and lower insurance premiums, while 50% reported fewer workers working in hazardous conditions.
- The Italian Workers' Compensation authority subsidises bank credits to stimulate OSH investments in SMEs; participating companies had 13-25% fewer accidents than comparable enterprises.
- The Dutch subsidy programme for investments in new OSH-friendly machinery and equipment led to better working conditions in 76% of enterprises (40% of employers said that the new equipment was highly beneficial, 36% that it was reasonably beneficial).

Success factors for economic incentives

Summarising the three parts of the report the following success factors could be identified:

1. The incentive scheme should not only reward past results of good OSH management, i.e. past accident rates, but should also reward specific prevention efforts which aim to reduce future accidents and ill-health.
2. The incentive scheme should be open to all sizes of enterprises and pay particular attention to the special needs of SMEs.
3. The incentive should be high enough to motivate employers to participate.
4. There should be a clear and prompt relation between the desired prevention activity of the enterprise and the reward.
5. The incentive system should have clear awarding criteria and should be designed to be as easy to use as possible, in order to keep the administrative burden low for both participating enterprises and incentive-offering organisations.
6. If the incentive needs to target a large number of enterprises, insurance or tax-based incentives with precisely defined criteria are most effective (closed system).
7. If the desire is to promote innovative solutions for specific areas, subsidy schemes are most effective.

Regardless of its social security structure, the introduction of economic incentives is of course ultimately a political decision for each country. For this reason, although the report presents many suggestions for organisations that would like to offer economic incentives to promote OSH, it cannot recommend any specific system.

List of acronyms and abbreviations

EU	European Union
AUVA	Allgemeine Unfallversicherungsanstalt, Austrian accident insurance
BG	Berufsgenossenschaft
COM	European Commission
CSR	corporate social responsibility
FBG	Fleischerei-Berufsgenossenschaft, German butchery accident insurance
EMMI	European Model for Motivation by Incentives
EUR	Euro
GDP	gross domestic product
ILO	International Labour Organisation
IMS	Integrated Management System
MISSOC	Mutual Information System on Social Protection
Munich Re Group	Münchener Rückversicherungs-Gesellschaft
OA	occupational accidents
OD	occupational disease(s)
OECD	Organisation for Economic Cooperation and Development
OSH	occupational safety and health
OSHA	US Occupational Safety and Health Act
PHARE	Poland and Hungary Aid for the Reconstruction of the Economies (EU programme)
SCC	Safety Checklist Contractors
SCF	Safe Communities Foundation
SCIP	Safety Communities Incentive Programme
SGB	Sozialgesetzbuch, German social law
SME(s)	small and medium-sized enterprise(s)
US	United States (of America)
USD	US dollar
VAT	value added tax
VCA	Veiligheids Checklijst Aannemers
VFC	'Virtual Fitness Centre'
WC	workers' compensation
WEP	Work Environment Professional
WHP	Workplace Health Promotion
WSIB	Workplace Safety and Insurance Board

1.

INTRODUCTION

One of the ambitious aims set by the European Commission (COM) in its Community Strategy on Health and Safety at Work for the period 2007-2012 (COM, 2007) is to reduce the occupational incident rate within the European Union (EU) by 25%. Achieving such a reduction will take more than just the implementation and transposition of the current EU regulations concerning occupational safety and health (OSH) into national legislation by all Member States. The regulations also require enforcement, especially in small and medium-sized enterprises (SMEs) to bring about behavioural changes to improve workers' health and safety. Besides ensuring compliance directly through measures such as legislation, labour inspectorate activities and penalties, OSH policies can be promoted through economic incentives.

This report supports the Commission's objective mentioned above, by providing an overview, analysis and evaluation of existing approaches concerning economic incentives for OSH in Europe. Economic incentives in OSH refer to processes that reward organisations which develop and maintain safe and healthy working environments. The main aim is thus to examine how enterprises and employers can be influenced and motivated in order to do more about OSH.

The scope of the report is on economic incentives in OSH, defined as external economic benefits offered to employers to motivate them to invest in safer and healthier workplaces (see also European Agency for Safety and Health at Work, 2005). The incentives in OSH described in this report are thus external and economic. External means that these incentives are established by organisations outside the enterprise, usually public administration bodies or insurers; these incentives may act at national, regional or sector level. With regard to the economic aspect of incentives, there are two major categories:

- financial incentives (positive or negative), such as insurance-related incentives (e.g. variable premiums), funding schemes, and tax-based incentives (tax reduction or specific taxes); and
- non-financial incentives, including recognition schemes such as awards; aiming at positive recognition but not having substantial direct financial implications.

The main focus of this report is on external financial incentives (insurance-related incentives and public incentive schemes), and to a lesser extent on non-financial incentives (e.g. recognition schemes).

This is likely to be of most interest for countries that are considering introducing economic incentives or may have the legal framework to use such incentives but have not really done so until now. This report also intends to offer best practice information and guidance to insurances and other organisations, to assist in the development and provision of economic incentive schemes in OSH.

The report consists of three main sections.

The first is a literature review (Section 2), which provides an overview of international policy measures and relevant research literature on how enterprises can be motivated through economic incentive schemes to improve their efforts in preventing occupational accidents and illnesses. The evidence base for the review includes a number of meta-analyses and general overviews, as well as country-, sector- and enterprise-specific case studies, and literature focusing on small and medium-sized companies.

Economic incentives in OSH depend also on the specific economic, political, legislative and social structures of a country. Therefore, Section 3 gives an overview of the context and existing economic incentive schemes in the 27 EU Member States.

Based on the available information from the EU countries, economic incentives are categorised and discussed in relation to those focusing on insurance incentives, and those focusing on other funding initiatives such as grants, awards and tax concession schemes.

Section 4 presents a number of successful economic incentives in OSH. Twelve case studies and five snapshots from ten EU Member States have been selected from the range of EU initiatives described in the previous section. The selection of the case studies was based on the suggestions of the Focal Points of the Agency in the Member States, as well as on literature research, and focuses especially on financial incentives for OSH.

1.1. Terminology

The terms 'occupational accidents' and 'occupational diseases' are used throughout this report. 'Occupational accidents' is used as a synonym for 'industrial accidents', 'work accidents', 'occupational injuries' and 'employment injuries'. 'Occupational diseases', on the other hand, are understood to be diseases and illnesses caused or aggravated by work.

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2.

LITERATURE REVIEW

2.1. Introduction

Working conditions influence the business competitiveness of every enterprise. Poor working conditions result in additional costs for companies and a poor image among their workforce, clients, customers and the public at large, which is becoming more and more sensitive to safety and health issues. Working conditions also affect employees' physical, moral and social wellbeing and consequently a firm's productivity and the quality of its products and services. The EU Commission has no doubt that 'prevention pays off: less work-related accidents and diseases push up productivity, constrain costs, strengthen quality in work and hence valorise Europe's human capital' (COM, 2005).

According to economic theory, the market mechanism is able to determine the optimal level of occupational health and safety. Workers as rational actors can assess the level of risk inherent in a job and balance those risks against the benefits associated with that job. If benefits are not sufficient to compensate for the risks, then workers will not sign up for the job. Accordingly, employers will have to increase wages to a level that will encourage sufficient numbers of workers to perform this job. The added wage level that needs to be paid to compensate for a higher level of risk constitutes an additional cost to the employer. If it is too high the employer can avoid it by increasing the level of safety. Such an incentive to make jobs safer will exist to the extent that the marginal cost of increasing job safety is less than the corresponding wage differential that will have to be paid if no such change is made.

This economic model assumes, however, perfect competition in the labour market and perfect information on the part of employees over workplace risks and the possible consequences of these risks. As the result of a range of friction elements, there is, however, never perfect competition in the labour market in the sense that workers are perfectly free to switch jobs. Therefore, additional instruments are required to encourage employers to improve working conditions. As the traditional OSH strategy of 'command and control' based on specifying legal prescriptive requirements and the desired level of safety and health can always be improved, social partners, governments, politicians, researchers and insurance companies all over Europe are increasingly looking for new ways of improving the working environment beyond the minimum level required by law. The Green Paper on 'Promoting a European framework for Corporate Social Responsibility' adopted by the European Commission in 2001 stressed that OSH is one of the ideal areas for voluntary 'good practice' on the part of firms willing to go beyond existing rules and standards. According to the Green Paper on 'Entrepreneurship in Europe' published in 2003, responsible business behaviour can support business success and companies should demonstrate responsible entrepreneurship which includes integrating social and environmental concerns in their business operation.

Against this background, this study aims to support the Community Strategy request to provide more economic incentives for preventive measures, particularly in SMEs, in order to promote behavioural changes which can lead to an overall 25% reduction of the incident rate. More specifically, it provides an overview of recent scientific literature dealing with the question of how firms can be motivated to promote OSH prevention measures by setting economic incentives. Here 'prevention measures' are defined in the broadest sense, covering work-related accidents and mental as well as physical diseases. In defining 'economic incentives' we broadly distinguish between

economic benefits that are external to a firm, and economic benefits internal to a firm. 'Economic' refers not only to financial incentive schemes such as insurance premium variations, bonuses, subsidies or subsidised bank credits, but also to non-financial incentive schemes, namely recognition schemes such as awards that increase the reputation of a firm but do not have substantial financial implications.

Based on this definition, the focus of our study lies on external financial benefit schemes. Reference is made to other economic incentives schemes if they seem particularly relevant and interesting. According to our definition we did not focus on a particular outcome variable but included all studies dealing with prevention measures in a wider sense. We generally leave aside the literature on workplace health promotion except for some case studies where the economic incentive scheme appeared particularly interesting. We specifically analyse the state of the art in policy-making of international organisations such as the EU, OECD or ILO, and recent scientific work on this topic including case studies and research dealing with the particular case of SMEs.

The following review of this literature is split into seven main parts:

First, we briefly explain the methodology of our literature search before we proceed to existing work and policy-making of international organisations and expert groups. Third, we describe recent scientific overviews and evaluations (meta-analyses) dealing with diverse economic incentive schemes for OSH prevention efforts in firms. Fourth, we highlight some interesting case studies and concrete examples of applied economic incentive schemes. Fifth, we focus on the literature referring to economic incentive schemes in SMEs. Finally, we summarise our main results and then formulate some tentative policy recommendations in the conclusions.

Most importantly, we have found that there is a strong argument for the application of economic incentives in order to improve a firm's occupational health and safety record. However, there are methodological difficulties in evaluating the effectiveness of the various incentive schemes, and further research is needed to clarify some ambiguous results. Generally, a good mix of governmental regulation and economic incentives seems most promising for reducing work-related accidents and illnesses in enterprises. Various forms of experience-rating of workers' compensation insurance premiums and innovative external economic incentives such as fitness rebates, or an internal monthly lottery, have shown good results on accident and sickness reduction. However, the successful application of such incentive schemes always depends on the general organisational attitude towards OSH measures, as well as on particular features of the company and industry concerned. To be successful, incentive schemes need to be designed carefully so that they take these particular features into account.

2.2. Identification of relevant literature

We collected the literature covered in this overview in three steps. First, we set up a list of relevant terms in English (see Section 2.7, Annexes, Table 1) and searched for recent scientific literature in the most prominent OSH-specific databases, namely 'OSH

update' and 'Scopus'.[1] We complemented the results of these topic-specific databases with searches in the Dutch university database 'Picarta' and the Dutch OSH-specific literature database 'Arbobibliotheek'. We also searched 'Google Scholar' looking for related studies listed in the references of key works identified by the searches mentioned above. After screening the content of the found literature we made an initial pre-selection according to the relevance of these pieces to the topic at hand and set up a draft table of contents as structure for our study. We then created an Excel template summarising the most relevant content of each study (see Section 2.7, Annexes, Table 2). Based on the draft structure and the filled-in Excel template we held a meeting to decide on the final list of literature to include in the analysis.

2.3. Literature review

2.3.1. Existing EU, ILO and expert group reports

In contrast with the former 'command and control' strategy, current EU OSH prevention strategies are based on the so-called 'proactive approach', where employers themselves are expected to take steps to ensure a satisfactory level of safety and health with minimum state intervention. The Community Strategy on Health and Safety at Work (COM, 2002) adopted by the European Commission for the period 2002-2006 focuses on continuing improvements in wellbeing at work, developing a safety culture, and combining a variety of instruments such as legislation, progressive measures and best practice, corporate social responsibility and economic incentives. This strategy (COM, 2002) emphasises that:

- Economic incentives have long applied to accidents at work and occupational illnesses with insurance premiums, for individual firms and/or sectors of activity, varying according to the accident rate. This encourages risk prevention and complements the other instruments available in the field. Insurers — both public and private sector ones — have already given thought to similar economic incentives offering prevention contracts which include an analysis of the risks in the company, technical assistance, equipment aids and appropriate training. These kinds of practices would seem to warrant more systematic application [in order to motivate employers to take OSH prevention measures].

The new Community Strategy on Health and Safety at Work for the period 2007-2012 (COM, 2007) confirms that companies investing in active OSH-related policies obtain tangible results in reducing their costs of absenteeism and staff turnover as well as achieving higher consumer satisfaction and employee motivation. These positive results can be obtained by changing people's attitude to occupational health and safety issues by promoting their awareness of this field. The further development of awareness may be reinforced by providing direct and indirect economic incentives to an employer, among other measures. Examples of employer benefits could be a reduction in social contributions or insurance premiums depending on the

1 In the first instance we looked for literature dating from 2000 to 2008 and case studies from developed countries, i.e. mostly EU countries and the USA.

investments made in improving working conditions or reducing accidents at work; financial aid for the introduction of health and safety management schemes; or the introduction of health and safety requirements into the procedures for awarding public contracts.

Dorman (2000) stresses the role of economic incentives in the area of OSH in his well-known report for the International Labour Organisation (ILO). According to his study, the earliest way of providing economic incentives in order to improve working conditions was hazard pay, i.e. employers pay workers a higher wage in return for a greater risk of injury or illness. Dissatisfaction with hazard pay and employer liability as a means for compensating workers at risk gave rise to mandatory public insurance programmes. The fundamental principle behind all workers' compensation systems is the replacement of employer liability with a programme of guaranteed payments to injured workers or their families. Workers thereby lose the right to make most kinds of liability claims against employers but, on the other hand, are entitled to awards from a publicly regulated insurance system. Employers usually finance this worker insurance system through contributions based on the size of their payroll. The coverage of the system, the level of compensation, the amount collected from premiums, and the procedures for adjudicating disputed cases are determined by public agencies. Thus, according to Dorman (2000), workers' compensation systems always provide a combination of pure insurance functions and government regulation. The weak point of most of the insurance schemes is, however, a lack of simple correlation between preventive activities and financial benefits.

Economic incentive schemes could be a practical means of closing this gap and, according to Dorman (2000), yield the following particular advantages:

- Economic incentives are linked directly to business performance. Their impact on economic measures of enterprise performance is easily seen by managers.
- Economic incentives can stimulate continuous improvement. This is in stark contrast to most regulations specifying a minimum performance level. Often, once the requested minimum has been attained the regulation is satisfied and no further improvement is required.
- New risks require the establishment of new regulations but policy-making is in many cases a long process. By focusing not on the process by which risks are generated but on their outcomes, economic incentives already apply to both traditional and emerging risks.
- Because they are based on outcomes rather than methods, economic incentives encourage problem-solving and innovation.

Besides the EU commission and the ILO, the European Foundation for the Improvement of Living and Working Conditions has also been active over the last two decades helping policy-makers to develop economic incentives systems at national and European level. For instance, a 'European Forum' was established in 1993 for Member States to exchange views and experiences on this topic. Based on these discussions a multidisciplinary working group has developed the 'European Model for Motivation by Incentives', the so-called EMMI. The proposed model operates within a framework of compulsory industrial injury insurance paid by the employer. However, the incentives aim to mobilise a number of social parties within and outside the individual enterprise. The main tools suggested are premium graduation with a bonus system and direct investment aid aimed at helping enterprises that want to achieve major changes by incorporating preventive measures. Such changes could, for instance, include costly investment in new technology, training efforts and product innovation. As a further voluntary option a marketing label is proposed by Bailey et al. (1995) denoting excellence in the

working environment. The award of this marketing label could be related to the bonus system and be offered to enterprises that obtain a certain level of bonus. In its report 'Economic Instruments for Sustainable Development' (Clinch et al., 1999), the European Foundation lists the following four key features of economic incentives that may make them particularly suitable for the promotion of health and safety in the workplace:

- Well-designed incentives can bring improvements in the working environment, where both the size of the incentive and the conditions of payment show tangible links between improved health and safety practice and the resulting reward.
- Incentives should take account of the effect of statistical fluctuations on small and medium-sized enterprises (SMEs).
- Incentives based on historical performance alone will only have a limited impact on preventive work.
- Incentives should point forward, promoting efforts not results.

In the same report, the European Foundation lists the following particular advantages and limitations of experience-rated insurance premiums related to historic claims rates as the most widely used and readily understood method of creating incentives for better safety and health practice:

- They are cheap to administer and transparent. Competition among insurance companies can help ensure equalisation of actuarial risk and premium charged.
- Statistical fluctuations can significantly affect the claims experience. This is particularly the case in SMEs. Having statistical 'good luck' does not mean that there are no serious lapses in health and safety practice. Statistics can mask serious problems. When economic incentives are based solely on claims experience, organisations where a random event occurred are penalised severely (in situations where either the occurrence of an event or its severity is related to random occurrence and not poor risk-minimisation strategy at the enterprise). In effect, this system rewards the careless but lucky. When one bases current and future risks on the occurrence of events in the past, the incentives do not address the effectiveness of current preventive behaviour. Therefore, it would be ideal to base premium assessment and reward on future risk.
- The costs of claims are not a perfect guide to risk of injury/ill-health. Observed claims levels might be reduced by better claims management as well as reduced risks of accidents. The occurrence of an accident or injury will tend to reflect poor health and safety practice. The actual cost of claims may reflect the local compensation culture and award system, as well as the actual risk level in the enterprise. The severity and duration of injuries are subject to purely chance fluctuations (for example, whether an object falling from a height falls on a worker's finger or on his full body).
- There is a delayed and uncertain link between health and safety investment and economic return: it is not clear for an organisation what the individual return on investment might be. This return will be delayed until measurable improvements in the performance of either the company or the sector result in improved claims experience, with resulting lower premiums. However, a health and safety programme which may show little apparent economic return if undertaken in isolation may lead to tangible results in overall health and safety performance, as well as sectoral premiums, if undertaken on a sectoral basis with companies operating together.

Regarding the overall effectiveness of economic incentives and the criteria for evaluating them, the discussion at a European level is still ongoing. Results of an opinion survey of German and Bulgarian experts confirm the macro-economic

importance of OSH for European enterprises (Elsler and Nikov, 2003). However, the experts also point to the fact that existing micro-economic incentives in both countries do not encourage employers to improve OSH beyond minimum standards required by law in force. Consequently, most of the experts believe that external organisations should provide fiscal incentives for companies that demonstrate above-average OSH performance. However, opinions on the most effective incentive scheme vary strongly across countries.

In Bulgaria, for instance, experts expect incentives from state-run organisations to be the most effective, followed by accident and health insurance bodies and employer organisations. Trade unions and private organisations are regarded as less suitable to provide economic incentives for OSH in enterprises. The most effective form of promoting OSH is seen to be personal consultation and tax reduction. Elsler and Nikov (2003) stress that, in contrast to many western European countries, OSH certificates or awards are not seen as a helpful tool to promote OSH in Bulgaria due to the relatively high costs of such certificates or award schemes and the fact that their effects on corporate image are intangible.

German experts regard health and accident insurance institutions as the most suitable organisations to provide economic incentives in OSH. State-run organisations took third place on their list, and play a minor role compared with Bulgaria. The experts from Germany believe that discounts on health and accident insurance premiums are the best ways of encouraging companies to improve their OSH performance.

The expert survey on the effectiveness of OSH-promoting tools needs to be supported by company surveys and economic analyses. However, this preliminary study shows that approaches used in different countries and their effectiveness depend heavily on historic, economic, social and political circumstances. Generally, there is a need for a greater understanding of the effectiveness of economic incentives in promoting OSH, especially with regard to SMEs (Elsler, 2007) (see also Section 2.3.4, below).

2.3.2. Scientific overviews and evaluations of economic incentives for OSH

This literature review investigates existing scientific theories and studies about economic incentive schemes encouraging companies to take measures to prevent work-related accidents and illnesses. Ten references are discussed in this section. Several of these references were based on a meta-analysis. So, indirectly, the results of many other studies have also been considered. Generally, the authors referred to in this scientific overview were all aware of the methodological problems and highlighted the difficulty of comparing the results. The articles were all of high quality, and all contained a persuasive argument.

A variety of social, legal and market-based mechanisms for the promotion and financing of workplace health and safety have been created in industrialised countries since the beginning of the twentieth century. Commonly used systems are tort liability, no-fault insurance, government intervention and the use of the labour market (Durbin and Butler, 1998). From the literature it is apparent that two instruments are particularly frequently used, namely legal regulations and economic incentives, but in fact many different instruments exist. Toren and Sterner (2003) presume that legal regulations should be supported by economic sanctions and incentives in order to make these regulations effective. For the prevention of occupational injury and illness, the choice of policy instruments should be based on an optimal mix of three criteria: effectiveness, efficiency and political feasibility (Toren and Sterner, 2003).

Within legal regulations one can distinguish different systems, some based on the principle of financial incentives/deterrence (where the focus is on the outcome) and others based on **norms** (where the focus is on the process). Examples of norm-based regulations include occupational exposure limits and bans of certain substances. Compliance controlled by inspections and citations can function as a type of deterrent to encourage companies to improve their injury and illness rates in order to avoid financial consequences. Generally, for economic incentives to be effective in preventing occupational injury and illness, these incentives should be directed at the group level, i.e. the organisation or nation (Toren and Sterner, 2003). Economic incentives are mainly tied to some sort of indicator that can be measured, such as the number of people who take sick leave. But when these indicators are not well chosen, enterprises can manipulate their measurements and results in order to receive the relevant economic benefits. This is a general disadvantage of this approach. Different economic incentive systems exist, such as taxes and insurance premiums. In Europe, either private or public insurance companies or the state govern the insurance systems for occupational injury and illness. The different economic incentive systems for preventing occupational injury and illness are discussed in detail in the following sections.

External financial incentives: by the state or national governmental authorities

In general, governments try to facilitate the prevention of injuries and illnesses at the workplace through two main systems: enforcement of occupational health and safety regulations on the one hand and experience rating of workers' compensation insurance premiums on the other hand (Tompa et al., 2007). Although regulations do not fall directly under our definition of economic incentives they still aim at changing the behaviour of key stakeholders. We briefly describe the system of occupational health and safety regulation in the next paragraph in order to emphasise the complementary nature of the two policy-making devices: governmental regulation and economic incentives. There are three main types of regulatory strategies: (1) direct intervention (guidelines and standards), (2) policing or deterrent systems (inspections and fines), and (3) educational programmes. We will take a detailed look at experience rating in the following section, where insurance-based systems are discussed more thoroughly.

According to Mustard (2005), direct OSH regulation aims at changing the behaviour of employers by prescribing specific guidelines and standards. The level of efficient investment in occupational safety and health by an organisation is expected to rise to the expected value of the sanction. This way, regulation creates two costs: administrative costs and regulatory error (when sanctions are too small or too large). One disadvantage which critics point to is that direct regulation generally fails to take into account the variations between firms with respect to their level of technology and other issues.

Within the regulatory system of deterrence the focus lies on compliance with the law, enforced and controlled by inspection, citations and concrete penalties. In order for a regulation to be able to reduce occupational injury and illness it needs to be effective in the sense that regulators must be able to detect irregularities and punish firms that do not comply with the regulations. In addition, standards need to be communicated clearly to organisations. There are various reasons why the ideal circumstances for effective regulation are not often encountered in practice. First, regulations may focus on factors other than the core causes of injury. Second, the regulator may not be sufficiently competent to detect and punish firms that do not

comply with regulations. And finally, the threat of punishment may not be sufficient as a deterrent for non-compliance, meaning that penalties are not high enough or firms are willing to take risks because they believe there is a low probability that they will be inspected.

The review of the literature on this topic by Tompa et al. (2007) focuses primarily on employer behaviour as this is an important target for policies aiming to reduce occupational injury and illness. However, employee behaviour also needs to be kept in mind, as explained in greater detail below.

In their meta-analysis Tompa et al. (2007) discuss some modelling and measurement issues which are important to take into account when investigating the relationship between behavioural incentives and outcome. These issues are aspects such as limitations of the data sets, contextual factors, study design and temporal sequencing. Regarding content, Tompa et al. (2007) consider two key aspects within their meta-analysis of the effectiveness of occupational health and safety regulation: (1) the introduction of regulation and (2) the enforcement of regulation through inspections or citations. They found the following evidence for the relationship between these two key aspects of occupational health and safety regulation and the outcomes of frequency and severity of claims:

First, concerning the introduction of regulation, Tompa et al. (2007) found mixed evidence that the reduction in frequency of injuries was caused by the introduction of OSH regulation (only two studies were included in the synthesis). In Thomason's (2003) analysis several reviewed studies were also unable to find the expected reduction in the incidence of workplace injuries caused by the introduction of the US Occupational Safety and Health Act (OSHA) of 1970. Second, regarding the enforcement of regulation, the synthesis of Tompa et al. (2007) suggests that specific deterrence, i.e. the actual citation of a firm and/ or penalties imposed mostly as direct consequence of inspection has a positive influence on the frequency/severity of injuries. General deterrence, i.e. the mere threat/probability of inspection, apparently has less influence on the frequency/ severity of injuries (16 studies were included based on their quality). Further studies that investigated the relationship between OSHA enforcement activities (inspections, penalties) and the industry aggregate accident rates found little or no effect for OSHA enforcement activity (see Thomason, 2003).

Tompa et al. (2007) also discussed research studies based on plant-level data. These studies also found mixed results regarding OSHA's effectiveness. Earlier studies investigated the relationship between the introduction of OSHA regulations in the US in 1970 and the injury frequency. They found that inspections conducted in 1973 reduced injury rates by 16%, whereas the inspections in 1974 resulted in a reduction of just 5% in injury rates. This decreased effect can be explaining by the fact that in the early days of the OSHA regulations, more bad practices were detected and adjusted. Only the more difficult cases remained, which by their nature would be slower to correct and thus there would be a decrease in the effectiveness of the regulations. Thomason (2003) also reports results of plant-level studies. One study showed that a 1% reduction in the accident rate could be generated by a 10% increase in enforcement. This effect is larger than the results found in earlier research. According to Tompa et al. (2007), these results were due mainly to a deterrence effect (more specifically, an increase in the probability of inspection), as opposed to an increase in the average penalties. The overall results of both earlier and more recent studies reviewed by Thomason (2003) indicate that OSHA has achieved a moderate improvement in OSH in the US. Durbin and Butler (1998) indicate that the available research has not found sufficient evidence that OSH legislation and regulation has

a positive influence on workplace safety and health. Paton (2007) argues that the evidence for the effectiveness of regulation and inspection is unclear, but others are more convinced of the effectiveness of this system.

More positive results about the effectiveness of the introduction of new OSH regulation were published by Foley et al. (2009) recently. In Washington State (US) an ergonomics rule was adopted in 2000 that focused on primary prevention. In late 2003 the rule was abolished by an industry-funded voter initiative. From 1998 to 2003 there was a decrease in reported exposures among workplaces in the highest hazard industries. However, following the rule's repeal hazard exposures rose again. While more workplaces reported increasing prevention efforts between 1998 and 2001, this gain was reversed in 2003 and 2005. Employers who did more for prevention reported positive results in injury and absenteeism reduction. Larger enterprises in the high hazard industries were more active in taking steps and used a wide variety of resources to address ergonomics issues. Small workplaces relied more on trade associations and the state. All in all the introduction of the ergonomics rule had a positive effect, which was reversed by the rule's repeal.

Besides these major government approaches to OSH regulation (introduction and enforcement of regulation), Toren and Sterner (2003) mention further measures put in place by governments to encourage companies to pay more attention to OSH prevention. Taxes, for instance, can be used to punish enterprises that have a bad record in this regard. One of the few examples of this instrument was when Russia introduced a heavy tax on white phosphorous matches in 1892. Taxes can also be used as an incentive instead of a deterrent. Companies that demonstrate good practice can be rewarded by tax reductions when they invest in safety and health at work (Toren and Sterner, 2003). For example, a recent Swedish national commission proposed to reduce taxes when an organisation invested in physical and cultural activities at work. Paton (2007) indicates that economic incentives such as tax breaks could motivate firms to invest in occupational safety and health. But others, such as the UK Treasury, are not sure whether this is the best incentive to motivate firms (Paton, 2007). And it is self-evident that only organisations that make a taxable profit can benefit from tax breaks. Furthermore, organisations can only profit from these tax breaks at the end of a fiscal year. Also, the administrative burden of an organisation rises substantially with this system of tax breaks. The Norwich Union's NERA report (Paton, 2007) analyses the advantages and disadvantages of such tax incentives in more detail. The report suggests that tax incentives could indeed make a difference. However, they are only effective for companies paying corporate tax and making a taxable profit. Because firms from the public and non-profit sector are not set up to make a profit, these companies would not find much incentive in this system.

Linking economic incentives to audits or intervention programmes is another way for public authorities to encourage firms to invest in occupational safety and health (Toren and Sterner, 2003). We can find an example of this system in Canada where firms can sign up for an annual audit. Economic incentives of up to US$2 million are handed out to organisations with outstanding results.

Paton (2007) further suggests matching funds as a potential economic incentive. In this system the government provides grants proportional to the amount of money the organisation spends on workplace health programmes. So, for every dollar spent by the organisation, the government also pays one dollar. One disadvantage of such an incentive scheme is that administrative costs are high, both for the organisation and the government.

External financial incentive measures: insurance-related

The Centre of Competence for Workers' Compensation (Munich Re Group, 2005) gives an overview of three key aspects that are important to consider when implementing economic incentives for workers' compensation insurance:

1. Because many parties are involved in the processes carried out by a workers' compensation system, this system has to be reliable. If not, the whole process could be derailed.
2. Economic incentives must be developed in such a way that technical and social feasibility is guaranteed.
3. The credibility of workers' compensation insurance will be weakened when the economic incentive system is subject to many changes in a short period of time.

In their discussion, the Centre of Competence for Workers' Compensation (Munich Re Group, 2005) define economic incentives as 'any bonus-malus model, tariff re-grading, application of deductibles, etc. that can affect the workers' compensation insurance value as initially calculated'.

Regarding the design of economic incentive schemes, one needs to be aware that workers' compensation insurance can be sensitive when it comes to designing tariffs. The Centre of Competence for Workers' Compensation (Munich Re Group, 2005) sums up the following 11 basic features to consider in the design of such economic incentive schemes:

1. Highly regulated: in every country investigated, the law defines the different concepts within the domain of occupational safety and health. This way the workers' compensation insurance policies within a country can be developed in a standardised way.
2. Collective and mandatory nature: in addition to social repercussions, important demands are placed on policy management by the collective and mandatory nature of the insurance.
3. Automatic recognition: the insurance has the aim of replacing income rather than compensating for damage. Automatic payment is intended to avoid unnecessary litigation by victims.
4. Risks covered: countries differ from one another in the way occupational accidents and diseases are insured: they can be insured separately or together by the same insurance. It is important that the economic incentives reflect the different risks (short-term and long-term), without affecting the financial sustainability of the insurance model.
5. Long-term: this characteristic refers to the statute of limitations which is used in most countries. For occupational accidents it is clear that the term starts from the date of the accident. However, regarding occupational disease, it is not clear when to pinpoint the starting point.
6. External factors: this refers to particular risks that can cause accidents or diseases at work, but that are not clearly covered under the legislation of workers' compensation insurance.
7. Information systems: a good information system avoids problems in providing tariff discounts or loadings. Information clarity is important for the insurer as well as for the regulatory and supervisory bodies.

8. Financing model and presence or absence of competition: one needs to be cautious when developing economic incentives in a market where different insurers compete with each other. This can lead to a discount war, which potentially jeopardises the technical feasibility of the system.
9. Supervision, control and coordination: to avoid errors as much as possible it is important to tighten the supervision and control mechanisms when implementing an economic incentives system.
10. Special funds: these funds enable specific risks outside the scope of the insurance company to be covered.
11. Tariff sufficiency and other considerations: it is important to make sure that tariffs are high enough and that discounts do not disrupt the fundamentals of insurance. A fixed basis tariff (unaffected by discounts), different tariffs according to firm size, and calculating the best time period for the measurement of injuries and diseases are key aspects to ensure the effectiveness of the economic incentives system.

With respect to the effect of insurance-based benefits, it is important to be aware of behavioural effects on both employers and employees. Durbin et al. (1998) describe how employee behaviour changes by setting insurance benefits. Specifically, two moral hazard problems play an important role in understanding the (changing) behaviour of people: (1) risk-bearing moral hazard and (2) claims-reporting moral hazard. Higher benefits lead to an increase of injury risk, because workers will pay less attention to safety when they know that they are covered. So the introduction of workers' compensation benefits can lead to risk-taking behaviour that actually gives rise to more injuries. This process is known as the risk-bearing moral hazard. In addition to increasing risk-taking behaviour, workers' compensation benefits may also increase the reporting behaviour of employees in the sense that higher compensation benefits increase the likelihood that workers will report an injury that they would not have reported if there were no benefits, or lower ones. Higher compensation benefits thus increase the likelihood that workers falsely report a non-work-related injury as occupational. These two processes of reporting behaviour are called the claims-reporting moral hazard (Thomason, 2003).

In order to make employers more aware of their true production costs (i.e., including the costs of accidents and illnesses), premiums are linked to disease outcomes. If firms pay more attention to this issue they can thus reduce their overall production costs (Toren and Sterner, 2003). Three things should be taken into account. First of all, one should be aware that employers could use medical tests to select a healthy workforce in order to receive premium benefits. A second disadvantage is that employers could manipulate their claim frequency by putting pressure on the workers not to claim for accidents or disease. Last, outcomes should be classified according to severity so that organisations with frequent minor accidents are not treated the same way as organisations with few but severe accidents.

Workers who are unable to work due to occupational injury or illness are often entitled to receive cash benefits in the form of workers' compensation. These include medical benefits and rehabilitative services (Thomason, 2003). In the US, the overall cost of workers' compensation insurance increased from 0.93% of payroll the 1960s to 2.5% of payroll in 1994. Along with the rise in cost there was also an increase in the frequency (+25.4%) and severity of injuries (+150% for indemnity costs and +350% for medical costs). Thomason (2003) concludes that workers' safety incentives are reduced and workers' incentives to report compensable claims are increased by workers' compensation. Health and safety investments by employers are also

reduced by workers' compensation because not all employers are experience-rated. Thomason (2003) discusses a study by Chelius (1976) which indicated that fatal accident rates decreased following the introduction of workers' compensation. Another study in Thomason's analysis reported the opposite results (see Fishback, 1987). Several other studies (Thomason, 2003) uniformly indicate that higher injury or claims rates were related to higher levels of workers' compensation benefits. Also the probability of a worker claiming for compensation increases with higher levels of workers' compensation benefits. Available research reviewed by Durbin et al. (1998) indicates at the same time that the impact of workers' compensation insurance on occupational safety and health is greater than most government-based interventions (such as, for example, the 1970 Occupational Safety and Health Act in the USA).

Research and measurement of occupational safety and health take into account the confounding influence of the two moral hazards mentioned above. Experience rating of workers' compensation insurance is a feature of workers' compensation that may solve the conflicting behaviour caused by the claims-reporting moral hazard. In the system of experience rating of workers' compensation insurance premiums, adjustments to workers' compensation assessments are based on the firm's claim experience rather than its accident experience. So experience rating provides employers with incentives to engage in claims management as well as accident prevention (Thomason, 2003).

Premium assessment rates, as another form of experience rating, are determined in two steps (Mustard, 2005). First, the base rate is defined by comparing the company to the industrial classifications that show groups with the same risks for occupational injury or illness. Next, the base rate can be adjusted for each company based on its individual safety record in the past (experience rating). Thus, in order to motivate a firm to invest in prevention, the cost of injuries is tied to the firm's past claim record. At the same time, however, the firm is free to adjust its safety investments according to its resources. Due to the greater flexibility it offers companies, this method appears even better than the manual experience rating system where all enterprises within a rate category pay the same premium regardless of the injury record of individual firms (see Tompa et al., 2007).

Different forms of experience rating of workers' compensation insurance premiums are further investigated in the meta-analyses by Tompa et al. (2007), Thomason (2003) and Durbin (1998). Tompa et al. (2007) review two key features of workers' compensation, namely experience rating of insurance premiums and varying the degree of experience rating. They find moderate evidence that the frequency of injuries is reduced by the introduction of experience rating (six studies were found, of which five were included based on their quality). Furthermore, the relationship between the degree of experience rating and the frequency and/or severity of injuries can only be supported moderately (five studies were included in the synthesis). Different reviews used in the meta-analysis show that the relationship between experience rating and injury severity is more ambiguous than the relationship between experience rating and injury frequency. With different methodological issues in mind, and only little evidence available, it is difficult to draw clear conclusions on the effectiveness of the degree of experience rating. Thomason (2003) reports significant evidence that experience rating results in lower injury rates. Mixed results were found in the investigation of injury severity. Thomason (2003) reviewed 14 studies, of which 11 confirm that experience rating does indeed lead to an improvement of workplace safety and health. However, all studies differ with respect to methodology and data sources, so final conclusions have to be drawn with caution. According to Durbin et al. (1998), the strongest research on experience rating of workers' compensation

does not use insurance claims or insurance costs to measure occupational safety and health. It applies one of the following three ways to measure occupational safety and health: (1) benefit–firm size interaction, (2) natural experiments, and (3) fatality rates. The different research approaches have mixed results regarding the relationship between experience rating of workers' compensation and occupational safety and health. Within the benefit–firm size approach, some studies found evidence for an experience rating effect, while others did not. Within the natural experiments, no experience rating effect was found. The studies reviewed by Durbin et al. (1998) within the fatality approach did, again, find a significant experience rating effect, meaning that experience rating significantly reduced the number of fatal injuries.

Besides the experience-rating schemes described above, partial insurance is another feature of workers' compensation that might reduce the moral hazard effect. Partial insurance implies a waiting period and wage replacement rates for the employee and offers newer, deductible insurance contracts for employers. The available research (Durbin et al., 1998) indicates that the frequency of claims and total claim costs decrease when the waiting period and retroactive periods are increased.

In contrast to earlier research from the 1990s, Wright et al. (2005) also found that setting incentives on other insurance premiums than workers' compensation insurance plays an important role. Employers' liability insurance, for instance, costs a lot and any reduction in premiums could be a strong motivator to invest more in occupational safety and health.

So, overall, insurance-related economic incentives seem to be an effective way to motivate enterprises to invest in safety and health at the workplace. However, in most of the studies reviewed by Thomason (2003), pure cash benefits in the form of workers' compensation have proven to increase the frequency and severity of work-related accidents and illnesses. Other insurance-related incentive schemes such as different forms of experience-rating of workers' compensation premiums or partial insurance seem promising, although evaluation results remain somewhat ambiguous.

Internal financial incentive schemes

Two ways of providing internal financial incentive schemes have also been discussed in the literature, i.e. wage premiums and wage differentials set by the enterprise itself. However, whereas the former appear promising for stimulating OSH measures the latter does so to a much smaller degree, according to the authors.

Viscusi (1985) refers to wage premiums as a kind of on-the-job compensation paid by the organisation. Both the value that workers attach to their safety and the trade-off workers are prepared to make between money and perceived risk are reflected in wage premiums. The safety value represents the financial value workers place on their lives with full knowledge of the probability of injury or death. When managers want to know how workers perceive the safety risks of their jobs, they can look at barometers such as absenteeism and turnover rates, but also at these wage premiums. Such wage premiums may also function as a financial incentive to keep the risk itself as low as possible.

Strand and Johnson (1980) made an analysis of the expected illness and injury costs of wage differentials. A worker who is ill or injured because of an event in the workplace is often not able to perform all his usual workplace and household activities. This has economic consequences: e.g. wage loss through reduced productivity or income loss because of medical expenses. Organisations pay wage differentials in order to compensate for these expected losses. Their analysis shows several differences

between the private costs of occupational illness and injury and the incentives that result from these costs to pay more attention to occupational safety and health. As the probability of injury and illness is difficult to calculate, it is difficult to estimate potential injury and illness costs. Because of this difficulty it is unlikely that organisations will integrate the expected costs of injury and illness completely in risk-related wage differentials. Therefore, the economic incentive for firms to invest in safety and health at work decreases.

Having described the various styles of possible interventions by public authorities, insurers and the firm itself we sum up this section by referring to Wright et al. (2005), who conclude in their study that the best way to make sure organisations are motivated to invest in safety and health at work is a combination of advice, enforcement and persuasion of the business case. They also point out that the incentive scheme that will work best in a particular company depends heavily on the general attitude of the company towards occupational health and safety. To underline this argument, Wright et al. (2005) interviewed several general managers and health and safety managers. They all indicated that advice and incentives were the most important elements, whereas enforcement, reputational risk, bigger fines and more expensive insurance received less support from these managers. For those who are convinced that occupational safety and health are important for the business, persuasion and incentives are the best way to go. For those who have a negative view of occupational safety and health, enforcement is the most effective way to secure compliance. For organisations that are already motivated, as well as those which see occupational safety and health as a burden, advice and support are thought to be the most promising motivations to keep on investing in occupational safety and health. From the study of Wright et al. (2005) we can also conclude that organisational size and sector influence the attitudes and preferred interventions of firms. These results cannot be taken literally, but some sectors tend to have a more positive attitude towards safety and health (e.g. construction, manufacturing, health, personal and social services). Other sectors have a less positive attitude, such as agriculture, business to business, and hotels & leisure. Some sectors are difficult to characterise, because they are either neutral or have mixed attitudes (education, media, telecoms, transport, etc.). Regarding size, large organisations are more likely to show a positive attitude towards occupational safety and health than smaller ones.

2.3.3. Country-, sector- and case-specific studies on economic incentives for OSH prevention in enterprises

This section includes seven concrete examples of economic incentive schemes applied in practice, divided into country-, sector- and case-specific studies. External measures are dealt with first; that is, incentives which are launched or conducted by external agents, such as governmental regulations or insurance-based incentives. Subsequently, some interesting internal financial or non-financial incentive schemes are discussed. The goal is to give an overview of the selected literature in order to assess the impact of the measures introduced and finally to determine whether a particular incentive has been successful or not.

One of the seven studies is a country-specific analysis looking into the Polish labour code and its impact in the country (Podgòrski, 2006). Another study is more sector-specific, examining incentives in the construction industry (Goodrum and Gangwar, 2004). All other studies are case-specific; investigating very different incentive schemes in different environments, both in companies and among individual workers

(Hassink and Koning, 2005; Herman et al., 2006; Finkelstein et al., 2007; Winn et al., 2004; Engellandt and Riphahn, 2004). Of all these incentive schemes only two were initiated by external actors. These were the country study of the Polish labour code (Podgòrski, 2006) and a pilot study conducted by Finkelstein et al. (2007). All other papers studied internal incentive schemes, i.e. incentives launched by the companies or industries themselves.

External financial incentives

The most important providers of external incentives to improve occupational safety and health are national or international authorities. Due to the small study sample examined in this report, the following analysis is limited to national authorities and in particular national governments. According to Tompa et al. (2007) the most common instruments governments use to prevent accidents (and therefore also to improve occupational safety and health) are financial incentives and occupational health and safety regulations. The study by Podgòrski (2006) examines the use of the latter instrument in Poland.

In the late 1990s the Polish labour code (based on directive 89/391/EEC) was enacted. It places full responsibility for the protection of workers' safety and health on employers. They are required to carry out a range of organisational and technical activities directed at preventing occupational hazards and risks. In addition, the Polish Committee for Standardisation has established three standards to support employers' implementation of the regulations. Podgòrski's study (2006) concentrates especially on the required occupational safety and health management system (OSH MS) in industrial enterprises. The main research question was which motivational factors could be identified for decisions to introduce such a system. The author found that both external and internal factors mattered. For example, both compliance with OSH regulations and the ambition of top managers to improve their management of the enterprise were important factors in introducing an occupational safety and health management system.

The pilot study from Finkelstein et al. (2007), on the other hand, does not involve official authorities and their incentives. It describes a pilot study testing the effectiveness of different levels of financial incentives for weight loss among overweight employees. The study was designed and conducted by the authors of the paper. By introducing two levels of monetary rewards ($7 and $14 for each percentage point of weight lost from the baseline) and a three-month payment interval (after 3 and 6 months) the authors measured the impact of the incentives within different weight groups. In order to measure the impact of the amount of monetary reward they altered the level of payment after the first three months for different weight groups. The main result was that financial incentives can successfully motivate short-term weight loss.

Internal financial and non-financial incentive schemes

Most of the papers analysed dealt with incentive schemes initiated by companies or industry sector associations themselves. These internal incentive schemes comprised both financial and non-financial programmes. The financial incentives were either injury/illness-based programmes (Goodrum and Gangwar, 2004), performance- or behaviour-based pay systems (Engellandt et al., 2004; Goodrum and Gangwar, 2004), behaviour-based rebate options (Herman et al., 2006) or more innovative programmes like a lottery system (Hassink and Koning, 2005).

The research conducted by Goodrum and Gangwar (2004) looked for the impacts on the safety performance of US construction firms. They identified two different

categories of safety incentive programmes. On the one hand there were injury/illness-based programmes, which are based on the number of injuries and/or illnesses as a criterion to reward workers and teams. On the other hand behaviour-based programmes were used, which took worker behaviour as a criterion for awarding incentives, for example attending safety meetings and training, offering suggestions about how to improve job site safety, etc. The main finding of the research was that incentives in general are effective at improving many of the safety performance metrics used in construction. At the same time, though, differences exist within the industry regarding perceptions of incentive effectiveness (also see Wright et al., 2005). Craft workers have a more favourable opinion of the effectiveness of safety incentive programmes than do company managers. Interestingly, rewards based on crew versus individual performance, injury versus behaviour performance and different time periods for giving the awards made no difference to the effectiveness of the programmes among the sampled companies. Surprisingly, however, companies that used only tangible awards (e.g. money or gifts) had slightly better safety performance measures compared with those that employed both tangible and intangible awards (e.g. time off or certificates). The differences were, however, not statistically significant. So both approaches, using only tangible or a mix of tangible and intangible awards, can lead to successful interventions.

The study by Engellandt and Riphahn (2004) looked into a wage premium programme (which is not directly connected with OSH measures) in a large international company. The main aim was to determine whether performance-related pay helps to increase worker effort, for example by reducing absenteeism. The company used two kinds of premium programmes: an individual 'surprise' bonus granted for special achievements and a complex performance pay system, in which the annual salary is determined by the outcome of an annual individual performance evaluation. The latter premium programme was connected with the hierarchical level of the employee: the higher the employee is in the hierarchical order the higher the percentage of the premium. In order to measure which payment system actually affected performance the study made three hypotheses. The first stated that in a more heterogeneous department the motivation to improve performance would be higher due to the possible bigger step to a higher hierarchical level and thus higher payment (a more homogeneous environment would not provide for such large jumps). The second hypotheses stated that if the variability in the performance pay was higher the incentive to improve person-specific performance would be higher. The last hypothesis, on the other hand, took a more department-oriented stand in saying that if a department provided more bonuses than other departments (over the long term), the worker effort in that department would be higher than in others. After analysing data describing about 6,500 employees the main conclusions were: 1) worker effort responds positively to surprise bonus payments, and 2) workers make more effort if their supervisors re-evaluate their performance each year as opposed to leaving individual positions unchanged over time. The study also found that there was a significant negative correlation between the average level of overtime work in the departments and their rating dispersions, but did not consider this further because such a bias did not occur in the case of the two incentive indicators. Therefore, the study was only able to confirm the last two hypotheses.

In order to increase the long-term fitness activities of its employees the IBM Corporation introduced a cash rebate for its physical activity programme in 2004. The company gave a $150 cash rebate option for employees participating in a 'virtual fitness centre' (VFC). The money came with some conditions: participants had to do at least 20 minutes of physical activity, three days a week, for 10 of 12 consecutive

weeks. The rebate was processed automatically through the VFC system and issued in the employee's pay cheque. Herman et al. (2006) used the data gathered after the launch of the programme and investigated whether a financial incentive integrated with health benefits for an online physical activity programme was associated with increased employee participation and improved health status among participants compared with non-participants. The findings were: 1) The cash rebate incentive increased the programme's participation rates, 2) The participants reduced their risk relating to physical inactivity, life dissatisfaction, low perception of health, high risk status, smoking and high body weight, and 3) an incentive-based online physical activity programme can be an effective model for companies to increase employee health. Companies with a dispersed employee population can profit from an online model, because it enables participation from different locations.

Winn et al. (2004) further investigated a programme that used non-material incentives. The goal of the programme was to improve safety and security at a construction site by giving the workers performance feedback and the necessary training to enable them to work more independently, for example by carrying out independent inspections themselves. The idea behind the independent inspections was that the workers were able to qualify themselves, through a written test, to do inspections that were usually conducted by the safety manager. The research investigated whether the hazards associated with scaffold use could be reduced by using incentives. After six months, the use of these non-material incentives significantly improved on-time delivery and completion rates of a special inspection form. Surprisingly, even though workers said they preferred material incentives, their behaviour was changed by the non-material incentives.

The last financial incentive programme to be discussed is a lottery system connected with employees' sick leave. At the beginning of each month, a Dutch firm selected workers who had not taken sick leave in the previous three months. From this group of workers, seven winners were selected at random. Each lottery winner received a gift voucher worth EUR 75. The names of the winner were made public and the winners were excluded from further lotteries. Hassink and Koning (2005) analysed this lottery system to assess whether the financial incentives associated with a lottery did lower the rate of sick leave. They found out that the lottery led to a substantial decrease in sick days taken. Furthermore, non-monetary aspects (e.g. public announcement of the winners) were important in explaining the substantial incentive effect.

2.3.4. Economic incentives for OSH in SMEs

In the European Union, SMEs are defined in the Commission Recommendation of 6 May 2003. The recommendation defines an enterprise as 'medium sized' if it employs fewer than 250 people, and if it has either an annual turnover not exceeding EUR 50 million, or an annual balance sheet total not exceeding EUR 43 million. Moreover, less than 25% of its capital or voting rights can be controlled by a public body. Within this category small enterprises are defined as those that employ fewer than 50 people and whose annual turnover or annual balance sheet total does not exceed EUR 10 million. Small and medium-sized enterprises are socially and economically important, since they represent 99% of all enterprises in the EU and provide two-thirds of all private sector jobs. As much as 65% of European Gross Domestic Product (GDP) comes from SMEs. According to Eurostat, there are almost 20 million SMEs in the EU-27 operating in hugely different sectors. Each of them employed, on average, 4.3 people in 2005 (Schliemann, 2008).

However, according to the European Agency for Safety and Health at Work, SMEs also record a disproportionate 82% of all occupational injuries; a figure that rises to about 90% for fatal accidents. The incidence rate for fatal accidents in enterprises with fewer than 50 workers is around double that of larger companies. And, unfortunately, occupational risk is rarely a front-line concern for small companies with limited managerial and financial resources. The communication of the European Commission on the practical implementation of OSH-related directives (COM, 2004) indicates that the main reasons for shortcomings in complying with EU health and safety legislation in SMEs are a lack of specific and comprehensive information and guidance, poor ability and skills to manage health and safety and inadequate access to specific and specialised competent technical assistance.

Possible solutions for SMEs

It is often very difficult to convince SMEs that OSH issues are important, not only for complying with relevant regulations but also for their further sustainable development. Thus, apart from promotional and educational activities in this field offered free of charge to SMEs, more direct economic incentives taking into account their economic needs are expected to be developed. Walters (2001), for instance, presents two categories of such incentives:

First, there are insurance or insurance-related schemes offering some form of financial support for employers' efforts to introduce better preventive health and safety management. According to Walters (2001) this category is not always relevant to small business as it is based on the health and safety performance of enterprises as a measure of risk. Since the owner of a small company is statistically unlikely to have experienced an occupational accident followed by serious consequences he or she will be unimpressed with cost-related incentives. According to Walters (2001) even successful implementation of the enterprise diversity-based EMMI (see Section 2.1 of this report) in relation to small business is not easy. Moreover, Walters stresses that in some countries insurance systems work in such a way that they discriminate against SMEs in so far as they are charged proportionally higher premiums even though their health and safety performance may be better than that of bigger companies. The main objective of workers' compensation schemes and the regulations that underpin them is to secure fair compensation for workers who have suffered due to occupational accidents and diseases. Another goal is to stimulate preventive activities in companies. Walters (2001) emphasises that this aim is more successfully achieved in worker compensation insurance systems that are part of the organisation of social insurance, as in France or Germany, rather than systems based purely on free-market mechanisms.

A second category of economic incentives are grants, awards or tax connection schemes, separated from the insurance system. However, the author stresses that few examples of such schemes have been tried and tested in SMEs and have reliably produced successful outcomes (Walters, 2001).

Most approaches to small workplace health promotion quoted in the literature have been education-centred (Eakin et al., 2000; Micheli and Cagno, 2008) and there are few examples showing whether real economic incentive schemes can be applied successfully to SMEs (Walters, 2001). Providing free training, information materials and guidelines aimed at increasing awareness of OSH is perceived as one of the most effective ways of changing employers' attitudes to OSH issues in SMEs. The number of such projects, both national and international, is increasing, but no clear evidence of their effectiveness has been delivered so far. For instance, in 2001, the European

Agency for Safety and Health at Work awarded grants for 51 national and transnational projects aimed at reducing the number and seriousness of accidents in SMEs. The aim of the projects was to show how workers and employers in many different industries from all over Europe benefited from a tailored approach to a specific problem area. In 2002 and 2003 the Agency organised the next two funding schemes targeting the reduction of safety and health risks in Europe's SMEs. As in the previous scheme, they provided co-funding for initiatives that encourage SMEs to adopt good occupational safety and health practice by encouraging activities related to training, information and communication and the provision of good practice. Altogether, they covered 52 projects (11 transnational and 41 national) in 2002 and 40 projects (14 transnational and 26 national) in 2003.

One of the interesting exceptions aimed at setting a real economic incentive in SMEs is a safety initiative provided within the Safe Communities Foundation (SCF) in Canada (Eakin et al., 2000). This is a voluntary programme whereby communities can apply for funding, training and three years of technical expertise and support until they become self-sufficient. SFC assists communities in designing their own safety programmes including an obligatory occupational safety and health training programme for small and medium-sized enterprises. The Canadian Safe Communities network currently includes 45 Safe Community coalitions covering approximately 444 geographical areas and 22% of the total Canadian population.

Eakin et al. (2000) specifically mention the Canadian province of Ontario to be one of the most successful in this field. One important partner in the programme is the compensation and prevention agency Workplace Safety and Insurance Board (WSIB), which designed training materials for the Safety Communities Incentive Programme (SCIP), provides much of the professional manpower for education and consultation and offers an economic incentive scheme to encourage participation. Within SCIP small employers receive training, worksite evaluations and access to mentoring and coaching aimed at improving health and safety in the workplace. As a participant, a small business can share proportionately in a 75% refund of any savings realised in the community group's claim costs with the WSIB that result from improved workplace health and safety. This benefit is in addition to refunds a participating small business may receive through the other incentive programmes administered by the WSIB, which currently offers a fixed 5% rebate on WSIB insurance premiums upon successful completion of SCIP. Since 1997, more than 6,000 firms in Ontario have participated in SCIP and received rebates totalling US$ 12.6 million.

The results of the project evaluation show that for each of the three communities joining SCIP in 1997 lost-time injury frequency rates declined more quickly over the programme period than for the comparison group. For two of the three communities, no lost-time injury frequency rates declined as rapidly as in the comparison group firms. These data are supported by findings of self-reported improvements in the worker surveys and case studies noted below. In addition to these positive results, it was found that some changes in reporting practices have also occurred. Specifically, 67% of workers stated that they or their co-workers reported hazards and incidents to a greater degree now than in the past two years. Similarly, 46% of workers stated that their supervisors track near-misses more often now than they did in the past. Finally, 75% of workers reported that their workplace had become safer over the previous two years. These findings suggest that firms with better health and safety records have incorporated health and safety procedures that include changes in reporting practices. Furthermore, these and other health and safety changes may create a feeling that one's workplace has become safer.

The evaluation report of the Canadian project also confirms Walters' (2001) opinion that more direct economic incentives to improve OSH in SMEs are necessary: most participants confirmed that their initial motivation to join SCIP was the financial incentive, including the desire to reduce their ongoing premiums. The availability of the low-cost training was also a significant factor. However, many employers stated that they withdrew from SCIP because they were not satisfied with the incentive or the amount of savings on their premiums. Others reported that they did not have enough time to attend the training sessions, that the training and the make-up of the groups did not appeal to them, or that they assumed they were not registered because they never heard back from their SCIP representative.

Besides this Canadian initiative, we identified two interesting SME applications of real economic incentive approaches in Germany. Both have shown positive evaluation results. First, in the chemical industry a so-called 'employer model' has been implemented, i.e. employers can implement free OSH training instead of employing their own obligatory safety officer. The evaluation of this occupational safety training by a pre-post design in SMEs (described in detail by Elsler and Corth, 2003) in the chemical industry was very positive, i.e. accidents have been reduced by one-third in participating SMEs. Furthermore, employers' motivation for OSH, their attitude towards it and their knowledge about OSH increased.

Second, in the butchery sector, the German 'Berufsgenossenschaft' (BG) publishes an annual catalogue of special OSH measures and gives bonus points for members who implement each of these measures. According to the BGAG (2006) annual report, companies scoring 10 points or more receive discounts on their insurance premium. The maximum reduction is 5% for 100 bonus points or more. This bonus point system is particularly transparent and easy to apply as every enterprise can immediately link certain OSH measures with the bonus points and the resulting premium reduction. SMEs also have no problem in implementing at least some of the measures as the list is quite long and is amended annually. Further advantages are that a flexible bonus point system also makes cost-intensive measures attractive for enterprises as they result in a substantial premium reduction. Finally, as higher risks are linked to higher premiums, incentives are greater for high-risk firms because the absolute premium reduction is relatively higher for the same number of bonus points. Evaluation of this premium reduction system by the butchery BG in 2005 showed, amongst other things, that since the system was introduced in 2002, the participation rate has risen from 40% to 44%. The maximum premium discount of 5% has been reached by companies of all sizes, including small ones. The accident rates at companies participating in 2005 fell more sharply over the previous five years than the rates of non-participants (see BGAG, 2006).

Difficulties in promoting OSH in SMEs

There are two fundamental problems faced by each EU country: how to effectively approach SMEs with OSH-related information and solutions and how to obtain access to a large number of SME workplaces. An understanding of the conditions and daily life of SMEs is a prerequisite for solving these problems.

On the basis of a literature review Mose and Karlqvist (2004) identified three major problems that must be overcome in small and medium-sized enterprises to ensure high-quality prevention programmes. First of all, SMEs face financial problems. Second, time and employee defensiveness, language differences and low literacy were mentioned as being major obstacles if present. Third, they need to rely on external support. Small entrepreneurs should thus focus on developing networks in order to use the limited financial and personal resources they have collectively.

The authors note that even brief and inexpensive programmes work if they are well adapted.

An American study (Wilson et al., 1999) done among 2,680 worksites with 15 to 99 employees supports these findings. It found that 25% of all small companies studied offered Workplace Health Promotion (WHP), whereas 44% of the larger enterprises did so. One reason for this is that SMEs are less likely to have staff specifically responsible for this area. The study shows that the chance that staff or departments were specifically responsible for WHP rises with the company size.

Successful prevention programmes for SMEs need to have a holistic and integrative approach and involve both workers and management. If they learn more about occupational health and safety, workers who are confronted with hazardous situations at their workplace can be encouraged to raise concerns. According to a cross-sectional telephone interview survey done among 362 workers and managers, almost 90% of participating workers were more aware of health and safety at their workplace after training. They also became actively involved – from one-third to half of the employees, depending on the industrial sector, raised a safety concern. And – as management had also been trained – between 54.7% and 65.7% of all concerns raised led eventually to a change (Lippin et al., 2000).

When measures are planned to encourage small businesses to use OSH advice and services it must be remembered that OSH issues cannot be separated from the organisational and cultural realities of small business. In addition, the effectiveness of intervention programmes depends heavily on relationship between OSH consultants and the owners of the small enterprises (Eakin et al., 2000). The most important elements for the development of a trust-based relationship seem to be personal contact that focuses on positive achievements, and the relationship between the working environment and other management goals.

A Danish project approach aiming to provide OSH assistance by work environment professionals (WEPs) in small enterprises was based on such a dialogue between an external consultant and the SME owner (see Eakin et al., 2000). Only after a trust-based relationship had been built between WEPs and owners could the second phase, focusing on introduction of preventive working environment activities, be implemented. As owners are much more likely to listen to one another than to the WEPs, ensuring the exchange of owners' experience is another important success factor that contributed to an increase in the number of SMEs using the OSH-related consultations. Presentations by the WEPs, exhibitions and checklists can only be regarded as supporting tools.

In contrast to the dialogue-consultancy approach used in Denmark, Eakin et al. (2000) present a different approach with use of accountants for OSH advice that was explored in Australia and New Zealand. Accountants continually seek ways of diversifying their business by offering 'total-accounting and management packages' to clients. As small employers rely heavily on advice from accountants, the use of non-professionals to deliver OSH information and advice can increase the number of small companies using OSH services. However, the quality and extent of their advice was problematic. First of all, accountants could not ensure that OSH advice was provided by a competent person. Secondly, the advice was limited only to interpretation of OSH-related legislation and did not cover practical implementation assistance. A study of small business environment organisations in UK confirms the weaknesses of this approach. Findings show that while banks could provide some health and safety information, this provision is erratic and is not a part of the central strategy (Walters,

2001). Despite these limitations, the authors see the approach as a promising way of promoting OSH (Eakin et al., 2000).

A different approach which is oriented more towards employees than the previous ones has been explored in Sweden. There, trade unions have the right to appoint regional safety representatives, i.e. representatives outside the workforce paid by trade unions who receive 60% of their reimbursement from the state, for firms without joint OSH committees (normally SMEs that have below 50 employees). Joint government and union funding permits the representatives to visit 50,000 to 60,000 small workplaces per year, i.e. far more than the labour inspectorate. As only around 20% of the small firms are affiliated to occupational health services, the representatives are the main channel supporting their OSH activity. In their work, they are meant to inspect OSH conditions and make suggestions for improvements, promote the workers' interests and activity in OSH matters, and support OSH activities in small workplaces. As most workplaces are very small, without local representatives, OSH inspections predominate. However, through training, checklists, information etc., the representatives still try to make workers and employers more active in detecting and abating their own OSH risks, i.e. complying with the regulation on internal control. Cooperation between representatives and small firm owners and managers is surprisingly good. The low level of conflict has been attributed to OSH training, general union experience and the fact that the representatives are independent.

2.4. Summary of main results of the literature review

This study aimed to provide an overview of recent international policy measures and scientific research on how enterprises can be motivated by economic incentive schemes to improve their efforts in preventing occupational accidents and illnesses. In particular, we reviewed a number of meta-analyses and general overviews, country-, sector- and firm-specific case studies as well as literature focusing on small and medium-sized companies.

Summing up our main results, we find mixed evidence in the meta-analyses by Tompa et al. (2007), Thomason (2003), Paton (2007) and Durbin and Butler (1998) that the mere introduction of government regulations leads to a reduction in the frequency of work-related injuries. However, a recent study by Foley et al. (2009) has shown positive results through the introduction of a new ergonomics rule in Washington State (US), which was then reversed again by the rule's repeal. Regarding the enforcement of government OSH regulations, a specific deterrence strategy has a significantly greater influence on sick leave than general deterrence. The effectiveness of government-induced measures such as taxes, linking economic incentives to audits or intervention programmes or matching funds remains somewhat unclear. Taxes may indeed have a positive influence on OSH prevention measures but are only effective for companies paying corporate tax and making a taxable profit, which means they do not affect public and non-profit enterprises. Linking economic incentives to audits or intervention programmes is, according to Toren and Sterner (2003), another promising way of improving OSH in companies. Matching funds, where governments provide grants proportional to the amount of money the organisation spends on workplace

health programmes, have considerable potential but have proved to involve high administrative costs for both enterprises and the government.

Insurance-related incentive schemes have to be designed very carefully. The Centre of Competence for Workers' Compensation (2005) presents an excellent summary of 11 major points for the design of such incentive schemes.

With respect to the effectiveness of specific approaches, linking insurance premiums to disease outcomes is a common method of increasing employers' awareness of their true production costs, i.e. including sickness absence and work-related illnesses. One disadvantage of this method is the possibility that companies might manipulate claim frequencies by putting pressure on employees, in order to avoid paying higher premiums. Experience rating of workers' compensation insurance may have the potential to solve the claims-reporting moral hazard problems in employee behaviour, stimulating claims management as well as accident prevention on the part of employers. So far research shows mixed results, but most studies using meta-analysis state at least moderate evidence for the effectiveness of experience rating. Premium assessment rates linking the costs of injuries to an enterprise's past claims record in a two-step approach may be a better, more flexible method of experience rating. Partial insurance may also have the potential to reduce the moral hazard influence on employee behaviour. Although little research seems to have been carried out on this measure, results so far have been positive. Finally, employers' liability insurance may be a starting point for setting economic incentives for OSH as it generally costs a lot and financial aids are thus welcome by enterprises. In contrast to all these schemes, the effectiveness of pure cash benefits through workers' compensation, however, have proven to increase both the cost of workers' compensation insurance and the frequency and severity of injuries amongst the workforce.

All in all, the reviewed empirical cases (except the country study of the Polish labour code) indicate that economic incentive schemes do, indeed, alter employees' behaviour or incident rates in companies. The studies make a strong case for the use of incentives to improve occupational safety and health in companies. The study on the Polish labour code, on the other hand, emphasises that in order to introduce OSH measures effectively it is important to provide information and training to the companies involved. All in all, financial incentive schemes such as wage premiums, cash rebates for physical activity and a monthly lottery proved to be particularly useful for prevention. Further research is, however, needed in order to fully understand the impact of these schemes in general and particularly the difference in effectiveness between financial and non-financial incentives that are specific to a firm.

Concerning SMEs, economic safety incentives have to go beyond simple accident-based experience rating. The reviewed literature does provide some clear solutions and evidence on the effectiveness of approaches used to support SMEs in increasing their level of occupational health and safety. Evidence-based intervention studies, for example, support the effectiveness of free OSH training and the introduction of effort-based premium systems (e.g. in the German butchery sector section 4.2.1).

However, many evaluations in the literature are still based solely on authors' subjective opinions (Frick et al., 2000; Walters, 2001). In order to draw solid conclusions the quality of research and the evaluations of intervention studies in SMEs need to be improved. Hasle and Limborg (2006) support this view in their discussion of the quality of OSH-related research conducted in SMEs. Frick et al. reviewed the scientific literature on

preventive activities in small and medium-sized enterprises.[2] They stress there has been a significant increase in the number of studies of small enterprises, but point out that the research community is scattered between many different disciplines and institutions. They confirm that there is a lack of evaluation of intervention studies, both in terms of effect and practical applicability. However, there is sufficiently strong evidence to conclude that employees of small enterprises are subject to higher risks than the employees of larger ones, and that small enterprises have difficulties in controlling risk. The limited resources, including financial ones, are often mentioned in this context. According to the publications studied, the costs of fulfilling legal requirements in OSH are relatively higher in small companies than in bigger ones. The most effective preventive approaches thus seem to be simple and low-cost solutions, disseminated through personal contact (see Hasle and Limborg, 2006).

2.5. Conclusions

Evaluating financial incentive schemes set up to encourage companies to improve their investment in occupational safety and health is a tricky business, according to the reviewed literature. Although the methodological quality of the individual studies was generally high, the approaches still differ considerably when it comes to the nature and definition of the investigated incentive schemes, the research entity (government, employer, employee), sample sizes and research methods (meta-analyses, regression analyses, interviews). This makes an overall comparison of the results difficult. Besides this, the results of many studies into the effectiveness of OSH regulation or particular economic incentives remain ambiguous. Often evidence can be found both in favour of and against a particular incentive scheme. Last but not least, contextual factors play an important role in assessing the effectiveness of certain systems in increasing investments in occupational safety and health. Organisational attitude can influence the preference towards certain systems, and these attitudes can in part be influenced by organisational size and sector. The advantages and disadvantages of different incentives systems also vary for large organisations and SMEs. Nevertheless, some concrete and innovative examples of good practice have been described that, together with the empirical data gained by the studies presented, may be helpful in adapting existing programmes or in designing new incentive schemes. However, further research is needed to provide a full understanding of the mechanisms and impacts of the different benefit schemes.

Keeping in mind the above methodological obstacles, we can derive four main policy recommendations from our search for scientific evidence on the effectiveness of economic incentive schemes:

First, any legal regulations should be supported by economic sanctions and/or incentives to make them effective (Toren and Sterner, 2003). In order to take into account all different aspects that influence the process of economic incentives for

2 Their literature review was limited to English, Danish, Norwegian and Swedish publications after 1980, and to research from industrialised countries.

OSH, a combination of economic incentives and legal regulations is the best way to make sure that organisations are motivated to invest in safety and health at work.

Second, government taxes have been found effective not only for punishing enterprises but also for rewarding them for good OSH practice. However, taxes obviously are only effective for companies paying corporate tax and making a taxable profit.

Third, pure cash benefits for work-related accidents or illnesses in the form of workers' compensation have proven not to be the best option regarding insurance-related benefits. Other approaches such as experience rating or two-step premium assessment rating have shown better effects in terms of reducing the frequency and severity of work-related accidents and illnesses.

Fourth, although not an original focus of our study, internal economic incentive schemes have proven particularly creative and successful in practice. Reward systems such as a monthly lottery for employees who did not call sick in the previous month may be worth analysing and implementing on a bigger scale.

Finally, with respect to SMEs, more direct economic incentives for OSH prevention measures are necessary in order to lower the particularly high accident rates. Equally important is, however, to ensure that a greater number of SMEs have access to OSH-related expertise and information. The implementation of the measures demonstrated should always be followed by an evaluation of their effectiveness. It is noteworthy that OSH prevention schemes depend on the specific historical circumstances and the particular economic, political, legislative and social structures of a country, which means that their transferability from one country or jurisdiction to another is not straightforward. A careful analysis of the context and circumstances in which they work is therefore particularly necessary.

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2.7. Annexes

Table 1: List of applied literature search terms in English and German

a. English

Economic incentives	OSH	Enterprises	Evaluation
Financial motivation	(Improve) working environment	Firms	Efficiency
Compliance	OSH regulations	Insurance (health, accident)	Cost-benefit analysis
Economic instruments	Good OSH performance	Insurance companies	Research
Fiscal incentives	Workplace safety and health	SMEs	Comparison EU
Incentive schemes	Occupational risks	Social security systems	Comparative analysis
Insurance premium variations	Occupational health programmes	Industry	
Tax incentives	Industrial illnesses	Industry sectors	
(State) subsidies	Health and safety prevention	Labour inspectorates	
Management systems	OSH-index	Pension funds	
Insurance schemes	Working conditions		
Benefits, rewards, bonus	Occupational disease		
Costs, penalties			
Prevention			
Risk-rating, experience-rating			
Sectoral premiums			
Investments			
Accident rate, accidents at work, disability, sickness, absenteeism			
Certification (of OSH-friendly enterprises)			
Financial aid			

b. German

Oekonomische Anreize	Arbeitsschutz	Firmen	Evaluation
fiskalische Anreize	Arbeitsgesundheit	Unternehmen	Effizienz
oekonomische Motivation	BAUA	Versicherungen	vergleichende Analyse
Anreizsysteme	Arbeitsmedizin		

Table 2: Excel template for summary of reviewed literature[3]

Author(s)	Scope of measure (e.g. nationwide for all enterprises, sector-specific, regional, etc.)
Editor(s)	Year in which measure was initiated
Source	Brief description of measure(s) addressed
Year	3 main results (i. a. effectiveness of the measure regarding motivation of enterprises for OSH)
Research question(s) posed	Method used (incl. dependent variable (DV), samples size or countries covered, statistical estimation, case study, etc.)
Type of economic (financial) measure(s) addressed (e.g. wage premium, injury tax, insurance premiums, risk compensation, experience-rated workers' compensation insurance, specific type of law, government regulation, etc.)	Main criticism (positive as well as negative)
Initiating institution (internal (i) name of enterprise or external (e) name of government authority, insurer, etc.)	Further remarks
Compulsory (c) or optional (o) measure	

3 The completed Excel file can be obtained from the corresponding author upon request.

3.

POLICY OVERVIEW

3.1. Introduction

As mentioned in Section 2, occupational prevention, and thus also economic incentives in OSH, have to be analysed in the context of the specific economic, political, legislative and social structures of a country. Section 3 therefore seeks to give an overview of existing economic incentive schemes and their national context in the 27 EU Member States. Although the focus lies mostly on financial incentives (insurance-related incentives, and tax and funding schemes), national non-financial (ethical) incentives are mentioned as well.

3.1.1. Methodology

The information on legal and policy framework conditions of economic incentives in the EU countries was gathered as follows:

Firstly, a questionnaire was drafted and sent out to the focal points of the 27 Member States. Eight questionnaires were returned: by the focal points of Austria, the Czech Republic, Denmark, Finland, Lithuania, Poland, Slovakia and the United Kingdom respectively. However, the missing information was provided by the Topic Centre experts or competent contact persons in the other countries.

Subsequent to the questionnaire survey, relevant information was collected through reports, articles and databases. The following sources of information were particularly useful: the European Agency for Safety and Health at Work (2005), the National Confederation of Greek Trade Unions (2003), the MISSOC – Mutual Information System on Social Protection database (2008),[4] and the Munich Re Group (Münchener Rückversicherungs-Gesellschaft, 2000, 2002, 2005). Where necessary, information was checked with contact persons in the respective Member States.

In a second phase, all collected material was analysed, evaluated and compared, with the aim of extracting useful criteria and developing a table showing the typologies of different prevention and social security systems and related effective economic incentives in OSH. The ultimate objective of this categorisation was to get a view on which economic incentives in OSH are applied in which context (welfare and social insurance system), and whether certain incentives could be transferred to Member States with similar system characteristics.

4 The MISSOC database of the European Commission provides basic information about most of the social protection areas in each country, as well as information on the financing of social protection, including country-specific data on employment injuries and occupational diseases.

3.2. Policy classifications

3.2.1. Background

Although the EU plays an increasing role in social policy in its Member States, each country still differs in its social security arrangements, i.e. its social insurance programmes providing protection against recognised adverse social conditions, including poverty, social vulnerability due to ageing, disability, unemployment, etc. These differences in social security reflect their historical, political, economic and cultural backgrounds (Hämäläinen, 2006). It is therefore useful to select suitable policy classifications in order to cluster and compare existing economic incentive schemes in OSH and their national circumstances.

3.2.2. Welfare systems

All EU countries can be considered welfare regimes (welfare states), meaning broadly that they are democratic states which devote the majority of their fiscal resources to serving the needs of the welfare of their populations (Hämäläinen, 2006, p. 105). Different welfare models rely on different traditions of industrial and other social relations, and each has a specific institutional structure of welfare benefits provision (Council of Europe, 2006). The most influential typology in this regard is that of Esping-Andersen (1990), which distinguishes three main types of welfare-state regimes on the basis of several determinants[5]:

1. the 'liberal' regimes, mainly Anglo-Saxon countries;
2. the 'corporatist' regime, mainly the continental or Central European countries;
3. the 'social-democratic' regimes, mainly the Scandinavian countries.

Such classifications of welfare systems imply a simplification and generalisation of national contexts. While Esping-Andersen's classification has been criticised by many authors for this reason, all studies on welfare state modelling reveal three welfare state types, although the categorisation of regimes is sometimes different and some authors add one or even two extra regime types (such as the 'Mediterranean', Southern European regime). It is not within the scope of this report to describe and discuss social models in detail; Soede et al. (2004) and Hämäläinen (2006) provide appealing overviews of actual welfare system typologies and the respective EU countries that they cover. Hämäläinen (2006, p. 109) states that, throughout all studies and categorisations, some countries have become standard models: the United Kingdom is the Anglo-Saxon, liberal welfare model; Germany is the Bismarckian, continental, conservative model; Sweden is the social-democratic, Nordic model. According to some authors, The Netherlands is considered to have a 'hybrid' system, classified between the continental and Nordic regimes (Soede et al., 2004); some even state

5 Esping-Andersen's typologies are based upon two main dimensions, namely 'decommodification' (i.e. the degree to which individuals or families are able to achieve a socially acceptable living standard, independently of their participation in the labour market) and 'stratification' (i.e. the way countries shape the structuring of rights; welfare states of the same size can have very different stratification effects: one country may sustain the existing hierarchy and status divisions, another country may promote a two-tier system and a third may aim at universalism) (based on Soede et al., 2004).

that the hybrid character of the Dutch welfare state has become more pronounced with the introduction of liberal elements (van Oorschot, 2006). Italy, Greece, Spain, and Portugal are mostly assigned to the Mediterranean group of welfare states. The Baltic States (Estonia, Latvia, and Lithuania) and the Eastern European Member States (Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovenia, Slovak Republic) are sometimes categorised into separate groups.

3.2.3. Beveridge versus Bismarck

Instead of identifying the most appropriate general welfare typologies, we considered it more relevant to examine how the different national social security arrangements, and particularly the workers' compensation systems (see below), are financed in the EU Member States. European social security and healthcare systems can, on the basis of their financing sources, generally be categorised in two main types: 'Beveridgean' and 'Bismarckian' (see Council of Europe (n.d.); Figueras et al., 2004; Hämäläinen, 2006). Whereas the Beveridge model is tax financed, the Bismarckian model is funded by social insurance (contributions). The majority of social security systems in the EU are primarily contributions-based, although there has never been a 'pure' system of either type. Nevertheless, the United Kingdom and the Scandinavian countries have been closer to the Beveridge model, while continental Northern Europe has been closer to the Bismarckian model. The systems in Ireland, Spain, Portugal, Italy and Greece have been moving from insurance-based to predominantly tax-based financed systems; some authors consider these countries to have 'mixed' systems due to reforms in healthcare and the decentralisation of administration in the direction of regions and local communities (see e.g. Hämäläinen, 2006, 2007). The Baltic and Eastern European countries have introduced adapted Bismarckian models since they regained control over national policy-making in the 1990s (Figueras et al., 2004; Hämäläinen, 2007). Table 3 gives an overview of the EU Member States and their categorisation based on geographical region, type of welfare regime and financing source of social security system.

Table 3: Classification of EU Member States and their respective welfare regimes and financing sources

Region	Welfare state model	Financing of social security system	
		Predominantly Beveridgean	Predominantly Bismarckian
Anglo-Saxon	Liberal	United Kingdom	
		Ireland	
Nordic/ Scandinavian	Social-democratic	Denmark	
		Finland	
		Sweden	
Central European/ Continental	Hybrid		Netherlands
	Corporatist		Belgium
			Germany
			France
			Luxembourg
			Austria

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Region	Welfare state model	Financing of social security system	
		Predominantly Beveridgean	Predominantly Bismarckian
Southern European/ Mediterranean	Mediterranean	Greece	
		Spain	
		Italy	
		Cyprus	
		Malta	
		Portugal	
Eastern European (incl. Baltic states)	Post-communist		Bulgaria
			Czech Republic
			Hungary
			Poland
			Romania
			Slovenia
			Slovak Republic
			Estonia
			Latvia
			Lithuania

Table based mainly on Soede et al., 2004; Hämäläinen, 2006.

3.2.4. Workers' compensation insurance

Workers' compensation (insurance) systems can be defined as the social insurance arrangements providing compensation for occupational accidents and occupational diseases. As mentioned above, workers' compensation systems are the result of complex social, political and economical conditions in each country; this means that there are a great variety of financial structures supporting these national workers' compensation schemes (see Clayton, 1997; Munich Re Group, 2000, 2002, 2005). The Munich Re Group (2002, p. 6) stresses that an efficient system of protection for occupational accidents and diseases is an absolute necessity for a smoothly running industrial sector and a basis for social and economic stability.

An overview of the existing workers' compensation scheme and legal framework of each EU Member State is given in Section 3.6.2 (Annex 1).

Insurance schemes against occupational accidents and diseases in the EU can be categorised by distinguishing between public (state-run) and private (run by private insurance companies) workers' compensation schemes (see also Munich Re Group, 2000, p. 12):

- public system: workers' compensation is integrated into a social security administration or organised into a separate unit (e.g. a special fund);
- private system: private insurance companies act as the main players in a privatised market with compulsory insurance, covering the risks and offering the benefits prescribed by law; the state may act as a competitor in the free market (e.g. via a state-owned company) or withdraw totally and restrict its role to legislative, controlling and supervising activities.

Furthermore, a distinction can be drawn between state monopolies on the one hand and private, free markets for workers' compensation insurance on the other. In the latter case, there may be restrictions to the free market, e.g. with regard to the insurance of occupational diseases (see below).

Based on the classification in Table 3 and the respective distinction between public/private and monopolistic/competitive systems, the following classification of EU Member States with regard to their welfare and social security typologies can be arrived at (see Table 4). Table 4 shows that most countries have a public (state-run) insurance system; only six have a private system with a competitive market. Spain is the only Member State with a state-run, competitive insurance system. Four countries (Belgium, Spain, Portugal, Denmark) have a distinct system for occupational accidents and diseases (OA|OD), instead of an insurance of occupational accidents and diseases that is done by a single overall system. This is probably due to the fact that occupational diseases are typically long-term risks, which develop throughout the whole working life. Considering today's more flexible and mobile labour markets, in many cases the risks leading to a specific disease cannot be attributed to a single job or employer. Therefore it is regarded as a task of society as a whole to cover those long-term risks of occupational diseases.

Table 4: Classification of EU Member States and the characteristics of their workers' compensation schemes

Region	Welfare state model	Social insurance system		Workers' compensation (WC) system
		Predominantly Beveridgean	Predominantly Bismarckian	S (State-run), P (Private), M (Monopolistic), C (Competitive) OA|OD: distinctive systems for WC occupational accidents and diseases
Baltic	Post-communist		Estonia	SM
			Latvia	SM
			Lithuania	SM
Central European/ Continental	Corporatist		Belgium	PC (OA|OD)*
			Germany	SM
			France	SM
			Luxembourg	SM
			The Netherlands	PC
			Austria	SM
Eastern European	Post-communist		Bulgaria	SM
			Czech Republic	SM
			Hungary	SM
			Poland	SM
			Romania	SM
			Slovenia	SM
			Slovak Republic	SM

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Region	Welfare state model	Social insurance system		Workers' compensation (WC) system
		Predominantly Beveridgean	Predominantly Bismarckian	S (State-run), P (Private), M (Monopolistic), C (Competitive) OA|OD: distinctive systems for WC occupational accidents and diseases
Anglo-Saxon	Liberal	United Kingdom		PC
		Ireland		SM
Southern European/ Mediterranean	Mediterranean	Greece		SM
		Spain		PC (OA|OD)**
		Italy		SM
		Cyprus		SM
		Malta		SM
		Portugal		PC (OA|OD)***
Nordic/ Scandinavian	Social-democratic	Denmark		PC (OA|OD)****
		Finland		PC
		Sweden		SM

* In Belgium, the insurance of occupational accidents is organised in a private, competitive system, financed mainly by insurance premiums paid by employers, whereas the insurance of occupational diseases is mainly financed by contributions and covered by the Occupational Diseases Fund (Fonds Beroepsziekten, FBZ/Fonds Maladies Professionnelles, FMP) (see also Section 3.6.2, Annex 1).

** In Spain, the insurance of occupational accidents is administered by the Industrial Accident Mutual Insurance Societies (Mutuas de Accidentes de Trabajo y Enfermedades Profesionales de la Seguridad Social, MATEPSS). The MATEPSS partly cover occupational diseases. The occupational diseases which are included in a list are paid via a public fund ('pay as you go') (see also Section 3.6.2, Annex 2).

*** The Portuguese system of covering occupational accidents and diseases is a mixed system, in which insurance against occupational accidents is carried by private insurance companies in a fully funded scheme, whereas occupational diseases are covered by a state pool (Caixa Nacional de Seguros das Doenças Profissionais, CNSDP) (see also Section 3.6.2, Annex 1).

**** In Denmark, occupational accidents are covered directly by private insurers; the insurance of occupational diseases is administered by the Labour Market Occupational Diseases Fund (Arbejdsmarkedets Erhvervssygdomssikringen) (see also Section 3.6.2, Annex 1).

To ensure that national workers' compensation systems remain sustainable, compensation costs need to be controlled and reduced. Prevention is therefore the key to keep systems running (Munich Re Group, 2007, p. 8). Section 3.3 aims to give an overview of existing national economic incentives for promoting prevention at the workplace. According to research by the Munich Re Group (2000, 2007), prevention can be attained effectively both in public and private workers' compensation schemes – there is no single best solution. However, in general, public workers' compensation systems are considered to be more able to guarantee continuity, whereas private systems can be more flexible, can adapt more quickly to new challenges, and can implement new techniques more easily.

3.3. Economic incentives

3.3.1. Introduction

According to the European Foundation for the Improvement of Working Conditions, economic incentive methods in OSH can be described as methods which financially reward those enterprises that ensure and develop good and safe working conditions (Bailey et al., 1995). Economic incentives can complement regulatory dictates as they stimulate organisations at the financial level and thus add weight to the business case for good OSH; they are needed in OSH to motivate companies – not only to ensure they comply with current regulations, but also to make them go beyond minimum legal requirements.

Two main categories of economic financial[6] incentives can be distinguished for stimulating employers to invest in safer and healthier workplaces (see Walters, 2001; European Agency for Safety and Health at Work, 2005; Tompa, 2007b):

- insurance strategies: insurance or insurance-related schemes in which participants receive some form of financial support or reward for their efforts to increase OSH and prevent occupational accidents and diseases;
- tax and funding schemes: grant, award or tax concession schemes, separate from the insurance system, but which are designed to promote the same kind of attention to OSH management and performance.

Table 5 provides an overview of the 27 EU Member States, the characteristics of their respective workers' compensation schemes, the existence of specific insurance-related incentives, tax and funding schemes, and non-financial incentives in OSH (the information is ordered according to the alphabetical order of countries in their original languages). More detailed information on these topics can be found in Section 3.6.2 (Annex 1: Overview of legal framework and workers' compensation scheme per EU Member State and Annex 2: Overview of rating systems in each EU Member State), and Section 3.6.3 (Annex 3: Overview of economic incentives in OSH (other than insurance-based incentives) in each EU Member State). All this information is further analysed in the next chapters.

6 As opposed to economic non-financial incentives.

Table 5: Classification of EU Member States, characteristics of their workers' compensation schemes and rating systems, existing tax and funding schemes in OSH (other than insurance-related), and non-financial incentives

Country	Region	Welfare state model	Financing of social security system	Insurance scheme			Tax schemes	Funding schemes	Non-financial incentives
				Public or private workers' compensation insurance	Monopolistic or competitive insurance market	Insurance-related incentives			
			Predominantly BE (Beveridgean) or BI (Bismarckian)	S (state-run) or P (private)	M (monopolistic) or C (competitive)	Information available on rating system used and application of insurance-related incentives (see Section 3.6.2, Annex 2)	Information available on tax schemes in OSH (see Section 3.6.3, Annex 3)	Information available on funding schemes in OSH (see Section 3.6.3, Annex 3)	Information available on recognition schemes regarding OSH (see Section 3.6.3, Annex 3)
Belgium	Central European/ Continental	Corporatist	BI	P	C	System of premium differentiation: premium calculation based on experience rating, occupational risk (loss statistics), and company size.		– Occupational Diseases Fund: Programme for early rehabilitation of low back pain workers, Reimbursement of hepatitis B vaccine or combined hepatitis A/B vaccine – Experience Fund – Safety Coach project (Prevent/ Experience Fund) – Diversity Plans	Pro-Safe Award
Bulgaria	Eastern European	Post-communist	BI	S	M	Bonus-malus system: premium calculation based on experience rating.		Working Conditions Fund	
Czech Republic	Eastern European	Post-communist	BI	S	M	Malus system.			
Denmark	Nordic/ Scandinavian	Social-democratic	BE	P	C	Premium calculation based on risk category. No specific premium variation system.		– Prevention Fund – Subsidy for OSH consulting – Work Environment Research Fund. **Former initiatives:** – Fund for monotonous repetitive work – A lifting instruction scheme – State subsidies to enterprises with OSH certificates.	Red, yellow, green and crowned smileys

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Country	Region	Welfare state model	Financing of social security system	Insurance scheme			Tax schemes	Funding schemes	Non-financial incentives
				Public or private workers' compensation insurance	Monopolistic or competitive insurance market	Insurance-related incentives			
			Predominantly BE (Beveridgean) or BI (Bismarckian)	S (state-run) or P (private)	M (monopolistic) or C (competitive)	Information available on rating system used and application of insurance-related incentives (see Section 3.6.2, Annex 2)	Information available on tax schemes in OSH (see Section 3.6.3, Annex 3)	Information available on funding schemes in OSH (see Section 3.6.3, Annex 3)	Information available on recognition schemes regarding OSH (see Section 3.6.3, Annex 3)
Germany	Central European/ Continental	Corporatist	BI	S	M	Premiums vary between the different sectoral BGs and even between the member companies of a single BG. §162 SGB VII obliges Statutory Insurance Companies to introduce variations. In addition to a bonus-malus, certain BGs have established a system giving a premium reduction for certain prevention efforts: – Incentive scheme of the Statutory Accident Insurance of the Butchery Industry (Fleischerei Berufsgenossenschaft, FBG) – Incentive scheme of the Statutory Accident Insurance of the Health Care Sector (BG Gesundheitsdienst und Wohlfahrtspflege-BGW) – Negative incentives have been established by the Statutory Accident Insurance of the Leather Industry (LederindustrieBG, LIBG). – There are also health insurance related funding schemes as health insurance premiums represent a significant proportion of the ancillary labour costs, accounting for about 7% of the wage bill. – Enterprise for Health: Promoting health management among companies in Lower Saxony (AOK Niedersachsen, Allgemeine Ortskrankenkasse Niedersachsen)	Tax incentives for occupational health promotion start in 2009. Employers can write off up to EUR 500 per worker per year from tax.	Promotion of OSH management systems by the Bavarian Business Inspectorate Funding of in-house health promotion measures for SME by IKK Nordrhein Health Insurance Company.	– Incentive scheme of the Statutory Accident Insurance of the Health Care Sector (BG Gesundheitsdienst und Wohlfahrtspflege-BGW): BGW Health Prize – Hamburg OSH partnership programme: awards – Statutory Accident Insurance of Trade and Goods Distribution (Berufsgenossenschaft Handel und Warendistribution, BHGW): awards for 'Innovations in Prevention' and 'Healthy Employees-Healthy Company' – Steinbruchs-Berufsgenossenschaft (StBG): Seal of Approval – Systematic Safety.
Estonia	Baltic	Post-communist	BI	S	M				
Greece	Southern/ Mediterranean	Mediterranean	BE	S	M				

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Country	Region	Welfare state model	Financing of social security system	Insurance scheme			Tax schemes	Funding schemes	Non-financial incentives
				Public or private workers' compensation insurance	Monopolistic or competitive insurance market	Insurance-related incentives			
			Predominantly BE (Beveridgean) or BI (Bismarckian)	S (state-run) or P (private)	M (monopolistic) or C (competitive)	Information available on rating system used and application of insurance-related incentives (see Section 3.6.2, Annex 2)	Information available on tax schemes in OSH (see Section 3.6.3, Annex 3)	Information available on funding schemes in OSH (see Section 3.6.3, Annex 3)	Information available on recognition schemes regarding OSH (see Section 3.6.3, Annex 3)
Spain	Southern/ Mediterranean	Mediterranean	BE	S	C	Premium calculation based on risk category. No specific premium variation system.		– Grants to improve safety in traditional coastal fishing vessels – Grants to replace unsafe equipment for SMEs in the construction sector – Subsidies for employee training in health and safety and for measures to improve health and safety in 2004 – Subsidies for SMEs in Castilla-La Mancha that invest in improving workplace health and safety – Subsidies for OSH promotion – Subsidies for purchase, adaptation and/or renewal of machinery and safety equipment – Subsidies to promote the implementation of planned preventive actions – Grants to SMEs in the construction sector for purchase of modular scaffolding – Subsidies to enterprises for projects and investment in good practice aimed to control occupational risks – Grants to encourage employers to recruit OSH technicians as permanent staff.	
France	Central European/ Continental	Corporatist	BI	S	M	Premium calculation based on company size: premiums of large companies (>200 workers) vary according to OA/OD rates; for smaller companies, premiums vary according to sector.		– Prevention contracts, advances and grants (CNAM/CRAM) – 'Safer tools' campaigns (CNAM) – Health at Work Plan 2005-2009 (Plan Santé au Travail 2005-2009, PST 2005-2009).	

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Country	Region	Welfare state model	Financing of social security system	Insurance scheme			Tax schemes	Funding schemes	Non-financial incentives
				Public or private workers' compensation insurance	Monopolistic or competitive insurance market	Insurance-related incentives			
			Predominantly BE (Beveridgean) or BI (Bismarckian)	S (state-run) or P (private)	M (monopolistic) or C (competitive)	Information available on rating system used and application of insurance-related incentives (see Section 3.6.2, Annex 2)	Information available on tax schemes in OSH (see Section 3.6.3, Annex 3)	Information available on funding schemes in OSH (see Section 3.6.3, Annex 3)	Information available on recognition schemes regarding OSH (see Section 3.6.3, Annex 3)
Ireland	Anglo-Saxon	Liberal	BE	S	M	Occupational accident and illness benefits are part of the Irish social welfare system. Premiums are paid for social welfare and include income-related contributions from the workers (2-4% of gross income) and the employer (8.5-10.75%). Non-cash benefits are mainly covered by tax.			
Italy	Southern/ Mediterranean	Mediterranean	BE	S	M	Premium calculation based on sector/ activities; premium may be reduced based on compliance with OSH standards and individual claims experience.		– Business financing for OSH programmes and projects – Loans for SMEs for technological innovations resulting in accident reduction – Grants for SMEs for programmes aiming at accident reduction.	
Cyprus	Southern/ Mediterranean	Mediterranean	BE	S	M	Premium calculation based on individual risk.			
Latvia	Baltic	Post-communist	BI	S	M		Tax exemption of general expenditure on labour protection measures.		
Lithuania	Baltic	Post-communist	BI	S	M	Premium calculation based on risk category (three groups).		Prevention fund	Conditions for enterprises participating in public tendering.
Luxembourg	Central European/ Continental	Corporatist	BI	S	M	Premium calculation based on risk category. Premium can be increased on the basis of individual claim experience.		Grants by Insurance Association against Accidents (AAA, Association d'Assurance contre les Accidents) for financial support to companies for: installation of safety management systems, acquisition of 'Maîtrisk' software and various training courses.	
Hungary	Eastern European	Post-communist	BI	S	M	A bonus-malus system is being developed.			

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Country	Region	Welfare state model	Financing of social security system	Insurance scheme			Tax schemes	Funding schemes	Non-financial incentives
				Public or private workers' compensation insurance	Monopolistic or competitive insurance market	Insurance-related incentives			
			Predominantly BE (Beveridgean) or BI (Bismarckian)	S (state-run) or P (private)	M (monopolistic) or C (competitive)	Information available on rating system used and application of insurance-related incentives (see Section 3.6.2, Annex 2)	Information available on tax schemes in OSH (see Section 3.6.3, Annex 3)	Information available on funding schemes in OSH (see Section 3.6.3, Annex 3)	Information available on recognition schemes regarding OSH (see Section 3.6.3, Annex 3)
Malta	Southern/ Mediterranean	Mediterranean	BE	S	M				
The Netherlands	Central European/ Continental	Hybrid	BI	P	C	Specific insurance-related incentives such as premium variations or bonus systems for specific prevention activities, occur within the framework of contracts between employers and the private insurers and safety and health services.	(Farbo Scheme)	– Farbo Scheme – Education & Development Funds (O&O fondsen).	
Austria	Central European/ Continental	Corporatist	BI	S	M	Insurance premiums to the accident insurance are fixed at 1.4% of the worker's gross income and are paid exclusively by the employer (§51 ASVG). No premium variations foreseen.		– Low-cost consultancy for safety and health management for SMEs (AUVA) – Funding of Health Promotion Activities (Healthy Austria Fund, FGÖ) – Funding of IMS implementation by Austrian Federal States.	
Poland	Eastern European	Post-communist	BI	S	M	Premium differentiation system: premium calculation based on company size, risk category, and experience rating.		– Polish Agency for Enterprise Development and Polish Chamber of Commerce: grants for SMEs and training – CIOP-PIB and National Labour Inspectorate: promotion of a systematic OSH approach (training, consulting, audits).	– Diploma of the National Labour Inspectorate 'Safety at work in small enterprises' – Safe Work Leaders' Forum.
Portugal	Southern/ Mediterranean	Mediterranean	BE	P	C	Premium calculation based on risk category or individual rating. Bonus system based on risk analysis, quality of risk information, claims experience, and minimum premiums for particular sectors.			
Romania	Eastern European	Post-communist	BI	S	M	Premium calculation based on risk category.			
Slovenia	Eastern European	Post-communist	BI	S	M				
Slovak Republic	Eastern European	Post-communist	BI	S	M	Premiums will vary according to risk category from 1 January 2010.		Safe Enterprise Programme	

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Country	Region	Welfare state model	Financing of social security system	Insurance scheme			Tax schemes	Funding schemes	Non-financial incentives
				Public or private workers' compensation insurance	Monopolistic or competitive insurance market	Insurance-related incentives			
			Predominantly BE (Beveridgean) or BI (Bismarckian)	S (state-run) or P (private)	M (monopolistic) or C (competitive)	Information available on rating system used and application of insurance-related incentives (see Section 3.6.2, Annex 2)	Information available on tax schemes in OSH (see Section 3.6.3, Annex 3)	Information available on funding schemes in OSH (see Section 3.6.3, Annex 3)	Information available on recognition schemes regarding OSH (see Section 3.6.3, Annex 3)
Finland	Nordic/ Scandinavian	Social-democratic	BE	P	C	Two systems for premium calculation: 'risk per mill' system for SMEs, and special rating system for larger companies.		– The Finnish Work Environment Fund – TYKES program for the development of working life – TYTA model	– Zero Accidents Forum – Working safety price for the road transport sector
Sweden	Nordic/ Scandinavian	Social-democratic	BE	S	M				
United Kingdom	Anglo-Saxon	Liberal	BE	P	C	– SME Safety and Health Performance Index – Corporate Health and Safety Performance Index (CHaSPI).			

3.3.2. Insurance strategies

The costs of poor OSH management and performance on the part of companies are shifted on to society, which counters this by running workers' compensation schemes and/or private insurance systems. Insurance-related incentives (incentives through tariff adjustments) aim to recoup some of these costs from the companies concerned, thereby trying to establish a link between the insurance premium paid by the companies and their behaviour and OSH performance.

Insurance-related incentives depend on the way in which national workers' compensation schemes are structured. Table 5 provides an overview of the characteristics of respective workers' compensation schemes and the application of specific insurance-related incentives within the 27 EU Member States. An overview and short description of the rating systems in the different EU countries is given in Annex 2, Section 3.6.2.[7] Some national insurance-related incentives are also described more in detail in Section 4 of this report:

- Premium differentiation in occupational accident insurance (Belgium);
- Statutory Accident Insurance of the Butchery Industry (Fleischerei Berufsgenossenschaft, FBG) (Germany);
- Enterprise for Health: Promoting health management among companies in Lower Saxony (AOK Niedersachsen, Allgemeine Ortskrankenkasse Niedersachsen) (Germany);
- Reduction of the compulsory insurance premium following the adoption of prevention support measures by companies (Italy);
- Premium Discount Programme in the Farmers' Workers' Compensation Insurance (Finland);
- The SME Indicator (United Kingdom).

Table 5 reveals that in several countries the state has not established any real insurance-related incentives in OSH, namely Denmark, Estonia, Greece, Spain, Ireland, Latvia, Lithuania, Hungary, Malta, Romania, Slovenia, the Slovak Republic, Sweden and the UK. In some of these countries, e.g. Denmark, Spain, Lithuania and Romania, companies' insurance premiums are set on the basis of a risk category system.

The simplest way of implementing an insurance-related incentive is through 'experience rating': insurance premium rates depend on the number of claims in the past, which provides an incentive for companies to emphasise prevention in the workplace. Such an insurance premium variation (gradation) may be focused on the performance of the economic sector to which the company belongs or on that of the individual company (European Agency for Safety and Health at Work, 2005). Premium calculation/variation based on experience rating exists both in countries with private, competitive insurance workers' compensation schemes (Belgium, The Netherlands, Portugal, Finland) and public, monopolistic systems (Bulgaria, Czech Republic, Germany, France, Italy, Cyprus, Luxembourg, Poland) (see Table 5).

The introduction of a premium variation system or the change of the existing scheme is being discussed in various Member States (for detailed information, see Annex 2, Section 3.6.2):

7 Munich Re Group, 2002 also contains a detailed overview of the rating systems and type of supervision applied by the respective governments of Belgium, Germany, France, Italy, Portugal and Finland.

- Belgium: a new system of premium differentiation came into effect on 1 January 2009 (based on the Royal Decree of 8 May 2007 on premium differentiation for occupational accidents) (see also case study 'Premium differentiation in occupational accident insurance').
- Denmark: the tariffs of the insurance companies and the Labour Market Occupational Diseases Fund are calculated depending on the risk, which means sector and occupational risk. In December 2006 a report on a reform of the insurance system was published. It recommended, among other things, a bonus system that would also affect companies' tariffs. A concrete model has not yet been implemented.
- Estonia: a system of risk premiums was planned and developed, but the draft law bringing it into effect has not been passed by the Estonian parliament.
- Spain: the Spanish Strategy on Occupational Safety and Health 2007-2012 (Estrategia Española de Seguridad y Salud en el Trabajo 2007-2012) indicates that by 2012 a reduction will be made to companies' social security contributions if they can demonstrate that their accident rates are lower than the average in their sector.
- France: the Health at Work Plan 2005-2009 (Plan Santé au Travail 2005-2009, PST 2005-2009) included a reform of the tariff system to make it more efficient. Up until December 2008, this tax reduction has not yet been implemented.
- Hungary: a bonus-malus system is being developed.
- The Slovak Republic: a premium variation according to risk category will be introduced from 1 January 2010.

In some countries, e.g. Belgium, France, Poland and Finland, company size is taken into account when calculating insurance premiums (see Annex 2 in Section 3.6.2 for more information). France and Finland both have a different premium system for larger and smaller companies. In France, occupational insurance is covered by the National Health Insurance Fund (CNAM) and its regional branches (CRAM). In the case of larger companies (more than 200 employees), the premium is calculated for each individual company and is based solely on its occupational accident and disease rate. For smaller companies, however, the drivers are not as strong because the premiums depend on the results of their economic sector. Nevertheless, the insurance system encourages smaller companies directly by offering financial support through prevention contracts, advances and grants (see below).

Germany has a unique sectoral occupational insurance approach. Responsible bodies for accident insurance are the Statutory Accident Insurance Companies of the private sector (23 Berufsgenossenschaften, BGs), of the public administration and public services (Unfallkassen, UKs), and the agricultural sector (eight Landwirtschaftliche Berufsgenossenschaften, LBs). Since 1 July 2007, the statutory accident insurance institutions for the industrial sector (BGs) and the public sector accident insurers and associations of municipal accident insurers (UKs) have been represented by a common umbrella association, the German Social Accident Insurance (DGUV). Membership fees (insurance premiums) vary between the different sectoral BGs and even between the member companies of a single BG. This is because of the way the insurance premiums are calculated.[8] Prevention of occupational accidents is considered to be an essential task of the accident insurance companies. This was one reason why tariff variations have been legally permitted. All accident insurance companies also offer

8 Every company is placed in a hazard group by the BG assembly (Vertreterversammlung), and each hazard group falls within a certain tariff band. Within the tariff the sum of wages determines the insurance premium for the company. Parameters for the insurance premiums within the LB are acreage and number of animals.

special prevention services for the member companies of the sector. The strategy of prevention and the approach to economic and non-economic incentives may vary significantly from BG to BG. The legal basis for premium variations is §162 SGB VII, but accident insurances apply the concept quite differently. A very sophisticated system of premium variations can be seen in the example of the Statutory Accident Insurance of the Butchery Industry (Fleischerei Berufsgenossenschaft, FBG). In three different programmes that can be applied in combination, participating companies can get a maximum 20% annual reduction of their membership fee (see e.g. Annex 2 in Section 3.6.2 and Section 3). Another approach is that of the Statutory Accident Insurance of the Health Care Sector (BG Gesundheitsdienst und Wohlfahrtspflege-BGW), which combines an award with premium reductions for promoting occupational safety and health management for its member companies (see Annex 2 in Section 3.6.2). The Statutory Accident Insurance of the Leather Industry (Lederindustrie-BG LIBG) has introduced a negative incentives system: Since 2004 companies with an accident rate of 200% (in comparison to the branch average) have had to pay 120% of the membership fee.

The Netherlands is considered an interesting case, with a 'hybrid' welfare system containing continental, Scandinavian and liberal elements (see above). The Dutch insurance system for occupational risks is based on a competitive market with multiple (private) insurers and health and safety services. With regard to prevention and insurance of sickness and occupational risks, the legal framework provides some flexibility to employers. Because of this there are considerable differences between businesses and sectors in organising prevention and social insurance. Specific insurance-related incentives, such as premium variations or bonus systems for specific prevention activities, occur within the framework of contracts between employers and the private insurers and safety and health services.

According to Walters (2001, p. 358), the most amenable systems to stimulate prevention efforts appear to be those in which insurance systems for workers' compensation are part of the organisation of social insurance rather than being purely private and market-based, such as in the UK. In Anglo-Saxon countries with liberal welfare state characteristics, employers have to have a certain level of cover for liability insurance, ensuring that they have at least a minimum level of insurance cover against claims from employees who are injured at work or become ill as a consequence of work. If an insurer believes that the employer did not fulfil his OSH duties correctly and that this has led to the claim, the policy may enable the insurer to sue the employer to reclaim the cost of compensation. The SME Safety and Health Performance Index (see Section 4.2.2) was developed in this context. The tool is intended to give insurers an indication of how well a company (SME) performs at health and safety, and thus enables them to take individual companies' performance at health and safety into account when setting insurance terms.

3.3.3. Tax and funding schemes

Although insurance-related economic incentives are important in promoting the prevention of accidents and diseases in the workplace, they are not the only alternative and should therefore be regarded as just one strategy within a group of initiatives, including tax incentives, subsidies/funds for specific OSH activities, and better financing conditions.

Taxes can be tailored to influence the behaviour of businesses. Tax-related incentives in OSH can consist of tax reductions or specific taxes. Only a few examples of such

incentives in OSH based on tax structures can be found in the EU (for more detailed information, see Annex 3 in Section 3.6.3):

- Latvia: a tax exemption on general expenditure on labour protection measures.
- The Netherlands: the Farbo scheme, which was first developed as a tax system, but in 2005 changed into a subsidy system. In 2009 it was decided to abolish the scheme (see Section 4.3.8).
- Germany: Tax incentives for occupational health promotion start in 2009. Employers can write off up to EUR 500 per worker per year from tax for activities which promote occupational health.

In France, the Health at Work Plan 2005-2009 (Plan Santé au Travail 2005-2009, PST 2005-2009) included a proposal for specific tax reduction for companies that invest in applied research into technologies that are able to improve safety. Up until December 2008, this tax reduction has not yet been implemented.

Funding schemes for OSH are reported in nearly every EU country. An overview of the specific schemes in each Member State is given in Table 5. These funding schemes are mainly established by public bodies. Funds (subsidies, grants) are provided for a wide range of topics, such as:

- implementation of training in OSH;
- purchase of educational material;
- application of OSH consultancy;
- purchase of specific OSH software;
- installation of OSH management systems;
- set up of specific plans and projects (rehabilitation of persons with chronic low back disorders, prevention of MSD, ergonomic programmes, diversity-oriented plans, etc.);
- conducting of research and development in the field of OSH;
- purchase, adaptation, renewal, replacement of unsafe equipment and tools;
- reimbursement of cost of vaccines;
- etc.

An analysis of the data from Table 5 reveals that funding schemes relating to OSH are established in countries with a variety of different national social insurance contexts. They are issued in Member States with private, competitive insurance workers' compensation schemes (e.g. Belgium, The Netherlands, Finland) as well as in public, monopolistic systems (e.g. Bulgaria, France, Italy, Lithuania, Luxembourg, Austria, Poland, the Slovak Republic). Conclusions cannot be drawn from focusing on the way the respective social security systems are financed: funding schemes exist in the so-called Bismarckian countries (funded by social insurance contributions) (e.g. Belgium, France, Austria, Poland), as well as in EU countries which have a predominantly Beveridgean (tax-based) system (Denmark, Spain, Italy, Finland). It should however be noted that no specific funding schemes were reported from the UK and Ireland – countries with a liberal welfare state model. Germany is a unique case, where the social insurance system is organised by the respective social insurance companies which also have a public prevention role (see above). The strong role of these insurance institutions favours insurance-related incentives and/or recognition schemes (see below).

3.3.4. Non-financial incentives

Economic non-financial (ethical) incentives in OSH aim to give positive recognition of companies that invest in safer and healthier workplaces. These forms of incentives do not, however, have substantial financial implications; the benefit lies here more in the gain in reputation for the concerned enterprise. An overview of existing non-financial incentives is given in Table 5 and Annex 3 in Section 3.6.3. Examples of such recognition schemes are:

- Belgium: Pro-Safe Award;
- Denmark: System of the red, yellow, green and crowned smileys; which allow the general public to see how an enterprise is performing in OSH;
- Germany: BGW Health Prize (Statutory Accident Insurance of the Health Care Sector (BG Gesundheitsdienst und Wohlfahrtspflege-BGW)), awards within the framework of the OSH partnership programme Hamburg, awards for 'Innovations in Prevention' and 'Healthy Employees-Healthy Company' (Statutory Accident Insurance of Trade and Goods Distribution (Berufsgenossenschaft Handel und Warendistribution, BHGW)), Seal of Approval – Systematic Safety (Steinbruchs-Berufsgenossenschaft (StBG);
- Poland: Safe Work Leaders' Forum, and the National Competition to improve Working Conditions;
- Finland: Zero Accidents Forum, and Working Safety Price for the Road Transport Sector.

3.4. Conclusions

The aim of this section is to give an overview of existing economic incentive schemes and their national context in the 27 EU Member States. As much information as possible was collected to ensure that economic, political, legislative and social structures were taken into account. This information was applied to conduct a comparative study on how economic incentive systems are handled in the respective EU countries. The results were portrayed by means of a table, listing the typologies of different prevention and social security systems, and related economic incentives in OSH.

In order to cluster and compare existing economic incentive schemes in OSH, and their respective national context, several characteristics of each EU country were depicted: (1) type of welfare state model (liberal, corporatist, or social-democratic regime), (2) type of financing of national social security arrangements (tax-based versus funded by contributions), and (3) type of workers' compensation insurance scheme (private versus public, and monopolistic versus competitive).

Economic incentives from the different countries were gathered, analysed and categorised. Although the focus was on financial incentives (insurance-related incentives, and tax and funding initiatives), national non-financial incentives were reviewed as well. The policy review revealed that examples of economic incentives exist in all Member States; some countries appear to implement economic incentives as a macro-economic instrument to improve the quality of working conditions, such

as the larger Member States France, Germany, Italy and Poland, or from the smaller countries Belgium, Finland and The Netherlands.

In several EU countries, no real insurance-based incentives exist (e.g. Denmark, Estonia, Greece, Spain, Sweden, UK). At best, insurance premiums are set in these countries by applying for example a risk category system. These methods of premium setting can, however, not really be regarded as economic incentives, which should actually aim at motivating individual enterprises to go beyond legal minimum requirements. A basic form of insurance-related incentive in OSH is premium variation based on experience rating (bonus-malus system). Experience rating methods are applied in several Member States, such as Belgium, Bulgaria, Czech Republic, Germany, France, Italy, The Netherlands, Poland, Portugal and Finland. A further step in stimulating employers to invest in OSH through insurance-related incentives is by implementing a specific premium differentiation system rewarding certain prevention efforts taken. Such approaches do for example exist in Italy (where subsidies and bank credits are offered by the insurance), Germany (which has a sectoral occupational insurance approach), and The Netherlands (specific insurance-related incentives occur within the framework of contracts between employers and the private insurers and safety and health services).

In some countries, such as Belgium, France, Poland and Finland, company size is taken into account when setting insurance premiums. SMEs are in any case a difficult category when it comes to economic incentives and OSH (see e.g. also Munich Re Group, 2000). France and Finland both have a different premium system for larger and smaller companies. In France, the premium of larger companies (more than 200 employees) is based on experience rating; for smaller companies, however, the drivers are not as strong because the premiums depend on the results of their industrial sector. Nevertheless, the insurance system encourages smaller companies directly by offering financial support through prevention contracts, advances and grants.

Although insurance-related economic incentives are important in promoting the prevention of accidents and diseases in the workplace, they are not the only alternative and should therefore be regarded as a single strategy within a group of initiatives, including tax incentives and funding schemes.

Tax-related incentives in OSH can consist of tax reductions or specific taxes. Only two real examples from the EU Member States ware reported, namely a tax exemption for general expenditure on labour protection measures in Latvia and for specific health promotion measures in Germany.

Funding schemes for OSH are reported in nearly every EU country. Funds (subsidies, grants) are provided for a wide range of activities, from the purchase of certain materials and tools to the implementation of OSH management systems. These funding schemes are mainly established by public bodies. It should, however, be noted that no specific funding schemes were reported from the UK and Ireland – countries with a liberal, purely private, market-based system.

Economic non-financial incentives in OSH do not have significant financial implications, but aim at giving recognition to enterprises which have put effort into OSH. Examples of such recognition schemes were reported in several countries – especially in Germany, where award schemes are run by a number of social insurance companies.

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3.6.1. Annex 1 : Overview of legal framework and workers' compensation scheme in each EU Member State

Last updated: December 2008.
Sources: see 3.5.2.

Country	National legal framework for OSH financial incentives	Description of national workers' compensation scheme
Belgium	**General** ■ The Wellbeing at Work Code, comprising the Act of 4 August 1996 on the wellbeing of workers at work and a set of implementing Royal Decrees. ■ The General Health and Safety Regulations (ARAB/RGPT) (older, will disappear when the new royal decrees enter into force). **Workers' compensation scheme** ■ Law of 10 April 1971 on occupational accident and commuting accident compensation. ■ Law coordinated by Royal Decree of 3 June 1970 concerning the compensation of health damage resulting from occupational diseases. ■ The Royal Decree of 8 May 2007 on premium differentiation for occupational accidents.	Belgium has a system of compulsory health insurance with a very broad benefits package that covers almost the entire population. Health insurance is one of the six sectors of the social security system, which include old age and invalidity pensions, unemployment insurance, work accident insurance, work-related health and occupational diseases, family allowances, and sickness and disability insurance. The Belgian occupational accident insurance system is a private obligatory insurance system on a fully funded basis. The insurance companies authorised to operate in this sector must be seen as part of the benefit chain in social insurance because they are so tightly integrated into the system. Cover extends to wage and salary earners working for private employers and to persons receiving training or doing an apprenticeship. Self-employed people are exempted from the obligatory insurance. There are special regulations for civil servants. Occupational diseases are not covered, but are included in a separate government fund, the Occupational Diseases Fund (Fonds voor de Beroepsziekten, FBZ/Fonds des Maladies Professionnelles, FMP), organised on a pay-as-you-go basis. There is a further state fund, the Occupational Accident Fund (Fonds voor Arbeidsongevallen, FAO/Fonds des Accidents du Travail, FAT), which is also organised on a pay-as-you-go basis. This fund is responsible for compensation for occupational accidents to seafarers, shipowners and workers whose employers did not comply with their duty to insure them, or whose insurer has not complied with the duty to pay benefit. It also refunds to the insurance companies benefits paid for claims that occur in Belgium as the result of unforeseeable and unintentional contact with explosives or military equipment. The Occupational Accident Fund exercises a supervisory function over insurance companies.
Bulgaria	**General** Act on Occupational Safety and Health of 1997. **Workers' compensation scheme** Social Insurance Code (Code for the Obligatory Public Insurance, COPI) (Кодекс за социално осигуряване) of 1999 (amended 2003).	In Bulgaria, there is a social insurance contributory scheme covering economically active persons. Since the beginning of 2000 the public insurance has been regulated by the Code for the Obligatory Public Insurance (COPI). The COPI arranges obligatory public insurance, including state public insurance in cases of general illness, occupational accident, professional disease, maternity leave, ageing and death, and the additional obligatory pension insurance. Insurance of occupational accidents and diseases falls under the Occupational Accidents and Professional Diseases Fund of the National Insurance Institute. The insurance contribution is 0.7% and it is entirely covered by the employer. The introduction of the COPI has put a much stronger emphasis on risk prevention. It has also enabled the introduction of differentiated contributions for the different types of insurers, based on the performance of the company in respect to occupational accidents and diseases, etc.
Czech Republic	**Workers' compensation scheme** ■ Act No. 262/2006 Coll. Labour Code (Zákoník práce č. 262/2006 Sb.). ■ Government Decree No. 590/2006 to implement the Labour Code. ■ Decree No. 440/2001. ■ Government Decree No. 494/2001. ■ Regulation No. 125/1993 Coll. (Vyhláška č. 125/1993 Sb.): sets down conditions and tariffs of the legal insurance of employers' responsibility for damages caused by occupational accidents and diseases.	The occupational accident insurance in the Czech Republic is a statutory, monopolistic system. It is erected on the legal basis of Labour Code No. 262/2006 Coll. and Regulation No. 125/1993 Coll., which sets down conditions and tariffs of the accident insurance and the employers' responsibility for damages caused by occupational accidents and diseases. The supervising authority is the Ministry for Labour and Social Affairs (Ministerstvo práce a sociálních věcí). The insurance system for occupational risk is a complementary type of social security insurance, i.e. the total amount of incurred costs are covered partly by this occupational accident insurance scheme and partly by the general social security scheme (general health coverage, sick leave payments and invalid pensions). There are only two commercial insurance companies empowered by the state to provide this kind of service to employers on a non-profit basis. The occupational accident insurance includes workers of any sector; the self-employed are not included. Its benefits cover accidents at work and in causal relationship to work. It also covers occupational diseases which are defined in a list, if causal relationship can be proven. Travel accidents on the way to work are not part of the accident insurance. The insurance premium is paid by the employer and varies between 0.2% and 1.2% of the gross wages of the workers. The level of the premium depends on the sector the company belongs to. Typical risks in the sector are taken into consideration when the premium is calculated.

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Country	National legal framework for OSH financial incentives	Description of national workers' compensation scheme
	Last updated: December 2008. Sources: see 3.5.2.	
Denmark	**General** Denmark has a strong tradition of inspection of companies by the National Working Environment Authority (Arbejdstilsynet, AT) including the right to order fines as well as disseminating information, running campaigns and providing counselling on ways of improving the working environment in organisations. The Working Environment Council (Arbejdsmiljørådet) is the corresponding institution of the social partners at national level with significant influence on research and information work, drawing up of rules, development of the working environment in the various sectors and on safety work at company level. The latter is mainly carried out by 11 trade safety committees of the social partners and (accredited) consulting institutes. (AT Facts Sheet no. 17, in English) The National Board of Industrial Injuries (Arbejdsskadestyrelsen) is an agency under the Ministry of Employment. As a neutral authority it makes decisions on workers' compensation claims. The introduction of economic incentives is a very recent measure not yet implemented in full, and comprising a change in the insurance system, economic incentives such as subsidies, and non-financial incentives such as certificates. **Workers' compensation** ■ Consolidated Workers' Compensation Act (Consolidated Act No. 154 of 7 March 2006) (om arbejdsskadeforsikring). ■ Act on Protection against the Consequences of Industrial Injuries with subsequent amendments (Act No. 943, of 16 October 2000).	Denmark has a compulsory private insurance system covering occupational accidents and diseases. In the spring of 2003 the Danish Parliament (Folketing) passed a workers' compensation reform for the purpose of ensuring that injuries occurring as a consequence of work were recognised as industrial injuries. The intention was also to do something about injuries due to overwork in particular, and to reduce case processing times. The reform, which took effect on 1 January 2004, led to the following changes: a new definition of 'accident', a less strict definition of 'occupational diseases', shorter time limits for case processing, cover for new groups (self-employed persons and assisting spouses). The list is being adjusted on a regular basis so that it reflects the most recent research into the correlation between diseases and work. This is the task of the Occupational Diseases Committee (Erhvervssygdomsudvalget), in which workers as well as employers are represented. The National Board of Industrial Injuries (Arbejdsskadestyrelsen), an agency under the Ministry of Employment, as a neutral authority makes decisions on workers' compensation claims. It decides whether an injury or disease qualifies for recognition as an industrial injury and also determines the amount of compensation for an industrial injury. The decisions are based on the Workers' Compensation Act (2005) and the Act on Protection against the Consequences of Industrial Injuries (2000). Injuries and diseases reported on or after 1 January 2005 are assessed on the basis of Act No. 154, the Workers' Compensation Act of 7 March 2006. The Workers' Compensation Act has two concepts of industrial injury: namely accidents and occupational diseases. All employers are liable to provide protection under the Workers' Compensation Act. Failure to do so is punishable with a fine. The liability to provide protection is met by taking out industrial injuries insurance with an insurance company and paying contributions to the Labour Market Occupational Diseases Fund (Erhvervssygdomssikring, AES). The Fund is a publicly controlled independent institution, run by a Board composed of the parties to the labour market. Self-employed people and assisting spouses are entitled, but not obliged, to take out protection under the Workers' Compensation Act. For each claim, the National Board of Industrial Injuries charges insurance companies or the Labour Market Occupational Diseases Fund a processing fee. The tariffs of the insurance companies/the Labour Market Occupational Diseases Fund are calculated depending on the risk, which means both sectoral and occupational risk. The responsibilities for supervision are shared by three different ministries: the Ministry of Employment, supervision, control, coordination (Beskæftigelsesministeriet), Ministry of Social Welfare (Velfærdsministeriet), responsible for persons outside the labour market, and Ministry of Economic and Business Affairs (Økonomi-og Erhvervsministeriet), responsible for the control of the insurance companies and the Labour market Occupational Diseases Fund).
Germany	**General** ■ Arbeitsschutzgesetz (Law on workers' protection). ■ Sozialgesetzbuch (Social Law Code). **Workers' compensation** ■ Social Law Code (Sozialgesetzbuch), Book IV. ■ Social Law Code (Sozialgesetzbuch), Book V (health insurance premium variations for prevention and health promotion in the companies §§20-20b SGB V). ■ Social Law Code (Sozialgesetzbuch), Book VII, from 7 August 1996 (accident insurance premium variations, §162 SGB VII). ■ Social Law Code (Sozialgesetzbuch), Book IX, from 19 June 2001: integration offices (possibility of promoting workers with physical impairments).	In Germany the workers' compensation scheme is part of the national social insurance system. Responsible bodies in Germany are the Statutory Accident Insurance Companies of the private/commercial sectors (Berufsgenossenschaften, BG), the public administration and public services (Unfallkassen, UK), and the agricultural sector (Landwirtschaftliche Berufsgenossenschaften, LB). Legal foundations for the system can be found in Social Law Code IV and VII (Sozialgesetzbuch, SGB) where the Statutory Accident Insurance Companies are established as self-governing public bodies. Within the three different pillars the statutory accident insurance companies are organised differently: ■ Sectorally (BGs): 23 sectoral BGs are responsible bodies for accident insurances of their member companies. ■ Federally respectively on federal state level and sectorally (UKs): The public administration bodies of the federation and of the states and their local authorities belong to their particular UK. Some UKs are also organised sectorally such as the Fire-fighters' UK, the UK of the Railway Employees, and the UK of Post and Telecommunication Services. ■ Regionally (LBs): 8 Agricultural LBs are organised regionally (not matching with the federal states); only the Horticultural LB acts nationwide.

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Country	National legal framework for OSH financial incentives	Description of national workers' compensation scheme
	Last updated: December 2008. Sources: see 3.5.2.	
		The individual accident insurance providers (BG, UK, LB) are subject to public law and under the supervision (Fachaufsicht) of the Federal Ministry for Labour and Social Affairs. From June 2007 the Statutory Accident Insurance Companies of the private and the public sector were placed under one single federal umbrella organisation, German Statutory Accident Insurance (DGUV). The nine LBs are organised into the Agricultural Social Insurance (LSV). The accident insurance is financed by membership fees which are paid by the employers/companies (§150 I SGB VII). Workers are exempted from contributions. Membership of the sectoral BG and the regional LB is compulsory, and companies can not be rejected by the BG/LB. The accident insurance system covers accidents at work, occupational diseases, and travel accidents sustained on the journey to and from work. The workers' compensation for the public administration (UK) is financed by the employers of the public sector. These are the Federal States themselves concerning their public authorities, the municipalities and districts concerning local authorities, and companies/spin-offs in public services. The accident insurance premiums for children in pre-school education, pupils, students, volunteers, and unemployed are financed by taxes.
Estonia	**General** ■ Occupational Health and Safety Act of 16 June 1999. ■ Republic of Estonia Employment Contracts Act. ■ Republic of Estonia Labour Protection Act. **Workers' compensation** ■ Civil Code (tsiviilkoodeks) 1956. ■ Government regulation No. 172 on interim procedure of compensation (hüvitus) of injuries or other health damage occurring in the course of fulfilling work duties, 1992. ■ Law of Obligations Act (Võlaõigusseadus) 2001. ■ State Pension Insurance Act (Riikliku pensionikindlustuse seadus) 2001. ■ Health Insurance Act (Ravikindlustuse seadus) 2002.	In Estonia, OSH regulations and workers' compensation for occupational accidents and diseases are part of the general social security provisions. Pension and health insurance schemes are contributory social security schemes which are financed mainly by the 'Social Tax' (sotsiaalmaks), i.e. social security contributions of employers who do not pay income tax. Employers and self-employed people pay the amount required to the Tax Office, which is responsible for its distribution to the administrations concerned. In cases of temporary incapacity due to an occupational accident or disease, employees are entitled to a sickness benefit from the Estonian Health Insurance Fund (Eesti Haigekassa). In cases of a long-term or permanent incapacity, a disability pension or similar compensation benefit is paid to the employee. In cases of disability of the employee, the employer (if responsible for the accident or disease) also has to pay additional compensation supplementing the state disability pension (Law of Obligations Act (Võlaõigusseadus)).
Greece	■ Royal Decree 473/1961 'Occupational Risk Contribution' (Βασιλικό Διάταγμα: Αριθ. 473/1961 'Περί εισφοράς επαγγελματικού κινδύνου' (ΦΕΚ 119/A/26-7-61)). ■ Law 3655/2008 'Administrative and organisational reform of the social security system and other regulations concerning insurance matters'. ■ (Διοικητική και οργανωτική μεταρρύθμιση του Συστήματος Κοινωνικής Ασφάλισης και λοιπές ασφαλιστικές διατάξεις) of 3 April 2008: this law unifies six funds covering insurance in banks, investment bodies, insurance companies etc.	Greece has no specific insurance against occupational accidents and diseases. These risks are covered by the insurance systems for sickness, invalidity and survivors. There are several hundred different insurance funds in Greece. The institution that registers occupational accidents and diseases in Greece and sends the official data to Eurostat is the main insurance institution, i.e. the Hellenic Social Insurance Institute IKA. About 42-45% of the total workforce is insured by IKA. Other important insurance funds include OGA, the Organisation for Insurance in Agriculture (covers about 20% of the working population), TEBE, the Insurance Fund for Craftsmen and Small Traders, TSMEDE, Engineers' and Public Contractors' Pension Fund, Pension and Self-insurance Fund for medical doctors, Public Servants Fund, Lawyers' Fund, Fund for Seamen, etc. Some ministries supervise respective funds (e.g. Ministry of Employment for IKA, Ministry of Agriculture for OGA, and Ministry of Commerce for TEBE). Some other funds are self-managed. Private insurance companies act as supplementary insurance sources. In April 2008 the Greek government introduced Law 3655/2008, which is aimed to bring about reform of the insurance system. Among other measures, it will reduce the number of funds by merging those covering similar occupations. However, this law has faced opposition from many different sides. The merging provisions of this law will be brought into force within the next five years. IKA, as the major fund in Greece, has issued a national schedule for occupational diseases (Ministerial decisions for replacing Article 40 of IKA, 1979 (ΦΕΚ 132/12.2..1979: Υπουργικαί αποφάσεις και Εγκρίσεις περί αντικαταστάσεως του Αρθρου 40 του Κανονισμού Ασθενείας του ΙΚΑ)). Currently Greece is in the process of amending its occupational diseases schedule by adopting new occupational diseases according to the principles of the relevant European recommendation. It should also be mentioned that the Labour Inspectorate (SEPE) also registers occupational accidents in Greece and submits an annual review. There are discrepancies between the accident data of IKA and SEPE.

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Country	National legal framework for OSH financial incentives	Description of national workers' compensation scheme
	Last updated: December 2008. Sources: see 3.5.2.	
Spain	■ Social Security General Act (Ley General de la Seguridad Social) approved by Legislative Royal Decree No. 1/94 of 20 June 1994. ■ Occupational accidents: Revised text of legislation and Occupational accidents Regulation; Decree of 22 June 1956. ■ Occupational diseases: Royal Decree No. 2609/1982 of 24 September 1982. ■ Royal Decree No. 1299/2006 of 10 November 2006.	In Spain, according to 2002 data, 96% of employees (12,371,000) are covered for occupational accidents and diseases by one of the 29 existing Industrial Accident Mutual Insurance Societies (MATEPSS, Mutuas de Accidentes de Trabajo y Enfermedades Profesionales de la Seguridad Social). It is worth noting that in 2002 just six MATEPSS covered about 71% of workers (Duran and Benavides, 2004). The rest of the employees are covered by the National Institute of Social Security (INSS, Instituto Nacional de la Seguridad Social). Since 2003, the self-employed have also been eligible to be covered by one of the MATEPSS. The MATEPSS are associations set up by employers to pool their resources to provide protection against certain occupational risks. MATEPSS are private, non-profit making societies. In the most recent legislation this name has replaced the traditional one of mutuas patronales, i.e. employers' mutual insurance societies. Spanish law makes them responsible for insuring against occupational accidents and diseases and classes them as bodies cooperating with the public social security system, under the supervision and control of the Ministry of Labour and Social Affairs (Ministerio de Trabajo y Asuntos Sociales). Their functions have gradually been expanded, and nowadays they may contribute to the provision of protection against non-occupational risks and to the implementation of risk prevention and health and safety programmes. The contributions of the employer are based on the risk category the company belongs to. Employees do not pay any contributions. All accidents are covered, including road accidents.
France	■ Employment Injuries Act of 1946 (Loi du 30 octobre 1946). ■ Article L 411.1 of the Social Security Code ('Code de la Sécurité Sociale'). ■ Decree of 16 September 1977 on the allocation of contribution rebates or the imposition of supplementary contributions for work accidents and occupational diseases (Art. L242-7 of the Social Security Code) (Arrêté du 16 septembre 1977 relatif à l'attribution de ristournes sur la cotisation ou à l'imposition de cotisations supplémentaires en matière d'accidents du travail et de maladies professionnelles (Art. L242-7 du Code de la sécurité sociale)): the regional fund may grant rebates on the contribution or impose supplementary contributions under the conditions determined by interministerial decree, in order to take account either of prevention or assurance measures taken by the employer or, as the case may be, of exceptional risks presented by the business activity, as revealed in particular by an infringement of or resulting from a failure to observe the stipulated preventive measures. ■ Act 85-1353 of 17 December 1985 on the Social Security Code (Art. R422-7 and R442-8 of the Social Security Code) (Décret n°85-1353 du 17 décembre 1985 relatif au Code de la sécurité sociale (Art. R422-7 et R442-8 du code de la sécurité sociale)): the regional sickness insurance fund may, under the conditions and within the limits set by the national fund, grant companies reduced-rate advances in order to help them make changes to ensure better protection for their workers. The regional sickness insurance fund may, in order to carry out certain protective and preventive measures by way of experiment and under its control, enter into agreements with companies involving a contribution towards the funding of these measures. Such a contribution may take the form of reimbursable advances, subsidies, or advances which may, depending on the results obtained, be converted wholly or partly into subsidies.	The French workers' compensation system provides for compulsory insurance for all employees against occupational accidents and diseases. Under Article L 411.1 of the Social Security Code (Code de la Sécurité Sociale), each employee is entitled to compensation in accordance with regulations on workers' compensation insurance. There are special regulations on self-management for specified large companies, primarily public enterprises, and for the agricultural sector. Cover extends to occupational accidents and diseases, with a wide definition for occupational accidents that includes accidents on the way to or from work. In contrast to the other areas of social insurance, workers' compensation insurance benefits from a certain degree of independence due to the fact that benefits are fully financed by the companies in the system. The French system places special emphasis on prevention. One reflection of this is the allowance made in the rating system for each company's claims experience. The system is financed on a pay-as-you-go basis. The employer carries full responsibility for premiums, which are charged on the payroll total. The premium rate depends on the risk and the size of the company (see below). On a national level, workers' compensation insurance comes under the control of the Ministry of Labour and Social Affairs (Ministère du Travail et des Affaires Sociales). The National Health Insurance Fund for Wage Earners CNAM(TS) (Caisse Nationale de l'Assurance Maladie des Travailleurs Salariés) is responsible for the financial administration of the sector, for regulations on rating and for guidelines on compensation for victims. A key function of CNAM is to set the 'collective tariffs' ('taux collectif'), based on the statistics collected by the Ministry. At regional and district level, workers' compensation insurance uses the same administrative structure as the Health Insurance Funds. The Health Insurance Fund for the Regional Departments (Départements) CPAM (Caisse Primaire d'Assurances Maladies), is responsible for the administration of benefits. The Regional Health Insurance Fund CRAM (Caisse Régionale d'Assurances Maladies) is entrusted with prevention and calculation of individual tariffs on a regional level. Control is not exercised by the usual supervisory committees for health insurance funds, but by a special Commission, the CATMP (Commission des Accidents du Travail et des Maladies Professionelles). One of the functions of this committee is to determine premiums. Each company is notified of the premium rate by its Regional Health Insurance Fund CRAM.

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Country	National legal framework for OSH financial incentives	Description of national workers' compensation scheme
	Last updated: December 2008. Sources: see 3.5.2.	
	■ Act 95-1109 of 16 October 1995 amending the Social Security Code and setting the tariff scales for work accident and occupational disease risks (Art. D242-6-1 and following of the Social Security Code) (Décret n° 95-1109 du 16 octobre 1995 modifiant le code de la sécurité sociale et fixant les règles de tarification des risques d'accident du travail et de maladies professionnelles (Art. D242-6-1 et suivants du Code de la sécurité sociale)): the rate of companies' contributions is calculated according to the ratio between the level of risk inherent in the business and the total salary paid to the personnel over the last three years for which figures are known.	
Ireland	■ Social Welfare Consolidation Act 2005.	Insurance for occupational diseases and accidents is integrated into the Irish social welfare system. This integrated system includes all kinds of social welfare services, such as illness benefits, pensions, jobseekers' benefits, occupational injuries benefits, etc. The social welfare system is differentiated in various service packages, so called PRSI classes (Pay Related Social Insurance), which differentiate between gross income and nature of employment. The occupational accident insurance can be considered as one of the most basic service packages. The Irish social welfare system is financed from three different sources: employer contributions (8.5-10.75% of wages), worker contributions (2-4% of gross income) and public subsidies. The benefits of the Irish social system cover personal physical injuries caused by accidents at or in consequence of work as well as outcomes of travel accidents on the way to work. 56 diseases are recognised as occupational diseases and can be found on an official list. In the case of other diseases, the worker concerned has to prove that they are work-related. In Ireland, everybody can claim for a wide range of services provided by the free public health system. The services are tax-financed and are managed by the HSE (Health Services Executive). Besides the public health insurance, many Irish workers take out private health insurance. The Voluntary Health Insurance Board (VHI) is the largest provider established as a statutory body whose board is appointed by the Minister for Health and Children. Further providers are QUINN Healthcare (formerly known as BUPA Ireland) and Vivas. The Health Insurance Authority is the supervisory authority.
Italy	■ Occupational accidents and occupational diseases: ■ Statutory Order No. 1124 of 30 June 1965. ■ Law No. 251 of 10 May 1982. ■ Statutory Order No. 38 of 23 February 2000. ■ Occupational diseases in industry and agriculture: ■ Statutory Order No. 336 of 13 April 1994. ■ Household accidents. ■ Law No. 493 of 3 December 1999.	The sole insurance fund covering occupational diseases and accidents in Italy is the Italian Workers' Compensation Authority INAIL (Istituto Nazionale per l'Assicurazione contro gli Infortuni sul Lavoro). This is a public corporation, which reports to the Ministry of Labour and Social Security. There are different insurance funds for the railway and navigation sectors. INAIL is a self-managed public organisation with its own legal status. The decision-making body is its Board of Directors. The Board of Directors coordinates the institute's management function. In compliance with the general guidelines formulated by the Guidance and Control Council (CIV), the Board of Directors draws up multiyear plans that cover investment plans, the budget and financial statements, as well as budgetary variations. The Guidance and Control Council defines the institute's programmes and guidelines, fixing long-term strategic goals; it also carries out monitoring activities with respect to the goals to be pursued and the correct and cost-effective use of the institute's resources. All employers are obliged to insure their full-time employees and/or workers with a coordinated ongoing collaboration contract hired for activities which the law establishes as risky . Craftsmen and self-employed workers in the agricultural sector are also required to insure themselves. The Domestic Accidents Insurance Act 1999 has also extended insurance to housewives on a voluntary basis. Cover includes occupational accidents that cause the death of an insured person, or a disability lasting at least three days. Since the reform in 2000 commuting accidents are also included. Occupational diseases are covered as well. Occupational diseases are understood as not just those officially recognised as such, but also other diseases, provided it can be shown that they were caused by the particular occupation. Insurance charges, known as the premium, are to paid exclusively by the employer, the craftsman or the self-employed worker in the agricultural sector. In the case of workers with an ongoing and coordinated collaboration contract, the ordinary premium is subdivided as follows: one-third is paid by the worker and the remaining two-thirds by the employer. The actual payment is done by the employer. In the case of employees, the premium is calculated according to salary and in relation to the risk factor of the activity carried out.

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Country	National legal framework for OSH financial incentives	Description of national workers' compensation scheme
	Last updated: December 2008. Sources: see 3.5.2.	
		Employers are classified according to four sectors, each with a corresponding tariff and premium rate: (1) industry (e.g. production, production of raw materials and energy, plant engineering, transport, construction, communication, fishing, etc.), (2) crafts and trades, (3) service sector (e.g. commerce, tourism, providing and arranging services, self-employed and artistic activities, etc.), and (4) others (e.g. civil servants, banks, insurance workers, etc.). Each of these four sectors is then subdivided into ten groups of industrial sectors, and these ten groups are in turn divided into subgroups containing separate activities as tariff subheadings.
Cyprus	**General** ■ Health and Safety at Work Acts (Occupational Diseases Announcement) of 2007 (Οι περί Ασφάλειας και Υγείας στην Εργασία (Γνωστοποίηση Επαγγελματικών Ασθενειών) Κανονισμοί του 2007). ■ Health and Safety at Work Acts (Occupational Accidents and Dangerous Incidents Announcement) of 2007 (Οι περί Ασφάλειας και Υγείας στην Εργασία (Γνωστοποίηση Ατυχημάτων και Επικίνδυνων Συμβάντων) Κανονισμοί του 2007). **Workers' compensation scheme** ■ Social Insurance Law (Νομοθεσία Κοινωνικών Ασφαλίσεων): No. 31/56 of 1957, No. 2/64 of 1964, No. 106/72 of 1972, No. 41/80 of 1980-2007. ■ The Social Insurance (Benefit) Regulations. ■ The Social Insurance (Contribution) Regulations. ■ Compulsory Insurance of Employers' Liability Law (Law 174 of 1989 and amendments 63(I) of 1997, 15(I) of 2001 and 140(I) of 2003) (Ο περί Υποχρεωτικής Ασφάλισης της Ευθύνης των Εργοδοτών Νόμος του 1989 (N. 174/1989) και οι τροποποιήσεις του (Τροποποιητικός) Νόμος του 1997 (N. 63(I)/1997), (Τροποποιητικός) Νόμος του 2001 (N. 15(I)/2001), (Τροποποιητικός) Νόμος του 2003 (N. 140(I)/2003)): defines the procedures to be followed in case of accident, the rights of the employees vis-à-vis the insurance agent and the obligations of the employer. ■ Compulsory Insurance of Employers' Liability Normative Administration Acts of 197/1997 and amendment 130/1998) (Οι περί Υποχρεωτικής Ασφάλισης της Ευθύνης των Εργοδοτών Κανονισμοί του 1997 (Κ.Δ.Π. 197/1997) και Οι περί Υποχρεωτικής Ασφάλισης της Ευθύνης των Εργοδοτών (Τροποποιητικοί) Κανονισμοί του 1998 (Κ.Δ.Π. 130/1998)).	The Employers' Liability Law, which is compulsory, ensures that the employers have at least a minimum level of insurance cover against accidents claims. The employer is liable for a person employed on a contract for more than eight hours a week. This contract can be spoken, written or implied. It does not matter if the person is called an employee or is self-employed. What matters is the actual employment relationship between employer and employee and the degree of the control employer has over the employee's work.
Latvia	**General** The Labour Protection Law of 20 June 2001: the legal framework of the occupational safety and health protection system in Latvia. **Workers' compensation** ■ Law on State Social Insurance (Likums 'Par valsts sociālo apdrošināšanu') of 1 October 1997: the state social insurance guarantees employees and self-employed persons a substitute for income in the case of sickness, maternity, as well as due to accident at work or contraction of an occupational disease, also on the death of a dependant and under other circumstances.	The insurance system for occupational risks in Latvia is based on a monopolistic state system. Under the supervision and authority of the Ministry of Welfare, several state institutions are involved in the operation of the occupational safety and health protection system. The Ministry of Welfare comprises 11 departments, of which one – the Labour Department – is directly responsible for drawing up and implementing labour protection policy and strategy. Three other departments (Social Protection Department SPD, Environmental Health Department EHD and Health Department HD) are indirectly involved in the occupational safety and health protection system through the institutions under their supervision or authority. The State Social Insurance Agency does not distinguish between insurance of occupational accidents and occupational diseases. Risk selection is not allowed in Latvia. The Labour Protection Law and the State Insurance are based on a generic system that makes no distinction between private and public workers or between sectors. The State Labour Inspectorate (an agency of the Labour Department) is responsible for the supervision and control of the Labour Protection Law. The State Social Insurance Agency is responsible for the administration of the Law on State Social Insurance.

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Country	National legal framework for OSH financial incentives	Description of national workers' compensation scheme
	Last updated: December 2008. Sources: see 3.5.2.	
	■ Law on Compulsory Social Insurance against Occupational Accidents and Occupational Diseases (Likums 'Par obligāto sociālo apdrošināšanu pret nelaimes gadījumiem darbā un arodslimībām') of 2 November 1995. ■ Cabinet of Ministers Regulations No. 319 regarding Implementation of the Procedures stipulated by Law on Enterprise Income Tax dated 19 September 2000.	
Lithuania	■ Law on Social Insurance of Occupational Accidents and Occupational Diseases (Nelaimingų atsitikimų darbe ir profesinių ligų socialinio draudimo įstatymas) of 23 December 1999 (No. VIII-1509). ■ Law on Social Integration of the Disabled (Invalidų socialinės integracijos įstatymas) of 28 November 1991 (No. I-2044).	The Lithuanian insurance system for OSH risks is a monopolistic system. Insurance by the State Social Insurance Fund Board (SODRA, Valstybinio socialnio draudimo fondo valdyba), under the Ministry of Social Security and Labour, is obligatory for all kinds of enterprises in Lithuania. On top of this basic insurance, enterprises may voluntarily insure themselves with private insurance companies. When it comes to insurance, there is no distinction between occupational accidents and occupational diseases. Both are enforced on the basis of the Law on Social Insurance of Occupational Accidents and Occupational Diseases. Further, no differences exist between insurance of private and public sector worker and across sectors. Risk selection is not allowed in Lithuania. There are generally three groups of insurance premiums for enterprises in Lithuania. Every year the SODRA approves a special list of enterprises for each insurance premium group depending on the number and seriousness of work accidents occurring within the previous three years. Each year the Parliament of the Republic of Lithuania (Lietuvos Respublikos Seimas) has to approve the main budget indicators of the SODRA for the next year. The Republican Tripartite OSH Commission allocates subsidies to enterprises for OSH measures. The State Labour Inspectorate of the Republic of Lithuania certifies enterprises that have an acceptable record on OSH prevention, which enables them to tender for state subcontracts.
Luxembourg	**General** ■ Act of 17 June 1994 on the safety and health of workers at work. ■ Accident prevention rules of the Accident Insurance Association (AAA, Association d'Assurance contre les Accidents). Occupational safety and health is regulated by the amended Act of 17 June 1994 on the safety and health of workers at work and the accident prevention rules of the Accident Insurance Association. **Workers' compensation scheme** ■ Book II of the Social Insurance Code (Code des assurances sociales), amended notably by the Law of 17 November 1997 : ■ Social Security Code, book II, art. 147 and 148 (Code des Assurances sociales, livre II, art 147 et 148): companies are classified into risk classes that determine the level of contributions. If the frequency of accidents at a company is abnormally high, the AAA can increase the contribution level up to 100% for a specific period that cannot exceed five years. ■ Social Security Code, book II, art. 154 and 156 (Code des Assurances sociales, livre II, art 154 et 156): the insurance organisation may issue specific safety rules and check their application. In the event of a breach, fines can be imposed. ■ Ministerial Regulation of 20 December 2007 (Memorandum A No. 230-2007) (Règlement ministériel du 20 décembre 2007 (Mémorial A n° 230-2007): classes de risque et taux de cotisation 2008): risk classes and contribution rates 2008.	In Luxembourg, statutory accident insurance covers not just all employees but anyone carrying on an independent activity, such as trainees and those attending reintegration courses. Companies and self-employed people pay between 0.44% and 6% of total salary, depending on the risk grading of the business or activity. The accident insurer receives state subsidies to cover the administration costs. Accident insurance covers all work-related accidents and illnesses. Road accidents are also covered. The AAA enacts rules (regulations) for safety containing requirements for machines, tools, installations, dangerous products and substances. Those specific rules must be applied by employers. Agents from the AAA prevention service pay regular visits to companies to ensure that regulations are observed, and if necessary they advise the employers and the workers about the correct application of the regulations.

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Country	National legal framework for OSH financial incentives	Description of national workers' compensation scheme
	Last updated: December 2008. **Sources: see 3.5.2.**	
Hungary	**General** Act No. 93 of 1993 concerning occupational safety and health. **Workers' compensation scheme** ■ Act LXXX of 1997 on Persons Entitled to Social Security Benefits and Private Pensions, as well as the Coverage of these Services (törvény a társadalombiztosítás ellátásaira és a magánnyugdíjra jogosultakról, valamint e szolgáltatások fedezetéről). ■ Act LXXXI of 1997 on Social Insurance Pension (törvény a társadalombiztosítási nyugellátásokról) (Occupational accidents). ■ Act LXXXIII of 1997 on the Benefits of Compulsory Health Care Insurance (törvény a kötelező egészségbiztosítás ellátásairól) (occupational disease). ■ Act LXXXIV of 2007 on Rehabilitation Annuity (törvény a rehabilitációs járadékról) (rehabilitation annuity).	In Hungary, there is no specific insurance against occupational accidents and diseases. These risks are covered by the insurance systems for sickness, invalidity and survivors. The insurance is compulsory for the active population (employees and self-employed). The social security deducts contributions from the companies (employers) and employees also contribute the insurance. These fees are independent of the number of accidents.
Malta	■ Social Security Act (Att dwar is-Sigurta' Socjali) (Cap. 318). ■ Occupational Health and Safety Authority Act, 2000 (Cap. 424) – Att tal-2000 dwar l-Awtorita ghas-Sahha u s-Sigurta fuq il-Post tax-Xoghol (Kap. 424).	The social security system in Malta is provided by the state and is administered by the Department of Social Security, which falls under the authority of the Ministry for the Family and Social Solidarity. As part of the national social security system, the workers' compensation scheme for occupational accidents and diseases is financed through contributions by the employee, employer and the state. It covers the active population (employees and self-employed). There is no separation between the compensation of occupational accidents and diseases.
The Netherlands	■ Working Hours Act (Arbeidstijdenwet): forms a statutory framework for working hours in the Netherlands. ■ Dutch Safety and Health Act (Arbeidsomstandighedenwet, Stb. 2006, 673): contains a code of conduct for safety & health policy. Employers are obliged to make use of a certified Occupational Health and Safety Service (Arbodienst) or a certified professional (such as a company medical officer). The Arbodienst or the professional should help employers to improve their working conditions and prevent sickness absence and disability. ■ Act Extending the Period of Continued Payment of Wages during Sickness (Wet Uitbreiding Loondoorbetalingsplicht bij Ziekte, Wulbz, Stb. 1996, 134; Stbl. 1999, 30): obliges employers to pay 70% of an employee's wage (and no less than the minimum wage level) during the first 104 weeks of sickness. ■ Gatekeeper Improvement Act (Wet Verbetering Poortwachter Stb. 2001, 625; Stb. 2006, 673): obliges employers and employees to act as soon as the employee has reported ill in order to get employees back to work as soon as possible and thus prevent them having to claim a disability benefit. ■ Work and Income according to Labour Capacity Act (WIA, Stb. 2005, 572, 619): provides for a disability benefit in case of full and permanent occupational disability. Employees are entitled to benefit under the WIA when they are ill for at least 104 weeks and are at least 35% occupationally disabled. If employees are fully (at least 80%) and permanently occupationally disabled, they will be eligible for benefit on the basis of the Income Provision Scheme for People Fully Occupationally Disabled (IVA) of 75% of the daily wage (maximum daily wage EUR 177.03). If employees are between 35% and 80% occupationally disabled, they will be entitled to benefit on the basis of the Return to Work Scheme for the Partially Disabled (WGA).	The insurance system for occupational risks in the Netherlands is based on a competitive market with multiple (private) insurers and health and safety services. Employers are primarily responsible for the prevention and insurance of occupational risks to their employees and have the choice of carrying these risk themselves or reinsuring them with private companies or the public Social Security Agency UWV. However, the insurance of full and permanent occupational disability (IVA) is mainly carried out by UWV, although the employers have the legal right to carry out this risk themselves. No differences exist in the insurance of occupational accidents and occupational diseases or the insurance of private and public employees. Risk selection is not allowed in the Netherlands. All sectors have to comply with the various conditions and obligations which stem from the social insurance legislation. With regard to the prevention and insurance of sickness and occupational risks, the legal framework leaves some flexibility for employers. Because of this there are many differences between businesses and sectors in organising prevention and social insurance. The Dutch Social Security Agency UWV is responsible for supervision and control of the Act Extending the Period of Continued Payment of Wages during Sickness (Wulbz), the Gatekeeper Improvement Act and the Work and Income according to Labour Capacity Act (WIA). The Labour Inspectorate is responsible for the supervision and control of the Working Hours Act and the Safety and Health Act.

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Country	National legal framework for OSH financial incentives	Description of national workers' compensation scheme
	Last updated: December 2008. Sources: see 3.5.2.	
	Originally a risk-rating premiums regulation existed in the Netherlands (the so-called Pemba Act). However, the Pemba Act was abolished with the introduction of the WIA on 1 January 2006.	
Austria	■ General Social Insurance Act (Allgemeines Sozialversicherungsgesetz, ASVG) of 9 September 1955. ■ Federal Hospitals Act of 18 December 1956 (Krankenanstaltengesetz, KAG) and Hospitals Acts of the Länder.	In Austria there are four bodies governing workplace accident insurance. They operate nationwide and can be characterised as self-governing public bodies. The four accident insurers are under the umbrella of the Main Association of Austrian Social Security Institutions (Hauptverband der österreichischen Sozialversicherungsträger), jointly with health insurance bodies and pension insurance bodies, and under supervision of the Federal Ministry of Economics and Labour (BMWA): ■ Austrian Social Insurance for Occupational Risks (AUVA, Allgemeine Unfallversicherungsanstalt): AUVA is the biggest insurance body, responsible for three million self-employed and workers of all sectors, 1.3 million students and pupils, and volunteer workers. ■ Farmers' Social Security (SVB, Sozialversicherungsanstalt der Bauern): SVB is the insurer for occupational accidents and diseases for the self-employed and workers in the agricultural and forestry industry. It was founded on the basis of the Law on Social Insurance in the Agricultural Sector (Bauernsozialversicherungsgesetz). In former times, agriculture was an important sector in Austria. Today, some 300,000 farms are registered as members of SVB Occupational Risk Insurance. ■ Social Insurance for Railway and Mining Industry (VAEB: Versicherungsanstalt für Eisenbahnen und Bergbau): Some 200,000 workers and their families are registered at VAEB, mainly railway workers of Austrian Railways (ÖBB) and Railway Vienna (Wiener Linien). The Austrian mining industry is of minor importance, with just 5,000 workers nationwide (2006). ■ Social Insurance for the Public Sector (BVA, Versicherungsanstalt öffentlich Bediensteter, ehemals Beamtenversicherungsanstalt): Formerly only for public servants, it also insures staff from Austrian universities and the workers of BVA (since 2004). The Austrian accident insurance for workplace accidents is part of the national social insurance system. Membership is compulsory for all companies in Austria. The workplace accident insurance covers accidents at work, travel accidents on the way to work and occupational diseases. It also covers accidents during school and university lessons and during assistance services e.g. during first aid. The legal foundation for membership fees (insurance premium) can be found in §51 ASVG. Insurance premiums to the accident insurance are fixed at 1.4% of the worker's income and are paid by the employer only.
Poland	■ Law on the Social Insurance in case of Occupational accidents and on the Occupational Diseases Insurance (Ustawa o ubezpieczeniu społecznym z tytułu wypadków przy pracy i chorób zawodowych) of 30 October 2002. ■ Regulation of Minister of Economy, Labour and Social Policy from 2002 on differentiation of contribution rate depending on occupational hazards and their consequences (Rozporządzenie Ministra Pracy i Polityki Społecznej z dnia 29 listopada 2002 r. w sprawie różnicowania stopy procentowej składki na ubezpieczenie społeczne z tytułu wypadków przy pracy i chorób zawodowych w zależności od zagrożeń zawodowych i ich skutków) : allow premium differentiation in companies with more than 10 employees based on the accident statistics of the company. This differentiation has been applied since 2006.	The basis of the Polish accident insurance system is the Occupational Accident Act of 2002. The monopolistic organisation is part of the state social security system. The act covers accidents and occupational diseases and regulates the types of benefits, rules and procedures, calculation of the insurance premiums and the financing of accident prevention. Benefits are paid by the occupational accident fund, which is generally financed by the Social Insurance Institution (Zakład Ubezpieczeń Społecznych). The system is financed by a combination of general social security contributions (pensions, medical treatment, rehabilitation) and premiums (lump-sums) paid by the employer (2007 about 20%). 1% is used for accident prevention. The main part of the money is used for financing the benefits and the administration. Premiums differ depending on the level of occupational hazard and its effects. Risk selection is not allowed. There are risk categories for different sectors of the economy. Since 2006 companies have also been able to influence their payments, as individual risk categories are established for a period of one year at a time. Commuting accidents are not covered. Occupational diseases have been regulated in the Rozporządzenie Rady Ministrów (Regulation of the Council of Ministers) since 2002. This document contains a list of diseases and describes the procedures for reporting and diagnosing occupational diseases. The Social Insurance Institution (Zakład Ubezpieczeń Społecznych) is responsible for establishing the premium rates and coordinating the national insurance system, and the National Labour Inspectorate (Państwowa Inspekcja Pracy) is responsible for monitoring compliance by companies. A labour inspector may apply to the Social Insurance Institution for permission to double the premium rate of a company that has violated occupational safety and health conditions over successive inspections.

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Country	National legal framework for OSH financial incentives	Description of national workers' compensation scheme
	Last updated: December 2008. Sources: see 3.5.2.	
Portugal	■ Law 100/97 of 13 September 1997 (Lei nº 100/97 de 13 de Setembro – Aprova o novo regime jurídico dos acidentes de trabalho e das doenças profissionais): approves the new legal framework for occupational accidents and diseases. ■ Statutory Decree 143/99 of 30 April 1999 (Occupational accidents). ■ Statutory Decree 159/99 of 11 May 1999 (Occupational accidents among the self-employed). ■ Statutory Decree 248/99 of 2 July 1999 (Occupational diseases).	The Portuguese system of covering occupational accidents and occupational diseases is a mixed system, in which insurance against occupational accidents is carried by private insurance companies in a fully funded scheme, whereas occupational diseases are covered by a state pool (Caixa Nacional de Seguros das Doenças Profissionais, CNSDP), which operates on a pay-as-you-go basis. The legislation covering this dual approach is the social insurance framework law of 1984 (Law No. 28/84 of 14 August 1984). The present system, which was overhauled from 1 January 2000, is based on the new workers' compensation Law No. 100/97 of 13 September 1997, and on Legal Decrees Nos. 143, 159 and 247 from 1999. The original law providing for private organisation of workers' compensation insurance dates from the year 1913. The state does not contribute to social security. Insurance covers all occupational diseases described in the national diseases schedule. Insurance covers all compensation, medical treatment, and early retirements. Employers have to be insured for occupational accidents by a private company. Since 2000, self-employed people have also been subject to compulsory insurance for occupational accidents. Insurance companies are controlled by the Ministry of Finance. Contributions to private insurance companies depend on the risk category of the company. Insurance covers the direct and indirect costs of accidents as well as road accidents. If an employer is insolvent and does not meet its obligation to provide insurance cover, employees who suffer a loss receive workers' compensation insurance benefits from a special fund called the FAT (Fundo de Accidentes de Trabalho).
Romania	**General** ■ Labour Protection Law 1996. ■ General Norms of Labour Protection 2002. **Workers' compensation** ■ Law 19/2000 on Public System of Pensions and other Social Insurance Rights (Legea privind sistemul public de pensii si alte drepturi de asigurari sociale). ■ Law 346/2002 on Insurance of Occupational Accidents and Occupational Diseases (Legea privind privind asigurarea pentru accidente de munca şi boli profesionale).	From 1 March 2003 employers have been obligated to insure their employees against occupational accidents and diseases. The Labour Code, Law 346/2002 (which came into force on 1 January 2005) stipulates that the insurance for occupational accidents and occupational diseases is part of the social state-guaranteed insurance system. The competent authority is the Ministry of Labour, Family and Equal Opportunities (www.mmsf.ro). The risk insurance system is tripartitely administrated. The occupational accidents and diseases insurance market is designed by law to be competitive, but at the moment it is monopolistic. The executive institution is the National Insurance Fund for Work Accidents and Occupational Diseases. The fund is controlled by the National House of Pension and other Social Rights (www.cnpas.ro). The fund is able to consider prevention expenses in reference to the premium level. The risk insurance system is compulsory for all employers in companies and voluntary for persons working in agriculture, the self-employed, executive (employees) and persons working for international institutions in Romania. Premiums are paid by the employer or individual (voluntary insurance) in relation to tariffs and risk categories such as cost of services rendered, expenses incurred for prevention of work-related accidents and illnesses and administrative expenses. Risk selection is not allowed. Commuting accidents are covered.
Slovenia	■ Pension and Disability Insurance Act 104/2005 (Zakon o pokojninskem in invalidskem zavarovanju). ■ Health Care and Health Insurance Act 100/2005 (Zakon o zdravstvenem varstvu in zdravstvenem zavarovanju). ■ Health and Safety at Work Act 56/99 (Zakon o varnosti in zdravju pri delu).	Slovenia is a country with a long tradition of the Bismarckian mandatory social insurance system. The entire active population (both employed and self-employed persons) is covered by the national compulsory Health Insurance and the compulsory Pension and Invalidity Insurance. There is no mandatory insurance that would cover just the risks of occupational accidents and diseases. These risks are incorporated into the general Health Insurance and the Pension and Invalidity Insurance. Private insurance companies have no role in mandatory social insurance. The representatives of the insured workers and the employers manage the National Health Fund and the National Pension and Invalidity Fund. From January 2004 both funds were compelled by the law to introduce varying contribution rates for insuring the risk of occupational accidents and diseases. The level of contributions would be set according to the frequency of accidents at work for particular activities. Only the employer would pay the contributions. According to the Trade Union contact from Slovenia, Lučka Böhm (Association of Free Trade Unions of Slovenia (ZSSS)), the announced reform in the insurance system has not yet been introduced.

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Country	National legal framework for OSH financial incentives	Description of national workers' compensation scheme
	Last updated: December 2008. **Sources: see 3.5.2.**	
Slovak Republic	**General** ■ Decree No. 159/2001 on minimum requirements of safety and health to use working devices. ■ Decree No. 201/2001 on minimum requirements of safety and health for the workplace. ■ Directive No. 13/1986 for performing hygiene service and for declaration of dangerous works. ■ Decree No. 511/2004 on job classification according to health risks. **Workers' compensation** ■ Law on Social Insurance (Zákon o sociálnom poistení). No. 461/2003. ■ Law on Income Tax (Zákon o dani z príjmu) No. 595/2003. ■ Labour Code (Zákonník práce), Law No. 311/2001. ■ Law on Compensation for Pain and on Compensation for Reduced Social Opportunities (Zákon o náhrade za bolesť a náhrade za sťaženie spoločenského uplatnenia) No. 437/2004.	The Slovakian accident insurance can be categorised as statutory accident insurance. It is monopolistic and embraces all industrial sectors. The statutory accident insurance covers all workers in the private and public sectors, students and citizens in compulsory military service. The Slovakian accident insurance covers workplace accidents and accidents that are not the fault of the worker, as well as those occupational diseases included in an official list of 47 diseases. Risk selection is not allowed (accidents caused by any occupational risk are covered). Accident at work caused by negligence of the worker and travel accidents on the way to work are not covered. The accident insurance is funded by employers' contributions, which are fixed at 0.8% of the sum of gross wages. Legal basis is the §210 of the Slovakian Labour Code. Deficits and some special benefits / medical treatments are covered by tax contributions.
Finland	■ Employment Accident Insurance Act (Tapaturmavakuutuslaki) of 20 August 1948. ■ Occupational Diseases Act (Ammattitautilaki) of 29 December 1988. ■ Farmers' Accident Insurance Act (Maatalousyrittäjien tapaturmavakuutuslaki) of 23 December 1981. ■ Government Employees' Accident Compensation Act of 1999.	The statutory accident insurance (lakisääteinen tapaturmavakuutus) is defined by the Employment Accidents Insurance Act (Tapaturmavakuutuslaki) of 1948. The act has been amended several times; the latest amendments were made in 2000. The statutory accident insurance is delegated by legislation to private accident insurance companies, and is part of the social insurance system. The Ministry for Health and Social Affairs is responsible for the system. Although the accident insurance system is regulated by this law, the system can be regarded as private, because it is conducted by multiple insurers. There are 13 companies at present operating the statutory accident insurance system. The companies are obliged to enter into a contract. Employers are obliged to pay the insurance premiums. The system covers all employees. The self-employed are entitled to take the same cover on a voluntary basis. There are additional organisations to cover further occupational areas: the Farmer's Social Insurance Institution (Maatalousyrittäjien eläkelaitos, MELA) and the State Treasure Office (Valtiokonttori) for accident insurance coverage of government employees. All insurance companies are combined in the Federation of Accident Insurance Institutions (FAII; Tapaturmavakuutuslaitosten liitto, TTL). The main tasks of the federation are the promotion of statistics, the application of national and international legislation, guidance in handling claims and the coordination of research groups dealing with health and safety at work. The Parliamentary Ombudsman is also entitled to perform inspections in insurance companies. Further legislation related to the statutory accident insurance includes the Occupational Diseases Act (Ammattitautilaki) of 1989, the Farmers' Employment Accidents Insurance Act (Maatalousyrittäjien tapaturmavakuutuslaki) of 1981, and the Government Employees' Accident Compensation Act (Laki valtion virkamiesten tapaturmakorvauksesta) of 1990. The latter regulates compensation benefits and was last amended in 2000. The insurance system covers both occupational accidents and occupational diseases. There is a list of diseases and a general clause, but the procedure requires always a proof of the causal link. Commuting accidents are also included. The law provides a basis for technically correct pricing. The insurance companies are allowed to calculate the premiums with their own schemes (generally based on statistics collected over a five-year period) but are obliged to follow the principles in premium assessment which are defined by law. The premiums have to be proportional to the insurance costs, specific accident risks have to be taken into account, and in certain cases individual accident rates have to be considered. An average premium is about 1.2% of the wages paid, but in jobs with very high risks this can rise to 8%.

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Country	National legal framework for OSH financial incentives	Description of national workers' compensation scheme
	Last updated: December 2008. **Sources: see 3.5.2.**	
Sweden	**General** ■ Work Environment Act (Arbetsmiljölagen) of 1977: defines the overall framework of work environment regulation. ■ Swedish Work Environment Authority (Arbetsmiljöverket): the administrative authority for questions related to the work environment. **Workers' compensation** ■ Work Injury Insurance Act (Lag om arbetsskadeförsäkring) of 1976. ■ A recent report (Socialdepartementet. SOU 2008:10 – Statens offentliga utredningar (SOU). 30 January 2008) recommended that new authority be set up to control and reform the social insurance system, but this has not yet taken place.	Sweden has a monopolistic insurance system supplemented by an additional insurance of the social partners. According to the Work Injury Insurance Act (Lag om Arbetsskadeförsäkring) of 1976, all economically active persons, employees, employers and self-employed persons regardless of nationality are insured for occupational injuries. Those undergoing training are also insured for occupational injuries insofar as their training involves any such risk. There are only very few exceptions and no difference between occupational injuries and occupational accidents. The insurance is mainly financed by proportional contributions by employers and employees and by taxes. All employees have to pay the same percentage of their income as a contribution. The system is administered by the Social Insurance Office (Försäkringskassan). Work injury insurance is fully coordinated with the general health insurance, and there is no extra compensation for occupational injuries. However, the insurance still includes an annuity for persons whose work capacity has been reduced permanently as the result of an occupational injury. The abolition of the higher amount of the work injury benefits during sick leave means that in most cases there is no longer an economic incentive to report occupational injuries. The obligation for employers to report all injuries remains, however. The injuries are reported directly to the Försäkringskassan. Benefits are paid by the work injury insurance. Persons with permanent disability have a claim for a pension. But the work injury insurance does not regulate questions concerning compensation for incapacity and injury and other such inconveniences. In these respects, the injured employee is able to obtain compensation under special security insurance agreements, which are agreements between employers' associations and trade unions and which include most employees in Sweden.
United Kingdom	**General** The Health and Safety at Work etc. Act 1974 (HASAW or HSW) is the primary piece of legislation covering occupational health and safety in the UK. All other OSH related acts and a number of statutory instruments related to them are listed online on the HSE homepage http://www.hse.gov.uk/legislation. **Workers' compensation** ■ Employer's Liability Compulsory Insurance Act 1969 (ELSI). ■ Social Security Contributions and Benefits Act 1992 (SSCBA). ■ Social Security Administration Act 1992 (SSAA). ■ Pneumoconiosis etc. (Workers' Compensation) Act 1979. ■ Social Security Act 1998.	The workers' compensation scheme comes under the legal framework of the Social Security Act 1998, the Social Security Contributions and Benefits Act 1992 and the Social Security Administration Act 1992. The Employer's Liability Compulsory Insurance Act (ELSI) of 1969 makes employer liability insurance compulsory for a cover of at least £5 million, ensuring that employers have at least a minimum level of insurance cover against claims from employees who are injured at work or become ill as a consequence of work. In practice, most insurers offer cover of at least £10 million. Insurers must be authorised. Authorised insurers are individuals or companies working under the terms of the Financial Services and Markets Act 2000 and registered by the Financial Services Authority (FSA). The insurance system for occupational risks in the UK is a competitive market system with a large number of registered insurers (see http://www.fsa.gov.uk). No differences exist regarding the insurance of occupational accidents and occupational diseases or the insurance of private and public employees. Further, there are no sector-specific insurance models. Risk selection is not allowed. Any injuries or illness relating to motor accidents which occur while the employee has been working may be covered separately by the employer's motor insurance. Under ELSI, employers are obliged to meet their legal responsibilities to protect the health and safety of their employees. Employers are required to carry out risk assessments, take practical measures to protect their employees and report incidents. If the insurer believes that the employer did not fulfil his OSH duties correctly and that this has led to the claim the policy may enable the insurer to sue the employer to reclaim the cost of compensation. HSE inspectors check that employers have liability insurance with an authorised insurer covering at least £5 million. Employers can be fined up to £2,500 for any day for which they operate without suitable insurance. If a company refuses to display the certificate of insurance or to make it available to HSE inspectors it can be fined up to £1,000.

3.6.2. Annex 2: Overview of rating systems in each EU Member State

Country	Insurance-related incentives for OSH Last updated: December 2008. Sources: see 3.5.2.
Belgium	See Section 4.2.5. 'Premium differentiation in occupational accident insurance' The Royal Decree of 8 May 2007 on premium differentiation for occupational accidents makes insurance premiums for occupational accidents dependent on the number and severity of accidents in the company. Insurance companies must apply a compulsory no-claims bonus system, over and above a free basic rate. To this end they use a credibility formula in which the loss statistic (occupational risk) is based on a combination of temporary incapacity to work and medical costs. A poor loss statistic may lead to a premium increase of 30%, a good one to a decrease of 15% for the smallest companies. The formula also takes account of the size of the company. The purpose of these provisions is to encourage companies to do more accident prevention and to benefit companies with a good OSH policy. The Occupational Accident Fund (Fonds voor Arbeidsongevallen, FAO/Fonds des Accidents du Travail, FAT) will evaluate the preventive effect annually. The Royal Decree of 8 May 2007 came into effect on 1 January 2009, but the adjustment of the premium rate, to be applied to financial year 2009, will be calculated on the basis of the loss statistics relating to the years 2006, 2007 and 2008.
Bulgaria	Since January 2004, the National Insurance Institute has been able to increase or decrease the premium within the limits defined in the Public Insurance Tax Budget Law, and in accordance with the methodology approved by the Council of Ministers. Based on a bonus-malus system, premiums are differentiated among the insurance companies depending on the frequency and severity of the insurance cases that have occurred.
Czech Republic	The Czech occupational accident insurance system includes a malus system for not complying with legal duties: the accident insurance company can claim so-called 'regression fees'. Such regression fees serve as additional compensation for costs incurred in cases where an employer has violated legal obligations in the field of occupational safety and health.
Denmark	The tariffs of the insurance companies and the Labour Market Occupational Diseases Fund are calculated depending on the risk, which means sector and occupational risk. In December 2006, a committee's report on a reform of the insurance system was published. It recommends among other things a bonus system that would also affect companies' tariffs. A concrete model has not yet been implemented, however.
Germany	Legal foundation for membership fees (insurance premiums) can be found in §150 ff. SGB VII. It can be noted that fees vary between the different sectoral BGs and even between the member companies of a single BG. This is because of the way the insurance premium is calculated: every company is placed in a hazard group by the BG assembly (Vertreterversammlung), and each hazard group is on a certain tariff (§157 SGB VII). Within the tariff the sum of wages (§153 SGB VII) determines the insurance premium for the company. Parameters for the insurance premiums within the LB are acreage and number of animals. Prevention of occupational accidents is considered to be an essential task of the accident insurance companies. This was one reason why tariff variations are legally permitted. All accident insurance companies also offer special prevention services for the member companies of the sector. On a federal level they also support specialised institutes such as the BG Institute for Occupational Safety (BGIA) and the BG Institute for Work and Health (BGAG), which are concerned with research into OSH and the development of instruments and tools. The strategy of prevention and the approach to economic and non-economic incentives may vary significantly from BG to BG: §162 I SGB VII defines possibilities for premium variations. In contrast to other workers' compensation schemes in Europe, premium variations of the responsible bodies are laid down in federal legislation: Statutory Accident Insurance Bodies are obliged not only to offer various tariffs but also to vary insurance premiums. This can take the form of positive variations (reductions in favour of enterprises) or negative variations (additional charges). Further rules of procedure can be laid down in the Statutes (Satzung) of the Accident Insurance Bodies. Furthermore, §162 II SGB VII allows the Statutory Accident Insurance Bodies to grant financial awards ('Prämien') to companies for realising safety measures. **See Section 4.2.1 'Statutory Accident Insurance of the Butchery Industry (Fleischerei BG)'** A very sophisticated system of premium variations can be seen in the example of the Statutory Accident Insurance of the Butchery Industry (Fleischerei BG). Through three different programmes that can be applied in combination, participating companies can get a maximum 20% reduction of their annual membership fee. **Statutory Accident Insurance of the Health Care Sector (BG Gesundheitsdienst und Wohlfahrtspflege-BGW)** Another approach is followed in the example below: the Statutory Accident Insurance of the Health Care Sector combines an award with premium reduction for promoting occupational safety and health management for its member companies. Since 2003 the BGW has granted the 'BGW Health Prize' for its member companies which amounts up to EUR 45,000. The prize aims to reward ideas and exemplary prevention activities in the field of occupational health and safety. The jury focuses on measures directed to employees. A questionnaire includes questions on the following aspects: significance of occupational safety and health in the company (company and human resources management policy as well as work organisation), current status in the project schedule of measures and activities, available resources, and organisation of workplace health promotion. As the first and only Statutory Accident Insurance the BGW has developed a package combining quality management and occupational safety and health, called qu.int.as (qu.int.as – bgw-online.de). It stands for 'certifiable integration of occupational health and safety in quality management systems of companies'. Through qu.int.as occupational safety and health has become an executive function and is considered in the quality management of all company processes. If a company achieves certification, the BGW provides support in the form of advice from qu.int.as. The BGW subsidises up to 50% of the company's certification costs. The management tool includes qu.int.as-online, which provides access to experience reports, practical advice, contact information for the BGW's advisers and certification authorities, information on events and seminars and a newsletter.

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Country	Last updated: December 2008. Sources: see 3.5.2. Insurance-related incentives for OSH
	Statutory Accident Insurance of the Leather Industry (Lederindustrie-BG, LIBG) The Statutory Accident Insurance of the Leather Industry (LIBG) has established a negative incentives system: since 2004 companies with an accident rate 200% higher than the sector average have seen their membership fee increased by 20%. At the same time, all positive incentives have been cancelled. The LIBG claims a lack of effectiveness of the forerunner system, which consisted of a combination of both positive and negative incentives: the LIBG found that positive incentives were claimed for measures which would have been taken anyway. To target persistent bad performers, LIBG decided instead to fine them and to lower the general membership tariff. (see: http://www.libg.de/ebenen/mitgliedschaft/nachlaesse.php)
Estonia	According to Kristjuhan (2003), Estonia's Ministry of Justice spent five years on the elaboration of a law on mandatory insurance against work accidents and occupational diseases. The law was ready to pass Parliament in 2002. The main sticking point was whether Estonia should have public or private insurance. Discussions indicated that the private system may have slight advantages as it is more flexible. Considerable attention was also paid to technical aspects of insurance. The system of premiums was planned to take into account the following criteria: work environment, requirements of occupational health and work safety, and data of risk analyses. However, the draft law was not accepted by the Estonian parliament (Riigikogu). There were many reasons for that according to the author. Some private insurance companies handle insurance against occupational accidents and diseases in Estonia (Kristjuhan, 2003), including the ERGO Insurance Group. The typical private insurance contract includes the results of a risk assessment of the working environment and medical examinations of the employees. The insurer controls and evaluates the data about risk assessment submitted by the policyholder and the health examinations. If necessary, the insurer has to perform a supplemental risk assessment of the working environment together with the policyholder.
Greece	Premium variations do not exist in Greece. However, private insurance companies may use premium variations in their insurance schemes. The Royal Decree 473/1961 'Occupational Risk Contribution' (Βασιλικό Διάταγμα: Αριθ. 473/1961 'Περί εισφοράς επαγγελματικού κινδύνου' (ΦΕΚ 119/Α/26-7-61)), obliges all employers to pay a premium to IKA of 1% of the total salary bill for occupational safety insurance. This premium is the same for all enterprises irrespective of their size, sector or safety performance. So far this budget has not been allocated to prevention activities or compensation purposes. In fact, the insurance premium regulations remain ineffective compared to other insurance systems existing in EU. The employers' contribution, 0.45% of annual gross salaries, that was defined in Article 14 of National Law 2224/1994 (N. 2224/1994) (as amended by Article 10 of National Law 2336/1995 (N. 2336/1995)), is reserved in benefit of a special Account for Employment and Vocational (LAEK) (ΛΑΕΚ, Λογαριασμός για την Απασχόληση και την Επαγγελματική Κατάρτιση). LAEK was established by Article 1 of National Law 2434/96 (N. 2434/96). The above contribution is mandatory for all employers including public sector, municipalities, and other legal entities of public law.
Spain	The contributions of the employer are based on the risk category to which the company belongs. The Spanish Strategy on Occupational Safety and Health 2007-2012 (Estrategia Española de Seguridad y Salud en el Trabajo 2007-2012) mentions as one of the measures to be developed in the coming years (up to 2012), a reduction in companies' contribution for occupational risks to the social security, when they can demonstrate that their accident rates are lower than the average in their sector.
France	Within the social security system, occupational accident insurance is covered by the National Health Insurance Fund (CNAM) and its regional branches (CRAM). The premium paid by a company depends on the costs of occupational accidents and diseases, or on the risk. The size of the company determines how the premiums are calculated. In the case of larger companies (more than 200 employees), the premium is calculated for each individual company and is based solely on its occupational accident and disease rate. Therefore, large companies have to bear the costs of the accidents that occur. This system represents a genuine incentive, especially for larger companies, since they are directly affected by rises or falls in their accident or disease rates. For smaller companies, however, the drivers are not as strong because the premiums depend on the results of their industrial sector. Nevertheless, the insurance system encourages smaller companies directly by offering financial support through prevention contracts, advances and grants.
Ireland	No premium variation schemes identified.
Italy	Employers are classified according to four sectors each with a corresponding tariff and premium rate. Companies can apply to INAIL for a reduction in their tariff premium, if they can show compliance with all legal standards for work safety and work hygiene. Different criteria apply to companies in the first two years of business operations and to companies in the third and following year. Another type of premium grading is automatically carried out by INAIL and can produce a surcharge or credit on the rating premium depending on claims experience of a company. See Section 4.2.4. 'Reduction of companies' compulsory insurance premium following prevention support measures' Since 2000, Italian companies that take action to improve OSH over and above the – minimum level required by law – are rewarded with a 'discount' on the premium due to INAIL, called 'Premium Rate Fluctuation'.
Cyprus	According to the Compulsory Insurance of Employers' Liability Law, Amendment 63(I) of 1997, Article 5, insurance companies can set premiums according to their assessment of individual risks. Indicators for fixing insurance premiums are as follows: number of employees, salary, work area (size of company not relevant), safety management system/working procedures, accident reports/ near misses, personal protective equipment, past experience, and housekeeping. Laiki Insurance Ltd (General insurance company) (http://osha.europa.eu/en/topics/business/economic_incentives/economic_examples.stm/26-cy.stm) Insured customers of Laiki Insurance who can demonstrate to the company's Risk Survey Department that they have successfully implemented specific risk control measures that result in increased safety performance are entitled to a discount of up to 10% of the premium. The percentage of the discount depends on the residual risk level achieved after the implementation of the specific control measures set up by Laiki Risk Survey Department.

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Country	Insurance-related incentives for OSH Last updated: December 2008. Sources: see 3.5.2.
Latvia	
Lithuania	There are generally three groups of insurance premiums for enterprises in Lithuania. Every year the State Social Insurance Fund Board approves a special list of enterprises for each insurance premium group depending on the number and severity of occupational accidents occurring within the past three years. The insurance premium is raised for companies where fatal and serious occupational accidents occurred.
Luxembourg	
Hungary	A bonus-malus system is being developed.
Malta	
The Netherlands	The insurance-related incentives are connected with the employer's responsibility for prevention and insurance of employees' sickness and occupational risks. Employers are legally obliged to carry these risks themselves or to reinsure them with private insurance companies or with the public UWV. Specific insurance-related incentives such as premium variations or bonus systems for specific prevention activities occur within the framework of contracts between employers and the private insurers and safety and health services. An example can clarify the incentives which stem from this privatised system. First of all, an employer is responsible for healthy and safe working conditions. If employers do not satisfy the legal safety regulation, the Labour Inspectorate is authorised to fine them. Secondly, the employer foots the bill of wage payment during the first 104 weeks of sickness. During this time, the employer is not permitted to dismiss the employee. Furthermore, the employer is obliged to draw up a so-called reintegration plan together with the employee, before the sixth week of sickness. Finally, if the Dutch Social Security Agency UWV declares the employee partially disabled, the employer has to keep on paying the salary and must arrange suitable (part-time) work.
Austria	Legal foundation for membership fees (insurance premium) can be found in §51 ASVG. Insurance premiums to the accident insurance are fixed at 1.4% of the worker's gross income and are paid by the employer only. Variations are not foreseen in the Austrian social law and the different accident insurance bodies do not make use of such possibilities.
Poland	Differentiated accident insurance premiums as economic incentives were introduced in Poland in 2004. According to the regulation on Polish Accident Insurance System, the premium rate in companies is differentiated depending on their size, the occupational risks present, and their experience rating. The process differentiating the premiums will be completed in 2009. Since 2006 companies employing 10 and more employees have been able to influence their payments, as individual risk categories are established. The categories are based on the company's own statistics on the incidence rate of accidents overall, the incidence rate of fatal and serious accidents, and the rate of employees exposed to harmful and noxious working conditions. The system is differentiated at both sector and company level. The risk categories can be determined for a period of up to three years. The risk category for a given sector in which a company operates is similarly determined on the basis of the incidence rate of accidents in total, the incidence rate of fatal and serious accidents, the incidence rate of occupational diseases, and the rate of employees exposed to harmful working conditions. Each enterprise is assigned a corrective co-efficient, which is obtained by comparing the individual risk category of the enterprise with that determined for its sector. Until 31 March 2009 the corrective co-efficients ranged from 0.5 to 1.5. Detailed rules with regard to corrective co-efficients are defined in the regulations. Generally, if the risk category set for an individual enterprise is higher than the one set for an economic sector, the corrective co-efficient will be over 1. If the risk category is lower, the corrective co-efficient will be below 1. If a risk category set for a premium enterprise will be 2 or 3 risk categories higher than the one determined for branch of activities, the corrective co-efficient will be 1.1 or 1.2 respectively. If, on the contrary, the individual risk category for the enterprise in question is 2 or 3 risk categories lower, the corrective co-efficient will be 0.9 or 0.8 respectively. The premium rate to be paid by the ensured entity (enterprise) is calculated as premium rate set for a given branch of activities multiplied by a corrective co-efficient determined for the enterprise in question. The Accident Insurance System is intended to encourage companies to improve OSH performance and make them more aware that improvement of OSH performance is a benefit for a company.
Portugal	Insurance companies have developed their own, very individual tariff systems for occupational accidents, in which the ISIC code from the ILO (International Standard Industrial Classification) or its translation into Portuguese, CAE (Código de Actividade Económica), is generally used to classify commercial and industrial activities. The activities listed there are divided into either risk groups (e.g. numbered 1 to 12), or given an individual rating immediately. If the company uses risk groups (the number of which varies from one company to the next) a rate is allocated to each individual risk group. The rates for occupational accidents are charged on the full payroll total of the insured company, without making a distinction between different activities. Most companies have a simplified tariff for the self-employed. The contributions for occupational diseases are mandatory, paid by employers and amount to 0.5% of the salary bill. Insurance companies have developed mechanisms that allow surcharges or credits on the calculated rates of the companies according to the following criteria: risk analysis from the insurance company, quality of risk information, claims experience, and minimum premiums for policies and for particular sectors. There are minimum premiums in policies for risks in the high-risk groups, such as construction, mining, agriculture and the logging industry and for domestic staff.
Romania	The premium rate is influenced by the expenses incurred for prevention of occupational accidents. The contribution quotas due by employers range between 0.5% and 4% of the gross salary fund, depending on risk category. The contribution due by individuals (voluntary insurance) is common to all the insured, regardless of their activity, and ranges between 0.5% and 1% of the monthly insured income.

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Country	Last updated: December 2008. Sources: see 3.5.2. Insurance-related incentives for OSH
Slovenia	Neither of the mandatory social insurance systems (Health Insurance and Pension and Invalidity Insurance) plays a role in the prevention of occupational accidents or diseases. The contribution rates are the same for all employers and there is in effect no economic incentive for the employer to invest in better health and safety at work. As the mandatory insurances have no role in health and safety at work, the labour inspectorate and external preventive services have no influence on them. A law stipulating variations in contributions has not yet been introduced; so for the time being there are no premium variations in Slovenia.
Slovak Republic	With §133 of the Law on Social Insurance No. 461/2003 Coll., Slovakian employers will be divided into 10 risk categories according to safety and health at work in the system of injury insurance. The law will come into force by 1 January 2010, from which date employers will pay differential premiums ranging from 0.3% and 2.1 % of the gross wages paid. In addition, the new Occupational Safety and Health State Policy Strategy for 2008-2012 aims to support economic incentives for employers to make positive changes to safety. The tools to achieve this are: ■ charging higher levies for companies with bad health and safety records, and lower levies for good performers ■ promoting prevention activities, e.g. research, awareness, specific education, consultancy, etc.
Finland	The premiums have to mirror the risks. This means that the payment system supports OSH measures and reduces the premiums paid by employers who work to improve their OSH records. There are two systems for the calculation of the premiums. The general rates, normally used for SMEs, are based on the size of the company and the type of work and use the 'risk per mill' system. Accident rates are taken into account when it comes to deciding the 'risk per mill'. There are around 250 professional categories and ten risk groups as well as separate classifications for certain professional groups with very high risks. Examples for the 'risk per mill': carpenter (60.54), concrete worker (54.80), wood turner (40.83), electrician (30.52), office worker (3.80). Special rates are applied to larger companies. The company's trend of accidents affects the premium paid. The rate is influenced by the size and the risk absorption ability of the company, the type of work and the risks and the accident statistics of the company. Companies are obliged to maintain accident statistics. If they create safe working conditions, invest in preventive measures and avoid major accidents, companies can reduce their premiums. See Section 4.2.3. 'Premium Discount Programme in the Farmers' Workers' Compensation Insurance' All self-employed Finnish farmers with at least 5 hectares of agricultural land are covered by the Farmer's Social Insurance Institution (MELA, Maatalousyrittäjien eläkelaitos). Self-employed fishermen and reindeer herders are also covered. In this insurance, a premium discount programme ('MATA bonus') was implemented in 1997. Insured persons who had no compensated occupational accident or disease claims during the following 12 months received a 10% reduction in their MATA premiums starting 1 July 1998. Thereafter each claim-free year adds another 10% reduction up to a maximum of 50% off after five consecutive claim-free years. Each compensated claim results in a 10% loss of discount, but the premiums do not rise over the base level even if the personal discount would turn negative from multiple claims. This premium discount gives farmers an incentive to prevent injuries. In interrupted time series analyses it was found that the premium discount decreased the overall claim rate. Decreases were observed in minor and moderately severe accident categories, that is, up to 29 disability days. This suggests that in addition to under-reporting, the premium discount may also have some preventive effect.
Sweden	
United Kingdom	The Employer's Liability Compulsory Insurance Act 1969 would allow for risk-rating premiums which so far have not been applied in the UK. See Section 4.2.2. 'The SME Indicator' In 2003 the British government undertook a review of the Employer's Liability Compulsory Insurance. As a result the Minister of Work noted that too many businesses paid premiums that fail to reflect their health and safety record. One reaction was the creation of the SME performance index. It was developed by the HSE and businesslink.gov.uk with the help of the Association of British Insurers, the British Insurance Brokers Association and the Federation of Small Businesses. The SME safety and health performance index is a self-assessment questionnaire indicating a company's performance regarding incidence rate (recorded accidents, legally reported injuries, etc.) and hazard exposure and management (manual handling, repetitive movement tasks, stress, etc.). It only covers the top 10 hazards which the developers found most SMEs to encounter. Scores range from 10 (best) to 0 (worst). Hazards where a company has indicated higher exposure frequency are weighted downwards, i.e. the score will generally be lower than for hazards that occur less often. This is to encourage businesses to reduce the frequency of a particular hazard which will ultimately lead to a reduction in the risk of accidents or injuries. See: http://osha.europa.eu/en/topics/business/economic_incentives/economic_examples.stm/05-uk.stm. Corporate Health and Safety Performance Index (CHaSPI) CHaSPI was designed for large enterprises with more than 250 employees and thus was not directly applicable for SMEs. Currently 562 organisations are registered. It is an online self-assessment tool that aims to help employers to find out how well they perform in the identification and management of health and safety hazards. It also provides targeted guidance to improve OSH management and enables the company to compare itself anonymously with other businesses across sectors and sizes.

3.6.3. Annex 3: Overview of economic incentives in OSH (other than insurance-based incentives) in each EU Member State

Last updated: December 2008. Sources: see 3.5.2.	
Country	**Economic financial incentive**
Belgium	**Occupational Diseases Fund (Fonds voor de Beroepsziekten, FBZ/Fonds des Maladies Professionnelles, FMP)** The Occupational Diseases Fund (Fonds voor de Beroepsziekten, FBZ/Fonds des Maladies Professionnelles, FMP) is a public social security institution, responsible for insuring professional diseases and taking care of the indemnification of victims. Every victim, or one of their family members, can give notice of a professional disease by filling in an official form. A labour physician has to report every case of professional disease to the Occupational Diseases Fund. The victim will then be asked to file a demand for indemnification. **Programme for early rehabilitation of low back pain workers (Occupational Diseases Fund)** In March 2005 the Belgian government launched an evidence-based programme to promote an early return to work and to prevent chronic low back pain. The multidisciplinary back rehabilitation programme includes more than 45 rehabilitation centres across the country. An ergonomics intervention is also carried out by the occupational health prevention service in relevant companies. Target workers belong to the health care sector and must be off work due to LBP for a minimum of four weeks and a maximum of three months. Financial incentives are provided for both the patient and the employer to stimulate participation. The programme implementation is carefully monitored by a task force within the Occupational Diseases Fund. **Reimbursement of hepatitis B vaccine or combined hepatitis A/B vaccine (Occupational Diseases Fund)** In accordance with the Royal Decree on biological agents (Royal Decree of 2 December 1993, art. 63), an employer for whom there is a risk must have his exposed employees vaccinated. For a number of sectors, especially the health sector, this can be done at the expense of the Occupational Diseases Fund. In other sectors it is the employer who bears the costs. The Occupational Diseases Fund only reimburses the hepatitis B vaccine and the combined hepatitis A and B vaccine for people who are exposed to a higher risk of this disease than the rest of the population, as a result of their occupation (e.g. people working in hospital wards, rest and care homes, institutes for the mentally disabled, crèches, laundries that wash laundry from care institutions, certain laboratories, dental surgeries). The purpose of all this is to reduce the number of infections and to decrease the costs of public health. For organisations, this will result in less absenteeism, less stress at work in risk environments, and a higher level of risk awareness. Costs of doctors (prescription and administration of vaccines) and laboratories (blood test for a request for a repeat vaccination), if any, are not reimbursed by the Occupational Diseases Fund, but the mutual insurance companies pay their normal contribution. **See Section 4.3.7. 'The Experience Fund'** The Experience Fund (Ervaringsfonds/ Fonds de l'expérience professionnelle) of the Federal Ministry for Employment, Labour and Social Dialogue, supports initiatives and projects of private companies that invest in the improvement of the working conditions of older workers (45 years and older). The overall objective is to prevent older workers from dropping out of the labour market, to keep them at work for longer and to make use of their valuable experience and knowledge. The projects funded are initiatives to adapt working conditions and the work organisation, e.g. training for older workers so that they can function as coaches, teleworking, more flexibility, and preliminary studies that analyse the possibilities for adapting the working conditions and the work organisation, e.g. stress analysis, specific risk analysis. Companies can file a request for the subsidy at the Ministry for Employment, Labour and Social Dialogue by using a specific form. The form must be accompanied by a file containing the details of the project. If the minister approves the request, payment can be made to the employer based on financial documents that prove the expenditures made by the company. Examples of good practice are collected in order to set examples for other companies. (See: http://osha.europa.eu/en/topics/business/economic_incentives/economic_examples.stm/37-be.stm) **Safety Coach project (Prevent/Experience Fund)** In 2006 Prevent, the Belgian institute for occupational safety and health, initiated the 'Safety Coach' project within the framework of the Experience Fund (see above). The 'Safety Coaches' are older (+45 years), experienced workers who guide and assist new, young employees. They are designated by the company and trained by Prevent in specific issues concerning young workers. This pilot project guarantees that the older workers' valuable experience in and knowledge of the company's own health and safety issues are not lost and can be passed on to new, inexperienced employees. The involved older workers – the Safety Coaches – get the chance to use their acquired knowledge and experience in an original, useful and positive way. The initiative can also raise awareness about OSH and lead to better general communication between the generations on the work floor. **Diversity Plans (Diversiteitsplannen)** In 2001, the Flemish Government and the social partners concluded the so-called 'Vilvoorde Pact', in the footsteps of the Lisbon Strategy (EU), aiming to eliminate the underrepresentation of women, the disabled, immigrants and low-skilled workers among employed workers by 2010. In 2003, a Diversity Commission was established within the Social-economic Council of Flanders (the central consultation and advisory organisation of the Flemish social partners). This Commission is the central instrument through which disadvantaged groups are permanently involved in creating, monitoring and evaluating the employment equity and diversity policy. One of the instruments, as part of the 'Vilvoorde Pact', to execute the Flemish equity and diversity policy at a company level are the 'diversity plans'. A 'diversity plan' is a set of measures and actions focused on disadvantaged groups. These measures are intended to remove barriers and create possibilities to facilitate the inflow and internal mobility of disadvantaged groups within the company and to reduce the turnover of these groups. Companies and organisations from all activity sectors are eligible to receive subsidies from the government if they develop such a plan. Specific quantified targets regarding the recruitment, internal mobility and training of the disadvantaged groups must be included in the demand for subsidies. Among other topics, a diversity plan may focus on OSH-related aspects such as carrying out measurements regarding the quality of work and working life (surveys on job satisfaction, stress, etc.), executing risk assessments, introducing small adaptations to workstations, developing welcome brochures and other tailored information for the workers concerned, development of training materials adapted to the workers, initiating train-the-trainer programmes (training of personal coaches), providing adapted first aid training to certain groups. **Pro-Safe Award (Prevent)** Pro-Safe is a campaign to make small companies aware of the issue of health and safety at work. The Pro-safe platform was created on Prevent's initiative in 2003, and is supported financially by the occupational accident insurers within Assuralia and is based on a partnership with VBO, UNIZO, UCM, Co-Prev and the FPS Employment, Work and Social Dialogue. Pro-Safe presents an award every year for a company which has made special efforts in the field of prevention. More information : http://www.pro-safe.be.

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Country	Economic financial incentive Last updated: December 2008. Sources: see 3.5.2.
Bulgaria	**Working Conditions Fund** A 'Working Conditions Fund' was established in the Ministry of Labour and Social Policy to finance activities and actions for the improvement of working conditions in line with the requirements of the Act on Occupational Safety and Health of 1997. The fund's resources are allocated in consultation with the social partners to fund projects and programmes for: ■ training workers' and employers' representatives on health and safety issues; ■ drawing up regulations, methods and methodologies on health and safety at work; ■ co-financing company investment projects for improving working conditions. In the period 2004-2007, more than 65 companies received over 4 million BGN in financial support for the implementation of certain projects with clearly defined criteria and procedures. The results are more than encouraging and show that with proper funding, results can be achieved; ■ from September 2006, the National Insurance Institute and the Working Conditions Fund have cofinanced the activities of the National Clinics for Occupational Diseases to the extent of 3 million BGN for screening, prevention and treatment of occupational diseases, and strengthening expertise in combating occupational diseases; ■ the social partners have received Working Conditions Fund assistance and support for the development and publication of newsletters, brochures, books, CDs, etc. on health and safety at work.
Czech Republic	
Denmark	**See Section 4.3.5. 'The Prevention Fund'** The Prevention Fund (Forebyggelsesfond) was established in 2007 with 3 billion Danish crowns for a period of ten years. The fund finances projects for the improvement of OSH in enterprises (both public and private) with the aim of preventing musculoskeletal disorders in relevant sectors, rehabilitation of sick and handicapped persons, and raising awareness of the risk of smoking, alcohol, obesity and physical inactivity. Disseminating the projects' results is an important factor in deciding on recipients for the grant. The fund is a state-run organisation and the board consists of representatives of labour market organisations. **Subsidy for OSH consulting (Tilskud til arbejdsmiljørådgivning)** Public authorities and institutions that voluntarily engage an accredited consulting firm to improve the working environment can get 50% of their costs refunded. Private organisations carrying out public tasks (e.g. nursing homes, schools) are also entitled to funding from the scheme. There are 10 milion crowns (about EUR 1.3 million) per year available for the period 2008-2011. More information: http://www.at.dk/sw51821.asp?usepf=true. **Work Environment Research Fund (Arbejdsmiljøforskningsfonden),** established in 2003 with about 300 million crowns for the period 2003-2009. The fund supports research and development in the field of work environment, in order to prevent and to limit exclusion of persons from the labour market due to occupational accidents and diseases. Three committees make decisions about the funding strategy, the scientific strategy and the development of the fund. More information: http://at.dk/sw8381.asp. **Red, yellow, green and crowned smileys** The smileys are published on the Working Environment Authority's website and allow the general public to see how an enterprise is doing in terms of health and safety. There are three smileys in the health and safety field: ■ A green smiley indicates that the enterprise has no issues with the Working Environment Authority. ■ A yellow smiley indicates that the enterprise has received a notice with a time limit or an immediate improvement notice. ■ A red smiley indicates that the enterprise has received an improvement notice or a prohibition notice. ■ Enterprises that were screened before 1 April 2007 have a screening symbol on the Working Environment Authority's website. These enterprises may ask the Working Environment Authority for a new screening with a view to getting a green smiley. ■ A smiley with a crown indicates that the enterprise holds a recognised health and safety certificate. This means that the enterprise has made an extraordinary effort to ensure a high level of health and safety. More information (in English): http://www.at.dk/sw12200.asp. **Fund for monotonous repetitive work (EGA støtteordning)** (http://osha.europa.eu/en/topics/business/economic_incentives/economic_examples.stm/23-dk.stm) The fund by the National Working Environment Authority existed from 1995-2000 and had a budget of EUR 18,6 million to support development projects aimed at eliminating or reducing monotonous, repetitive work. The funds were spend on activities like rehabilitation and job enrichment, as well as developments in the organisational and technical spheres. It focused on jobs involving monotonous, repetitive work, heavy lifting, use of high force and poor working postures. For the entire period 129 projects were supported. An average project regarding organisation developments received support of EUR 1400. The technical projects received an average of EUR 1150. According to the evaluation most of the enterprises receiving funding have 20 or more employees. The exact reason why smaller companies are not applying is unknown but previous evaluation shows that it is difficult for SMEs to access the resources offered by various funds. 50% of the enterprises that received funding reduced or eliminated monotonous, repetitive work. The enterprises have also become more effective due to installing new automatic production systems and by making it more flexible and efficient.

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Country	Economic financial incentive
	Last updated: December 2008. Sources: see 3.5.2.
	A lifting instruction scheme (Løftevejlederordningen) (http://osha.europa.eu/en/topics/business/economic_incentives/economic_examples.stm/22-dk.stm) The scheme by the National Working Environment Authority ran from 1997 to 2002 and had a budget of EUR 3.9 million to support development projects aimed at preventing injuries caused by lifting people. The support went to projects that developed aids to facilitate lifting, job training and education of staff, etc. The focus was on healthcare and social institutions. 96 projects have received support from the scheme and approximately 48,000 workers have been affected by the scheme. On average every project received EUR 40,280 in support. The scheme had a support limit of EUR 93,000 per project. An evaluation of the scheme shows that it is still too early to observe its effects. A telephone survey among representatives of the projects shows that 50% believe that the scheme will reduce injuries caused by lifting people, days of sick leave and occupational accidents. **State subsidies to enterprises with OSH certificates (Statstilskud til virksomheder med arbejdsmiljøcertifikat)** (http://osha.europa.eu/en/topics/business/economic_incentives/economic_examples.stm/21-dk.stm) The scheme by the National Working Environment Authority ran from 2001 to 2003. Enterprises with an OSH certificate were able to apply for state subsidies to cover part of their working environment taxes, and part of the fees for inspection or certification. The subsidies were granted for a period of three years from the year the enterprise received the OSH certificate. The subsidies in the former system amounted to EUR 600 for each enterprise to cover part of the fees for inspection or certification. It is granted along with subsidies to cover part of the working environment taxes. 81% of the annual budget in 2001 was spent on the working environment taxes and 19% was spent on subsidies to cover the fees for inspection or certification. The scheme had an annual budget of EUR 14 million. The scheme was abolished in 2002. The present government finds state subsidies for OSH certification too bureaucratic a scheme. The financial outlay and the initiatives taken by the enterprises do not cover the amount they would receive from state subsidies if they invested in an OSH certificate.
Germany	**Labour inspections** Labour inspectorates in Germany are under the sovereignty of the Federal States (Bundesländer). There are 16 different legal foundations and 16 different executive administrations for labour inspections, which can be part of Business Inspectorates (Gewerbeaufsicht), Labour Inspectorates (Arbeitsaufsicht), or District Authorities (Bezirksregierungen) etc. The 16 authorities are in permanent contact with one another via LASI, the Committee of the Federal States for Occupational Safety and Health and Safety Engineering. In addition, the UK Bund (Federal Statutory Accident Insurance) serves as a labour inspectorate for the Federal Ministries and subordinated administration (§21 ArbSchG). The classic incentive of the labour inspectorate is to impose a fine on a company that does not comply with legal requirements. During the last few years some positive incentives with regard to occupational safety and health have been set by the authorities and labour inspectorates of the Federal States. These activities are linked to a changing self-awareness on the part of the labour inspectorates, which are putting more effort into prevention and consultancy than before. **Promotion of OSH management systems by the Bavarian Business Inspectorate** The Bavarian Authority for Health and Food Safety (Landesamt für Gesundheit und Lebensmittelsicherheit) and District Authorities of Bavaria (Bezirksregierungen, responsible for labour inspections) promote the implementation of OSH management systems of the OHRIS standard (Occupational Health and Risk Management System) for any company but with a special focus on SMEs. After the implementation and certification of OHRIS, companies with less than 250 workers (2008, formerly 150 workers or less) can apply for re-imbursement of EUR 5000. Furthermore, consultancy during and certification after implementation is done by labour inspectors and is free of charge. Other federal states, for example Saxony, also promote the implementation of OHRIS. Since 1998 more than 200 Bavarian companies could be certified for the successful implementation of OSH management systems according to the OHRIS standard. In 2005 the standard was revised in order to make it adaptable to ISO 9001 management systems. For more information, see for example: http://sn.osha.de/good_practice/ams/kammgarn-2008.htm. **OSH partnership programme Hamburg** The OSH authorities of the City of Hamburg in cooperation with the Chamber of Crafts promote good practice safety and health solutions especially for small and micro-enterprises in the handicraft sector. They offer consultancy and certification services for the implementation of OSH management systems. In 2007 eight enterprises (with between 8 and 150 employees) won awards for integrating safety and health management into general management processes. Further core activities of the programme include safety and health for mobile care services, automotive garages and dangerous substances, health care services and needlestick injuries, healthy office work, and noise prevention. **Awards and premiums for companies that invested in safety and health** Different types of awards are granted to companies in order to promote good practice in occupational safety and health. Some stakeholders count on the social responsibility of the companies, others try to set economic incentives by an additional premium: **Statutory Accident Insurance of Trade and Goods Distribution (Berufsgenossenschaft Handel und Warendistribution, BHGW)** From 2002 to 2007 the former Statutory Accident Insurance (Berufsgenossenschaft Großhandel- und Lagerei GroLa BG) gave annual awards for the categories 'Innovations in Prevention' and 'Healthy Employees-Healthy Company'. After merging with the Statutory Accident Insurance of Retail Trade (Berufsgenossenschaft für Einzelhandel) the BGHW continued presenting these awards. The know-how gained from the award winners over six years has been accumulated in a best practice pool that is available to all companies. The examples of best practice provide helpful suggestions for other companies in finding solutions for similar safety and health problems. The examples show that occupational safety pays off! All the measures presented are sustainable and contributed to increasing efficiency. They reduced sick leave and increased the motivation of employees as well as the quality of results. More information: http://www.bghw.de/praevention/best-practice-1

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Country	Economic financial incentive
	Last updated: December 2008. Sources: see 3.5.2.
	Statutory Accident Insurance of Vehicle Deployment (Berufsgenossenschaft für Fahrzeughaltungen, BGF) The Statutory Accident Insurance of Vehicle Deployment offfers an annual award for innovative ideas in four different categories relating to the prevention of occupational accidents, occupational diseases and work-related diseases. All entrants are member enterprises of the BGF from the various different branches of industry which are insured with the BGF: road haulage, passenger transport aviation, the recycling industry etc. Focal points are: ■ in-plant technical measures, for example additional technical protective gears for baling presses ■ in-plant organisational measures: A company won a prize for its suggestions for improvement of in-plant information and instruction ■ technical measures for improvement of road safety: one company won the prize for technical solutions in road haulage ■ organisational measures for improvement of road safety: one winner reduced the speed limit of its trucks to 130 km/h A jury evaluates preventive measures. The awards are for sums up to EUR 50 000 and are not granted as premium variations but as fixed sums. More information: http://www.bg-verkehr.de/medien/sicherheitspartner-archiv/2006/sipa07_2006_komplett.pdf and http://www.dguv.de/iag/de/forschung/forschungsprojekte_archiv/qdp/qdp_abschluss/index.jsp **Seal of Approval – Systematic Safety of the Statutory Accident Insurance of the Quarrying and Mining Industry (Steinbruchs-Berufsgenossenschaft, StBG)** The Statutory Accident Insurance of the Quarrying and Mining Industry combines the idea of presenting awards, granting premiums and providing free consultancy for introducing safety and health management systems. The aim is to promote positive examples and motivate all insured companies to systematically integrate safety and health matters into the business organisation. Companies insured with StBG now have the chance with the 'Seal of Approval – Systematic Safety' (SmS) to document the successful implementation of safety and health protection through a neutral institution. The process is voluntary and free. The seal of approval helps in: ■ motivating to improve organisation within industrial safety ■ providing incentives for systematic industrial safety ■ reducing costs by preventing accidents and occupational illness ■ promoting the image of the company, sector and trade associations After the four steps: initial self-check for evaluation, optimisation, audit by SmS adviser, and evaluation, the 'Seal of Approval – Systematic Safety' may be awarded for three years. In order to motivate employers to invest in safety and health, StBG has also established an incentive system. Premiums are paid for various initiatives, such as: ■ introduction of occupational safety and health management systems ■ investments in progressive safety measures ■ investments in progressive measures for improving health conditions ■ extraordinarily good results in preventing accidents ■ investments in the implementation of best practice solutions. Within the first three years of its existence, approx. EUR 5 million were paid out under this scheme. More information: http: //www.stbg.de **Incentives by Health Insurance Companies** **See Section 4.2.6 'Enterprise for Health: Promoting health management among companies in Lower Saxony' (AOK Niedersachsen, Allgemeine Ortskrankenkasse Niedersachsen)** AOK Lower Saxony and its project partners started pilot projects in stimulating small and medium enterprises (SMEs) to introduce integrated health management systems. This has been done using re-imbursements of the health insurance premium to companies who participate successfully. The monthly health insurance premium represents a significant part of the ancillary costs for the employer, amounting to about 7.3% of the workers' wages. **IKK Nordrhein Bonus-Programme for SMEs** Since 2005 IKK Nordrhein has been funding health promotion measures and health management in small and medium enterprises (SMEs) with the focus on the handicraft sector. Targets include the prevention of musculoskeletal disorders, stress prevention, and projects addressing ageing workers / demographic change. Both worker and employer receive a monetary (premium) bonus, which has been proven to be an effective incentive: In 2008 232 companies participated successfully, representing 1,215 workers (since 2005 419 companies have participated, representing 2,753 workers) and the drop-out rate has been close to zero. In an evaluation of 288 workers who participated in 2005 compared with a representative control group, IKK showed the effectiveness of the programme: In 2006 benefit costs per participating worker and year were at only at 63% of the costs of the average worker in the control group. IKK will continue the programme as it is beneficial for workers, companies and health insurance institutions alike.

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Country	Economic financial incentive (Last updated: December 2008. Sources: see 3.5.2.)
Estonia	
Greece	
Spain	Examples from http://osha.europa.eu/en/topics/business/economic_incentives/economic_examples.stm: ■ Grants to improve safety in traditional coastal fishing vessels (Concesión de ayudas en buques de pesca costera artesanal) ■ Grants to replace unsafe equipment for SMEs in the construction sector (Convocatoria para la concesión de subvenciones destinadas a fomentar, en el sector de la construcción, la sustitución de determinados elementos inseguros) ■ Subsidies for employee training in health and safety and for measures to improve health and safety in 2004 (Subvenciones para la formación en material de prevención de riesgos laborales y para el desarrollo de medidas que tengan por objeto la seguridad y salud para el año 2004) ■ Subsidies for SMEs in Castilla-La Mancha that invest in improving workplace health and safety (Ayudas para pequeñas y medianas empresas de Castilla-La Mancha que realicen inversiones en materia de prevención de riesgos) ■ Subsidies for safety promotion (Ayudas para la promoción de la seguridad industrial) ■ Subsidies for purchase, adaptation and/or renewal of machines and safety equipment (Ayudas dirigidas a la adquisición, adaptación y renovación de máquinas y equipos de seguridad) ■ Subsidies to promote the implementation of planned preventive actions (Ayudas destinadas a promover la implantación de medidas contempladas en la planificación preventiva) Renewal of equipment to improve risk prevention at work (Plan de renovación de equipos de trabajo para la prevención de riesgos laborales) ■ Grants to SMEs in the construction sector for purchase of modular scaffolding (Ayudas para las pequeñas y medianas empresas de la construcción para la adquisición de andamios modulares) ■ Subsidies to enterprises for projects and investment in good practice aimed to control occupational risks (Subvenciones a empresas que realicen Proyectos e Inversiones y/o Actividades de buenas prácticas preventivas dirigidas al control de los Riesgos Laborales) ■ Grants to encourage employers to recruit H&S technicians as permanent staff (Ayudas económicas de fomento de la contratación indefinida de Técnicos de Prevención de Riesgos Laborales (TPRL)
France	**Prevention contracts, advances and grants** General contracts are made with industrial sectors, establishing the results the sector wants to obtain, the various measures and actions required, the resources available, etc. The contracts take the form of four-year action plans. These industrial sectors can benefit from financial support if they subscribe to the general contract and develop a four-year action plan. Furthermore, enterprises can receive financial support from the National Health Insurance Fund (up to 70% of the costs of renewing the workplace). In practice, most of the support is used for technical prevention measures. In 2007, 1,159 new prevention contracts were signed; the total investment carried by the CRAM amounted to more than EUR 32.5 million. Such an agreement sets out the specific areas for which a targeted loan may be granted. An individual company (less than 200 employees) may then approach the CRAM for their area for a prevention contract. If such a request is accepted, a formal risk assessment is conducted and a detailed contractual arrangement between the enterprise and the CRAM is entered into. This sets out very precisely the required actions of both parties, including those which give rise to a payment and a calendar of actions and payments. The CRAM can make reduced-rate advances of between 15% and 70% of the total investment. Depending on the results obtained, the advances may be partly or wholly reclassified as grants. Moreover, the regional funds may also issue grants to companies for the implementation of preventive measures. **'Safer tools' campaigns** This measure, initiated in 1995 by the Health Insurance Funds (CNAM) in the construction sector, offers a fixed grant to companies for the acquisition of innovative tools which are safer. The annual campaign targets a particular risk type (falling from heights, handling loads, construction site organisation) and relates to clearly identified tools: a specific type of protective mask, a specific model of terminal box on work sites, etc. The tools comply with a set of specifications worked out with representatives of the professions and the regional health insurance funds. The campaigns are mainly aimed at SMEs in the construction sector, but they have also been extended to other activity sectors since 2003. **Health at Work Plan 2005-2009 (Plan Santé au Travail 2005-2009, PST 2005-2009)** The Health at Work Plan 2005-2009 was presented in February 2005 and aims at launching 'a dynamic to improve the prevention of Professional risks'. The budget for 2005 was EUR 10 million. With regard to economic incentives, the plan suggested two specific measures: ■ A reform of the tariffing system to make it more efficient ■ A specific tax reduction for companies that invest in applied research on technologies that can improve safety (the system already exists for general research but the PST 2005-2009 decided to develop something specific to motivate companies to conduct research in the domain of safety in particular. These measures have not yet been implemented.
Ireland	**See Section 4.2.7. 'Farm Health and Safety Initiative'** In 2005, TEAGASC and the Health and Safety Authority (HSA) began to develop a Code of Practice, required by new legislation, to help farmers implement safety and occupational health control measures at farm level. An insurance company in Ireland now offers a 10-15% discount on insurance premiums for farmers who complete the risk assessment in addition to attending an extra training course.

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Country	Economic financial incentive (Last updated: December 2008. Sources: see 3.5.2.)
Italy	SMEs can get a loan for technological innovations resulting in accident reduction in which interests are covered by INAIL. This applies also to the agricultural sector and craftsmen. Another financial incentive is the direct funding of SMEs for programmes aimed at accident reduction. More information: http://www.inail.it/Portale/appmanager/portale/desktop?_nfpb=true&_pageLabel=PAGE_HOME_EN&nextPage=General_information/info-702201244.jsp **See Section 4.3.6. 'Business financing for programmes and projects in the area of occupational safety and hygiene'** This case study concerns the allocation of financial resources for programmes aimed at making the premises and equipment of small and medium enterprises (SMEs) and agricultural firms compliant with safety regulations, and for information and training projects targeting workers, workers' safety representatives, emergency management staff, employers, and prevention and protection service managers (in compliance with Articles 21 and 22 of Legislative Decree 626/1994). The system promoting prevention initiatives to be carried out by companies was provided for by Ministerial Decree of 15 September 2000, which approved the implementation regulation defining the system supporting businesses. Investments have led to an improvement of health and safety standards in companies, thanks to technological innovation in equipment and systems, targeted actions aimed at improving the health levels of workers, and the introduction of innovative organisational and management systems.
Cyprus	
Latvia	**Tax-exemption of general expenditure on labour protection measures (Izdevumu, kas izdoti darba aizsardzibas pasakumu nodrošinašanai, neaplikšana ar nodokliem)** (http://osha.europa.eu/en/topics/business/economic_incentives/economic_examples.stm/25-lv.stm) According to national legislation, tax should not be payable on general expenditure to ensure principal labour protection measures such as the internal supervision of the work environment, evaluation of work environment risks, protection against serious and direct danger, first aid and other emergency measures, instruction and training of employees and trusted representatives, preventive measures regarding health protection in specific sectors (for example, vaccine against tick-borne encephalitis for forest workers or against infectious diseases for health care workers). These rules are stated in the Cabinet of Ministers Regulations No. 319 regarding Implementation of the Procedures stipulated by Law on Enterprise Income Tax (dated 19 September 2000). It is not possible to quantify the economic incentive, because the amount of general overheads paid for insurance of labour protection measures is different in every enterprise. This economic incentive can be applied to all kinds of enterprises and all sectors, but in many cases it is not enough by itself to encourage employers to improve the health and safety situation at work.
Lithuania	**Prevention fund** Every year part of the cumulative prevention fund from the insurance of occupational accidents and diseases is allocated to a subsidy system covered by the SODRA. Every enterprise undertaking risk assessment or implementing an OSH action plan can apply for part of this subsidy. The list of enterprises receiving a subsidy is published in the official gazette and on the websites of the Parliament of the Republic of Lithuania and state labour inspectorate (http://www3.lrs.lt/c-bin/getgr?C1=bin&c2=295361&c3=21962) along with a description of the OSH measures taken. **Note on OSH measures in enterprises for public tendering** The state labour inspectorate issues special guidance for enterprises wishing to tender for subcontracting work, in which they are notified that a declaration must be made about the OSH situation in the enterprise. Enterprises which have serious or fatal accidents at work are not allowed to participate in tendering for subcontracting.
Luxembourg	The Insurance Association against Accidents (AAA, Association d'Assurance contre les Accidents) grants various types of financial support to companies in the following fields: installation of safety management systems (OSHSAS 18001 or the SCC scheme (Safety Checklist Contractors; in Dutch: VCA, Veiligsheids Checklijst Aannemers), acquisition of the Maîtrisk software (software developed by the AAA to help companies manage their safety policies), various training courses (in, for example, manual handling or forklift driving) and acquisition of educational material.
Hungary	
Malta	
The Netherlands	**See Section 4.3.8. 'Subsidies for innovative work equipment, the FARBO regulation'** This scheme seeks to promote the use of a number of innovative tools and types of equipment (designated or otherwise) which improve working conditions. It is intended for businesses and non-profit organisations nationwide which need subsidised tools and equipment. This type of funding is not designed for individual use. Every year the Ministry of Social Affairs and Employment draws up a list of innovative and worker-friendly tools and equipment that reduce exposure to physical stress, noise or hazardous substances. When any tool or item of equipment on this list is purchased, it is possible to apply to the Agentschap SZW for a grant amounting to no more than 10% of the purchase price (excluding VAT). However, the Farbo Scheme offers more than financial benefits. By investing in worker-friendly tools and equipment, a contribution is made towards achieving better working conditions and a better working environment. The scheme commenced on 1 January 2005. After an evalulation, it was decided to abolish the Farbo Scheme in 2009. **Education & Development funds ('O&O fondsen') to provide training opportunities for employees.** There are over 100 training funds in the various sectors/branches of the economy. Most of them are funded by a contribution amounting to a certain proportion of the total wage bill in the sector or branch, by Collective Labour Agreement. These funds are meant both to equalise training costs for individual firms and to stimulate participation in training. In practice the funds offer many opportunities for employees to improve their safety awareness. The funds launch many initiatives to stimulate further training, sometimes in combination with recognised formal training.

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Country	Economic financial incentive
	Last updated: December 2008. **Sources: see 3.5.2.**
Austria	The Austrian accident insurance bodies are very active in the prevention of workplace accidents. They do not offer insurance premium variations, but there are some further economic incentives which should be mentioned: ▪ SGM: Implementation and certification of OSH management ▪ Consultancy of companies by AUVA consultants, e.g. in the safe handling of dangerous substances ▪ Fees, based on social insurance law ▪ Limit value measurement; for example if statutory minimum levels of dust are are exceeded then the company pays higher premiums than otherwise. **See Section 4.3.3. 'Low-cost consultancy for safety and health management (SGM) by Austrian SMEs'** The Austrian Social Accident Insurance (AUVA, Allgemeine Unfallversicherungsanstalt) offers consultancy for companies to implement OSH management systems. In order to reach Austrian SMEs, AUVA developed a safety and health management system which is easy to implement and suitable for companies of every size. This system, called SGM (= Sicherheits- und Gesundheitsmanagement), can be certified by AUVA and integrated into existing management systems. **See Section 4.3.4. 'Funding Health Promotion Activities'** The Fund for a Healthy Austria (FGÖ, Fonds Gesundes Österreich) aims to raise public awareness about health promotion and prevention through project funding, networking, special events, and PR. A priority area concerns 'Employees in small and medium-sized enterprises': creating a supportive environment and developing new tailor-made strategies. **Funding of the implementation of IMS** Several Federal States of Austria fund the implementation of IMS in companies, especially for SME. Examples can be given for the Federal State of Lower Austria, Upper Austria, Salzburg and Steiermark.
Poland	**See Section 4.3.1. 'Supporting SMEs in OSH management'** The programme was implemented by the Polish Agency for Enterprise Development (Polska Agencja Rozwoju Przedsiębiorczości). The main objective was to increase the capacity of the Polish SMEs to implement the legal requirements in the field of occupational safety and health and to encourage employers from SMEs to improve safety and health in their enterprises. Within the project free training on OSH was organised all over Poland. Subsides were provided to those SMEs that were interested in improving OSH performance via implementing OSH management principles. See: http://osha.europa.eu/en/topics/business/economic_incentives/economic_examples.stm/33-pl.stm. **See Section 4.3.2. 'Promoting a systematic approach to OSH management in Polish enterprises'** The programme was implemented by the Central Institute for Labour Protection – National Research Institute (CIOP-PIB) in cooperation with the National Labour Inspectorate. The main objective was to promote the rules of a systematic approach to OSH management in enterprises. Within the project training, consultations and audits on OSH management systems were delivered to enterprises. In the enterprises that implemented OSH management systems improvement of working conditions and a decrease in costs of occupational accidents and insurance premium were observed. **The diploma of the National Labour Inspectorate 'Safety at work in small enterprises'** The National Labour Inspectorate (Państwowa Inspekcja Pracy) carries out various competitions e.g. the diploma of the National Labour Inspectorate 'Safety at work in small enterprises'. **Safe Work Leaders' Forum** The Safe Work Leaders' Forum is aimed at creating a partnership between the Central Institute for Labour Protection – National Research Institute (CIOP-PIB, Centralny Instytut Ochrony Pracy – Państwowy Instytut Badawczy) and certain employers and their employees' representatives with the aim of creating outstanding working conditions and meeting the legal requirements in this field. A member receives a green, silver or gold card. **Polish Chamber of Commerce (Krajowa Izba Gospodarcza):** the chamber offers training. **National Competition for Improvement in Working Conditions** run by the Ministry of Labour and Social Policy (Ministerstwo Pracy i Polityki Społecznej).
Portugal	
Romania	
Slovenia	
Slovak Republic	**Safe Enterprise Programme** In 2005, the Slovak Ministry for Labour, Social Affairs and Family started a motivation campaign, the 'Safe Enterprise Programme', promoting the implementation of safety and health management systems among Slovak companies. The overall objectives of the programme are to enhance the level of occupational safety and health in the companies and to cut down work accidents, occupational diseases and sick leave.The best examples of good practice are awarded annually by the Ministry. The programme sets certain economic incentives by supporting the implementation and certification of OSH management systems, based on the Slovak guidebook 'Management of Safety and Health at Work – System Implementation Guide', published by the National Labour Inspectorate in 2002. This guideline was prepared in cooperation with Swedish authorities under auspices of the Phare Department of the Slovak Ministry of Labour, Social Affairs and Family. It is based on the ILO Guideline OSH 2001 for management systems of safety and health protection at work and refers to the principles of the EU framework directive 89/391/EEC. It also adheres to international standard OHSAS 18001, and British Standard BS 8800.

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Country	Economic financial incentive Last updated: December 2008. Sources: see 3.5.2.
Finland	**The Finnish Work Environment Fund (Työsuojelurahasto)** The fund was established in 1979 by the Finnish Work Environment Fund Act. The purpose is to fund research and development work that improves working conditions and promotes the safety and productivity of the workplace. The fund is financed by a part (2%) of the insurance premium paid by employers. The fund supports research and development projects related to working life and the practical application of the results of these activities. Training, education and information provision activities are also supported. The fund also finances the activities of the Centre for Occupational Safety (Työturvallisuuskeskus). Applications for grants can be made by companies, local authorities, universities and research institutions. The fund is monitored by the Ministry of Social Affairs and Health (Sosiaali- ja terveysministeriö) administered by the Ministry of Labour (Työministeriö) and the social partners (members represent the employers and the employees). More information (in English): http://www.tsr.fi/english/. **TYKES programme for the development of working life (Työelämän kehittämisohjelma TYKES)** TYKES is the continuation of former programmes for the development of working life. The programme was monitored by the Ministry of Labour (Työministeriö) and lasted from 2004-2009 with an overall budget of EUR 87 million. The aim of the programme was to develop workplaces / the work environment to increase productivity and wellbeing through e.g. research, training and information provision. During its period of operation, an estimated 1,000 development projects were undertaken involving 250,000 employees. The main target group is SMEs. More information (in Finnish): http://www.mol.fi/mol/fi/03_tutkimus_ja_kehittaminen/02_tykes/index.jsp. **Zero Accidents Forum (Nolla tapaturmaa-foorumi)** This forum is a voluntary network of companies with a desire to improve safety. The forum provides information about best practice at other workplaces, support from experts for improving safety, positive publicity and offers for training and seminars. More information (in English): http://www.ttl.fi/fi/tyoturvallisuus_ja_riskien_hallinta/tapaturmien_ehkaisy/tyoturvallisuuden_edistamiskeinoja/nolla_tapaturmaa_foorumi/jasenyys/Documents/zeroaccidentforum_introduction.pdf. **Working safety price for the road transport sector (Autoliikenteen työturvallisuuspalkinto)** Centre for Occupational Safety (Työturvallisuuskeskus) has introduced a new price for the road transport sector. This price will be given for the first time in 2008 for a transport company or organisation which has improved the safety, health and well being of the work environment. More information (in English): http://www.tyoturva.fi/en/. **See Section 4.4.1. 'The TYTA Model'** The TYTA model is a computer program that makes it possible to analyse and evaluate the economic effects of the working environment. The model produces information on costs caused by absenteeism due to illness, accidents, turnover, disability and development of working conditions. At the same time it is a tool to motivate the management to improve working conditions more systematically. The model is applicable in medium-sized and large companies where the number of sick days and accidents is higher. The model is freely available in Finland and has been mainly used in the area of Uusimaa Occupational Health and Safety Inspectorate in Southern Finland. It has been used by medium-size and large enterprises. The model was developed during the 1990s and has remained unchanged since its publication 1999. However, it is still fully usable. See: http://osha.europa.eu/en/topics/business/economic_incentives/economic_examples.stm/32-fi.stm.
Sweden	**General** The Swedish Work Environment Authority has been instructed by the government to issue more detailed regulations on the subject. It does this by setting provisions and general recommendations specifying the requirements to be met by the work environment. There are no economic incentives associated with this activity. **Pesticide tax (Bekämpningsmedelsskatt)** Sweden has several taxes for environmental protection purposes, but the pesticide tax, which was introduced as far back as 1984, also has an OSH dimension. The goal of this tax is to reduce the use of pesticides and thereby reduce the environmental and health exposure. The income raised by the tax is used to fund research in the area and the development of technical solutions and instruments for advice. These developments further reduce the use of these agents. The amount of the tax depends on the proportion of active ingredients in an agent, and it averages 7% of the price of the agent.
United Kingdom	

4.

CASE STUDIES REVIEW

4.1. Introduction

This section discusses a number of successful economic incentives in occupational health and safety. Twelve case studies and four snapshots from ten European Union Member States have been selected from a range of EU initiatives. An overview of these studies is presented below.

The selection of the case studies was based on the suggestions of the Focal Points of the Agency in the EU Member States as well as on literature research. They focus especially on financial incentives for occupational health and safety. Two main types of financial incentives can be distinguished: incentives based on an occupational accident insurance premium variation and incentives in the form of a subsidy, grant or financial reward. The incentives in the second category are most often granted by national or local governments.

4.2. Insurance premium variation

4.2.1. Statutory Accident Insurance of the Butchery Industry (Germany)

Organisation

FBG
Fleischerei-
Berufsgenossenschaft

Fleischerei Berufsgenossenschaft, FBG

Key points

Three incentive programmes were established:

- The Premium Variation programme, which aimed to reduce accident rates
- The Discount programme, based on Premium Variation, which assesses OSH performance over the previous five years
- The Funding programme, funding innovations in OSH and aiming at the future prevention of workplace accidents and occupational diseases.

Key words

Accident insurance, decrease in accident figures, butchery sector, premium variation

Abstract

The German occupational accident insurance system obliges statutory accident insurance bodies to introduce insurance premium variations and also enables them to fund health and safety measures in member companies. The Statutory Accident Insurance Body of the Butchery Industry (Fleischerei Berufsgenossenschaft, FBG) has introduced a sophisticated system of combining both positive premium variations and funding schemes for safety and health.

FBG's funding programme has proved to be successful in reducing accident rates in participating companies. In 2007 the sector reached an all-time low accident rate, with just 77 accidents per 1,000 full-time workers.

Background

The Statutory Accident Insurance of the Butchery Industry (FBG) is the accident insurance company for all companies in Germany's butchery industry. In 2007 it counted some 18,397 member companies with nearly 340,000 workers (around 254,000 full-time workstations). With 19,432 workplace and travel accidents, equalling 77 accidents per 1,000 full-time workers, the accident rate in the sector dropped to a historic low.

FBG has been active in the prevention of workplace accidents for many years. One of the ways it has done this is by offering variable accident insurance premiums. FBG combines three different programmes with different approaches:

- In the Premium Variation programme (Beitragsnachlass) the member company can be reimbursed by up to 10% of its annual membership premium, depending on its number of notifiable accidents in the previous year.
- The Discount programme (Rabattverfahren) is similar, but if the number of accidents remains below the sector average for five years, the company gets an additional reduction of up to 5% of its annual premium.
- The Funding programme (Prämienverfahren) aims to prevent future accidents and occupational diseases by funding prevention measures within the company to an amount of up to 5% of the annual FBG membership premium.

By taking advantage of the different programmes, companies can gain a rebate of up to 20% of their annual insurance premium.

Aims and objectives

The programmes outlined above all aim to motivate companies to invest in safety and health at work. But the mechanisms for motivation are different:

- The Premium Variation programme provides an incentive to reduce accident rates. In this programme an accident indicator of the company is set up for the previous year and compared with the industry average. It aims at short-term success (one year).
- The Discount programme helps ensure sustainability, and is based on the Premium Variation programme. Accident indicators for the past five years are compared with industry averages and discounts granted to companies with low indicators.
- The Funding programme aims at the prevention of future workplace accidents and occupational diseases. FBG uses it to fund new innovations in the field of occupational safety.

Scope of the project – what was done

a) The Premium Variation programme

The Premium Variation programme was the first premium variation programme launched by the Statutory Accident Insurance of the Butchery Industry (FBG). It is based on the legal duty of the accident insurance companies to include sectoral workplace accident rates in their premium calculation, mentioned in §162 I SGB VII. The law establishes a wide framework under which insurance companies have a lot of flexibility to set up their own systems (for the different models see Kohstall, 2006, part 2, pp. 2 ff).

The idea of the Premium Variation programme is that companies which were below industry average for the number and gravity of accidents in the previous year will be granted a reduction in their insurance premium for the following year. The maximum reimbursement is 10% of the annual insurance premium.

In a first step the so-called accident load ('Eigenbelastung') will be determined for the company. This key figure takes into account the sum of points per accident (number and gravity of accidents) that will affect the accident insurance premium paid by the company. The accident load also takes into account:

- All notifiable accidents in the company except travel accidents, accidents to migrant workers and accidents caused by *force majeure*. Between 1 and 50 points per accident are added to the final sum, depending on the FBG expenses caused by the accident (1 point if the costs are up to EUR 99.99, up to 50 points if costs exceed EUR 5,000).
- Additional points will be added if sick leave amounted to more than 42 days (5 points) or 84 days (10 points).
- Additional points will be added for permanent effects that lead to disability benefits. Between 15 and 100 points are added depending on the gravity of the accident. If a worker dies in an accident 100 points will be added to the final sum.

The accident load figure of the company will be compared with that for the whole butchery industry in Germany. The difference can be expressed in a percentage variation; per 10% below industry average the company will be granted a 1% annual premium reduction, up to a maximum of 10%.

Table 6: Premium calculation example: German butchery industry scheme

Company 1		Company 2	
Full-time workers:	15	**Full-time workers:**	344
Insurance premium:	EUR 4,926.50	**Insurance premium:**	EUR 154,083.10
Accident points:		**Accident points:**	
Expenses of BG:	3	**Expenses of BG:**	97
Sick leave:	0	**Sick leave:**	15
Permanent effects:	0	**Permanent effects:**	15
Sum:	3	**Sum:**	127
Accident load company	0.6090	**Accident load company**	0.8242
Industry average:	1.35380	**Industry average:**	1.35380
Variance (%):	-55%	**Variance (%):**	-39%
Reimbursement:	EUR 271.03 -5.50%	Reimbursement:	EUR 6,027.65 -3.90%

(*Example in table taken from* http://www.fleischerei-bg.de/mitgliedschaft/nachlass/berechnung/index.php)

In 2007, EUR 3.73 million was reimbursed to the companies in the Premium Variation programme. It can be seen that micro-enterprises in particular could achieve the full reduction of 10% on the annual insurance premium.

Table 7: Reimbursement in relation to company size 2007

Size of company (full-time workers)	No reduction	Reduction <10%	Max. reduction (10%)
1 to 9	13.72%	7.17%	79.11%
10 to 19	19.22%	34.72%	46.06%
20 to 49	25.22%	53.24%	21.54%
50 to 99	31.31%	62.63%	6.06%
More than 100	30.08%	69.31%	0.61%

(Source: FBG, 2008, p. 22)

b) The Discount programme

In addition to the Premium Variation programme, in 2004 FBG introduced a second programme of insurance premium variation. The so-called 'Rabattverfahren' or Discount programme provides an incentive for sustainability in occupational safety.

This programme takes into account the variance in the company's accident load for the previous five years. The percentage reductions the company has achieved are added and the total divided by 10. The result indicates the percentage of an additional reduction in the company's annual insurance premium. This measure ensures that companies profit from the long-term effects of safety measures by enjoying an additional reduction of up to 5% of the annual premium.

c) The Funding programme

Since 2002 FBG has been offering an additional premium model for its member companies. This programme (the 'Prämienverfahren') aims explicitly at the prevention of future accidents at work. It funds in-house prevention programmes and measures in the member companies, with a maximum award of 5% of the company's annual accident insurance membership premium. The award is not intended to cover the full cost of the prevention measure but to set an economic incentive for improving occupational safety and health.

The award is linked to certain quality standards and to certain focal points defined by FBG: the proposed measures have to exceed normal accident prevention standards set out in laws and regulation, representing good practice in the company. In 2008, the following topics were covered by the programme:

- Occupational safety: Knives; slips, trips and falls; machinery and equipment; travel accidents.
- Occupational health: Healthy skin; climate (cold work); noise; office work (visual display units); ergonomics.
- Generic measures: Reintegration, occupational training, certification of OSH management systems.

In order to participate in the funding programme companies simply have to complete a two-page questionnaire every year. It can be completed on the FBG website or sent in by mail (the English translation of the 2009 questionnaire may be seen at the end of Section 4.2.1). For each preventive activity the company describes in the questionnaire

it gets a certain number of bonus points. The questionnaire is designed in such a way that companies of all types and sizes can reach the maximum of 100 points.

Table 8: Bonus point allocation for prevention measures

Preventive approach	Tangible measures	Bonus points 100 points = 5% reduction
Technical measures	Use special safety knives	8 points
Organisational measures	Road safety training for drivers	Max. 8 points
Individual measures	Skin protection	Max. 6 points

Participation in this programme is voluntary. From the very beginning, some 40% of eligible companies participated in the programme and this increased to 46% in 2007, representing 8,340 companies from the butchery industry in Germany. Some EUR 1.57 million was awarded for successful accident prevention measures.

Outcome and evaluation of the project

a) The Premium Variation programme

In a survey on the quality of prevention (Kohstall et al., 2006), the Institute for Work and Health of the German Statutory Accident Insurance (BGAG) estimated the effectiveness of different economic and non-economic incentive systems. With regard to the Premium Variation programme, a theoretical simulation analysis was carried out, assuming different scenarios for small, medium and large enterprises.

For small enterprises the calculations showed that the premium differentiation is probably too low to act as a real financial incentive. Having just one accident per year, a small enterprise could already lose the maximum discount of 10% and any additional accident would not lead to a higher premium because of the ceiling effect.

Medium and large enterprises would have more premium differentiation, but on account of their size most of them have at least one accident per year and therefore cannot reach the maximum premium reduction. The insurance against emergency risk is less important to larger companies because they have a better spread of risks due to their size.

It has to be considered that the German statutory accident insurers like FBG are part of the public social insurance system and therefore too high a differentiation in insurance premiums would contradict the principle of solidarity. In addition, the premium differentiation is a legal requirement which has not only been created for financial reasons. In addition to motivating companies to improve OSH, considerations of justice play a certain role. Enterprises that cause lower costs to the insurance system should feel the benefits in their insurance contributions.

The analysis of Kohstall et al. (2006) is based on theoretical scenarios which have been analysed in a simulation model. This is very useful for analysing the effects of different accident rates and different company sizes on the insurance premiums. However the conclusions on possible motivational effects still remain theoretical assumptions, because these models do not include the effects on the real behaviour of the companies, i.e. they do not analyse the effect of the introduction of the premium differentiation on accident and disease rates.

The pure financial motivation of the premium variation is relatively small, but there is also a psychological effect to be observed. Employers who fail to get their expected premium reduction will probably start to think about the possible reasons behind this. In that way the premium differentiation can lead to increased awareness among employers and make them more motivated to improve their OSH performance.

b) The Discount programme

The purpose of this programme is to ensure more long-term sustainability, since it takes into account the company's accident record for the previous five years. The success of the programme is difficult to gauge as, because of its design, nearly all companies profit from the programme. The reason lies in the way the discount is calculated. It is not the percentage variations of the previous five years that are added and compared with the industry's average, but the reductions granted within the Premium Variation programme. This means that every company that has received a single reduction within the Premium Variation programme within five years automatically gets an additional reduction in premiums.

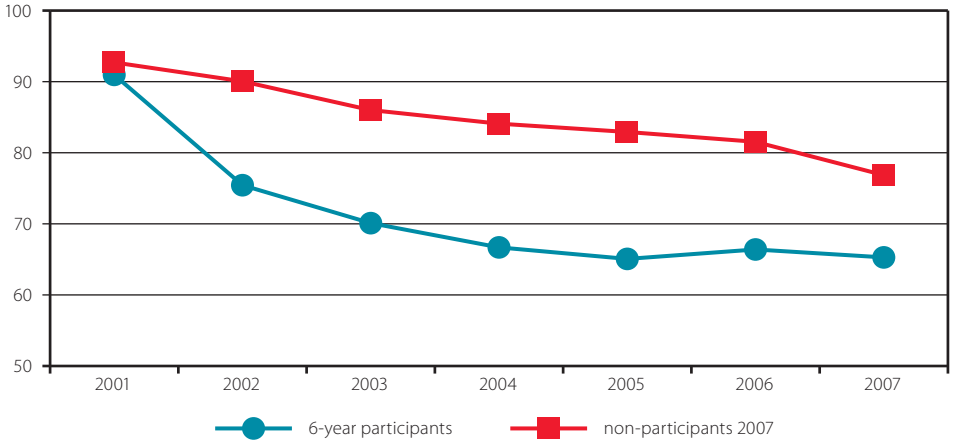
In order to achieve a more targeted approach FBG plans to introduce a system which includes negative incentives as well (see section 'Problems faced').

c) The Funding programme

There are some indicators which illustrate the success of this programme (Krüger, 2008). From the point of view of the accident insurance, it has been noticed that since the introduction of the Funding programme costs for rehabilitation measures have been under control. Despite changes in medical treatment costs, the costs for rehabilitation measures per insurance member have remained at the same level, varying between EUR 240 and EUR 250.

The accident rate of companies that have been participating in the programme from the very beginning is significantly below the rate of member companies that are not participating.

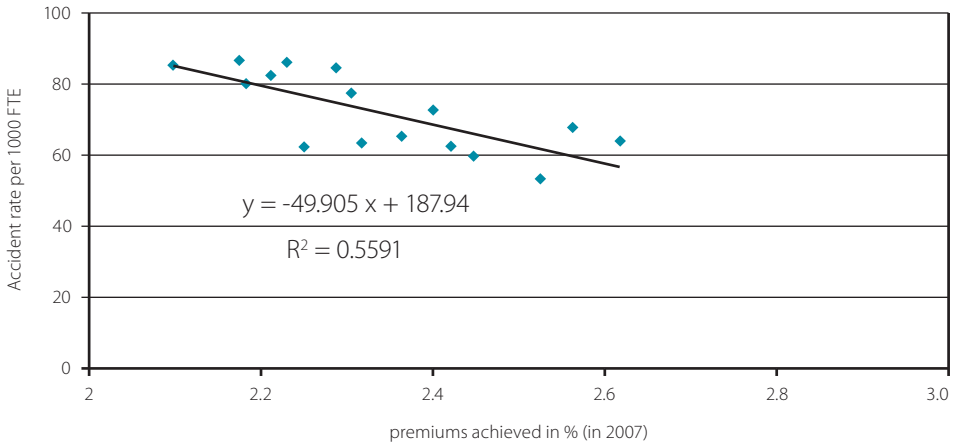
Figure 1: Accident rate of participating vs. non-participating companies



With regard to the efficiency of the Funding programme, the FBG tried to find out if there is a correlation between the size of the premium and the efficiency of the measures. The 2007 figures indicated that in companies that invested more in safety and were granted more money by FBG, fewer accidents occurred. The average

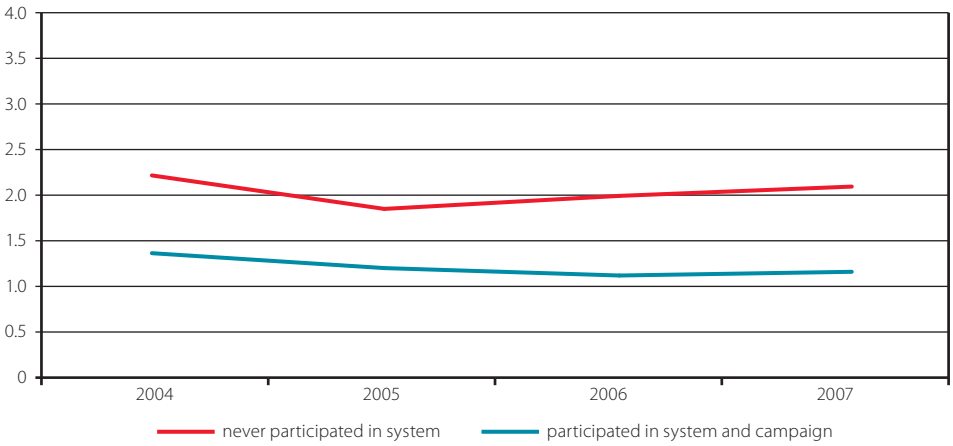
number of accidents declines steadily with the investment in occupational safety measures: companies that received a premium of 2.2% had an average accident rate of 80 accidents per 1,000 full-time workers while companies that received more than 2.5% dropped below 60 accidents per 1,000 full-time workers.

Figure 2: Correlation of accident rate and premium reimbursement



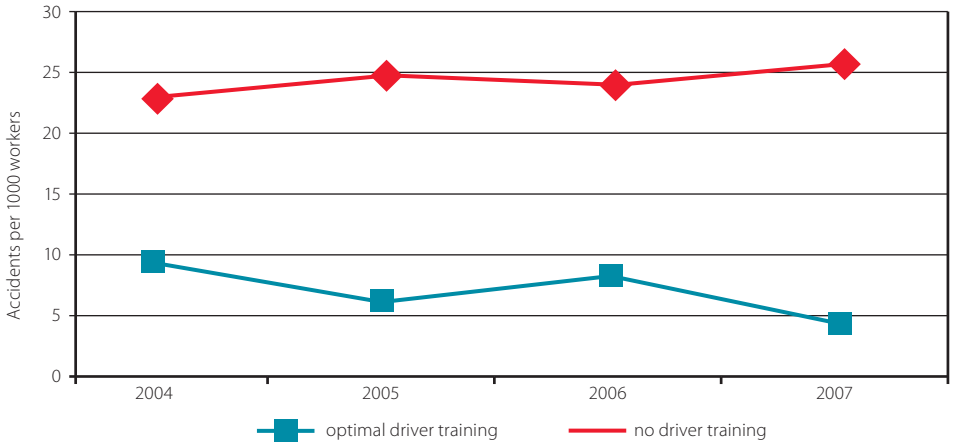
The Funding programme has paid special attention to measures aiming at the prevention of skin diseases from the very beginning. As a result, the number of suspected cases of occupational skin diseases has fallen since 2001. The industry average for 2007 was about 1.2 cases per 1,000 full-time workers per year, but in companies that had never participated in the programme the number remained at 2.0. This has meant a commensurate reduction in the costs per recognised occupational skin disease.

Figure 3: Skin disease rate of participating vs. non-participating companies



Since 2002, FBG has also funded driver training as part of the Funding programme, as travel accidents are often severe for the worker and costly for the insurer. If companies send at least 6% of their workforce for training they will receive maximum funding. Statistically, companies that have received the maximum funding ('optimal driver training') have reduced travel accidents among their workers, while companies that did not participate have seen a rise in such accidents in recent years.

Figure 4: Traffic accidents of participating vs. non-participating companies



Problems faced

The motivational success for prevention of the Premium Variation programme and the Discount programme is difficult to measure. They have been introduced in order to fulfil legal obligations of §162 SGB VII (German social law), which requires all accident insurers to offer a premium differentiation. According to several authors (e.g. Kötz, 1989; Schulz, 1996, 1999) the bonus-malus systems of German accident insurers have certainly had a positive effect, because accident rates have fallen considerably in the past few decades. However, it is difficult to measure the exact influence of the premium differentiation, since other factors such as technological improvements and better prevention strategies have contributed to a reduction in accidents as well. According to Kohstall et al. (2006) a stronger premium differentiation would probably be more effective, but this may contradict the spirit of the public social insurance system.

In view of this, FBG plans to introduce a negative incentive system. This means that companies which remain significantly above the sector's average accident rate could be obliged to pay an augmented insurance premium (in effect, a fine). This would increase the visibility of bad OSH performance and therefore raise awareness in the enterprises concerned. The normal insurance premiums are usually factored into the budget of companies. A positive variation is of course welcomed, but only a negative variation will force companies to adapt their budget planning and therefore make them think twice.

Such negative incentive systems are not unknown among statutory accident insurance bodies: in 2004 the Statutory Accident Insurance of the Leather Industry (Lederindustrie-BG LIBG) introduced a negative incentives system. Companies with an accident rate of 200% in comparison to the sector average find their premium has increased by 20%. At the same time, all positive incentives are cancelled. LIBG's experience was that positive incentives were taken as a bonus for measures that would be taken anyway. LIBG decided instead to fine companies with a bad safety performance and to lower the general membership rate (see http://www.libg.de/ebenen/mitgliedschaft/nachlaesse.php). However, the new approach has not yet been evaluated.

Success factors

Kohstall et al. (2006) have analysed several funding programmes of accident insurers in Germany. They highlight the easy access and unbureaucratic procedures of the butchery sector incentive scheme, which makes it very attractive for small enterprises as well as larger ones. Every enterprise can easily calculate how many bonus points, i.e. what premium reduction, it will get for which prevention measures. So there is a direct and fast link between the prevention efforts of the employer and the reduction in insurance premium, which produces a strong motivation to improve safety behaviour, whereas a differentiation based on accident numbers provides only an indirect and insecure connection. Even an exemplary enterprise could have bad luck and sustain an accident in spite of good prevention work. Such an enterprise would profit from the funding programme but not from the premium differentiation.

Evaluation by the FBG indicates the effectiveness of the Funding programme. Priorities in funding correlate to fields of common hazards at work and have not changed throughout the years. Examples are the prevention of skin diseases and of travel accidents, which have remained in focus since the introduction of the Funding programme in 2002. Experience shows that sustainability and persistence pay off.

With regard to further priorities (for example noise at work), reliable results are not yet available. It was on the priority list for 2008 and 2009 and it will need further experience and data before a reliable evaluation can be made.

General statistics also underline the success of the Funding programme: general accident rates of companies that participate frequently are significantly below the accident rates of companies that have never participated. A positive correlation between investing in safety and health and reducing accidents can also be shown.

The FBG has also analysed the economic efficiency of the Funding programme. It found that the cost of the programme in reduced premiums is more than compensated for by the lower accident rate in participating enterprises. As the Funding programme is very easy to administer, there have been no additional administrative costs for the FBG. Most of the questionnaires are completed online and the paper versions are scanned automatically. The accuracy of the data provided by the enterprises can also be checked automatically, e.g. if employers have really attended FBG training as indicated in the questionnaire. FBG labour inspectors can also check the workplaces if there are any inconsistencies. So far no abuse of the funding programme has been recorded.

Transferability of the project

Premium variations are an obligatory part of the German occupational accident insurance system. Statutory accident insurance bodies have to take workplace accident rates into consideration when calculating insurance premiums but they can decide themselves whether they do this in the form of positive or negative incentives.

Safety and health funding schemes are also common: in Germany, other statutory accident insurance bodies such as the Statutory Accident Insurance of the Health Care Sector (BGW), the Statutory Accident Insurance of the Quarrying and Mining Industry (StGB), the Statutory Accident Insurance for Retail Trade (BGHW) and the Statutory Accident Insurance of Vehicle Deployment (BGF) have also introduced funding programmes or financial awards for companies that take innovative measures in the field of safety and health at work.

Generally speaking, the programmes and funding schemes described in the example of FBG are transferable to all accident insurance systems, public or private, that allow insurance premium variations.

Further information

Fleischerei-Berufsgenossenschaft
Lortzingstr. 2
55147 Mainz
www.fleischerei-bg.de
Henning Krüger
Assistant head of prevention department

Tel: +49 6131 785 395
Fax: +49 6131 785 342
Email: henning.krueger@fleischerei-bg.de

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Das Rabattverfahren: http://www.fleischerei-bg.de/mitgliedschaft/rabatt/index.php

Das Prämienverfahren: http://www.fleischerei-bg.de/sicherheit/praemien/einzelheiten/index.php

FBG Measures Questionnaire Premium Adjustment 2009

1. IMPORTANT: How many people (including you) work in your company (as at 30.09.2009)? ⌊_⌊_⌊_⌊_⌋

2. Machine and equipment safety *(max. 8 points)*

2.1 Were meat-processing machines and slaughtering machines used in your company for the first time in 2009 and did these have a valid equipment safety mark or are they inspected individually by the FBG (Butchers' Employer's Liability Insurance Association)? ☐ yes ☐ no

2.2 How many meat-processing and slaughtering machines do you have? ⌊_⌊_⌊_⌊_⌋

2.3 How many meat-processing and slaughtering machines have a GS (safety) mark or are inspected individually by the FBG? ⌊_⌊_⌊_⌊_⌋

3. Protection against accidents with knives *(max. 18 points)*

3.1 For cutting bread and bread rolls by hand are only bread knives with a serrated edge used? ☐ yes ☐ no

3.2 In the shop are only knives with a rounded tip used to cut sausage? ☐ yes ☐ no

3.3 Are only special foil knives or special safety knives with automatic retractable blades used to cut foil, paper and cardboard, herb and spice bags and sausage skins by hand? ☐ yes ☐ no

3.4 Are suitable containers always used for storage and/or in-house transportation of knives (e.g. magnetic strips or knife holders) which reduce the risk of injury? ☐ yes ☐ no

3.5 How many employees use hand-held knives for boning, cutting and trimming in the production or processing area? ⌊_⌊_⌊_⌊_⌋

3.6 How many of these employees, in addition to the prescribed safety equipment, also wear a cut-resistant glove on the hand using the knife? ⌊_⌊_⌊_⌊_⌋

3.7 Are cut-resistant gloves worn in your company when replacing and maintaining machine knives (cutters, bacon cutters, saw blades etc.)? ☐ yes ☐ no

4. Main campaign "Stop that noise 2009" *(max. 20 points)*

4.1 Here we automatically award 10 points if you have used the media of the FBG's main campaign Noise 2009 and have run the activities associated with this.

4.2 Have special construction measures been taken (e.g. cutter or saw rooms, slaughter rooms, introduction of specific noise-dampening materials) to ensure that as few employees as possible work in noisy areas? ☐ yes ☐ no

4.3 Have all employees who work in areas where the noise levels are between 80 and 85 dB(A) undergone a preventive occupational health check (G-20)? ☐ yes ☐ no

4.4 In working areas where there is a noise level > 80 dB(A), do all affected employees wear individual ear protection (ear plugs)? ☐ yes ☐ no

5. Ergonomics – Workplace arrangement – correct lifting and carrying *(max. 10 points)*

5.1 How many employees have height-adjustable desks (more than just having a levelling device) to match their height and activity? ⌊_⌊_⌊_⌊_⌋

5.2 In 2009 how many employees have attended training organised by the company for correct lifting and carrying or have taken part in back exercises (partly offered free of charge by the health insurance company or sports clubs)? ⌊_⌊_⌊_⌊_⌋

6. Employment protection management system audited by the FBG *(max. 20 points)*
Here a "Safe with system" employment protection management system carried out at the time of the 2009 premium adjustment and audited by the FBG with a positive outcome, is awarded 20 points.

7. Further and in-service training in employment and health protection
(max. 18 points)

7.1 Here we automatically award a maximum of 12 points if in 2009 employees voluntarily took part in FBG further training seminars which lasted a minimum of 16 seminar hours.

7.2 Here we automatically award a maximum of 6 points if in 2009 employees took part in FBG information seminars which lasted at least 4 seminar hours.

8. Skin protection *(max. 13 points)*

8.1 How many employees perform activities which could damage the skin for less than 4 hours per day? ⌊_⌊_⌊_⌊_⌋

8.2 For how many of these employees do certificates exist stating that suitable occupational health examinations have been carried out on them to prevent skin diseases? ⌊_⌊_⌊_⌊_⌋

8.3 How many employees perform skin-damaging activities (e.g. cleaning work, frequent hand washing etc.)? ⌊_⌊_⌊_⌊_⌋

8.4 How many of them use a skin protection cream before starting the damaging activity and a skin care cream after the work has finished according to the FBG's skin protection plan? ⌊_⌊_⌊_⌊_⌋

9. Internal integration management to ensure continued employment *(max. 5 points)*

9.1 In 2009 did you take steps to integrate employees who, because of accidents at work, professional diseases or work-related health risks, were off work for more than an uninterrupted period of 6 weeks or were repeatedly unfit for work and do you finance measures to protect/promote the health of such employees? ☐ yes ☐ no

9.2 In your company is there an integration agreement with the Works Council and/or representatives of the seriously disabled, which provides for measures for the internal integration of employees who are unfit for work for an uninterrupted period of more than 6 weeks or who are repeatedly unfit for work? ☐ yes ☐ no

10. Protection when travelling on company business *(max. 15 points)*

10.1 Have all employees who, while on company business, drive a car, lorry or delivery truck taken part in driving safety training in the last three years? ☐ yes ☐ no

10.2 Are medical certificates for sight, reaction and hearing tests (according to G 25) available for all employees who drive vehicles on company business (car, lorry, delivery truck, fork-lift truck etc.)? ☐ yes ☐ no

11. Protection travelling to and from work *(max. 15 points)*

11.1 How many employees have taken part in driving safety training in the last three years for the means of transport used by them for travelling to and from work? ⌊_⌋⌊_⌋⌊_⌋

11.2 How many employees

- use a season ticket provided to them by your company and /or ⌊_⌋⌊_⌋⌊_⌋
- generally use public transport (without a season ticket) and/or ⌊_⌋⌊_⌋⌊_⌋
- generally use car-sharing for travelling to and from the place of work and/or ⌊_⌋⌊_⌋⌊_⌋
- live in the company premises or come to work on foot? ⌊_⌋⌊_⌋⌊_⌋

12. Preventive health care for people working at computer screens *(max. 4 points)*

12.1 How many employees regularly work more than 3 hours a day at computer screens? ⌊_⌋⌊_⌋⌊_⌋

12.2 For how many employees who regularly work at computer screens are eye-test certificates available (according to G 37)? ⌊_⌋⌊_⌋⌊_⌋

13. Protection from the cold in the workplace *(max. 7 points)*

13.1 How many employees work all year for longer than 2 hours a day in working areas where the room temperatures are below 15° C? ⌊_⌋⌊_⌋⌊_⌋

13.2 How many of these employees use protection from the cold provided by your company (e.g. professional clothing to protect them from the cold, insulating floor mats, footwear insulating against the cold)? ⌊_⌋⌊_⌋⌊_⌋

14. Protection from accidents involving tripping, slipping and falling *(max. 7 points)*

14.1 How many employees are employed in selling (shops)? ⌊_⌋⌊_⌋⌊_⌋

14.2 How many employees in the sales area (shop) are given sturdy footwear by your company with non-slip soles and firm ankle supports? ⌊_⌋⌊_⌋⌊_⌋

14.3 Are there written company instructions saying that when going up and down stairs the handrail should always be used, and are these instructions followed? ☐ yes ☐ no

Name/Signature

4.2.2. Snapshot: The SME Indicator (United Kingdom)

Organisations

The Health & Safety Executive (HSE) and the UK Dept for Business, Innovation and Skills's (BIS) Business Link.

Aim

The aim is to provide small and medium-sized enterprises (SMEs) with a usable tool that enables them to monitor and benchmark their OSH performance. The tool was developed to enable and encourage the insurance business and brokers to take into account SMEs' OSH performance when setting insurance premiums.

Key points

The SME indicator is a self-assessment questionnaire that focuses on two main areas: the key hazards that most SMEs encounter and the frequency of incidents relating to these hazards. This information allows SMEs to assess and re-assess their performance, and is therefore a good indication of how well they are managing occupational health and safety. It also allows them the opportunity to benchmark anonymously against other organisations.

The tool promotes better safety and health programmes by advising SMEs on the issues they should pay more attention to in order to control key risks.

The use of the SME Indicator by insurers has not been formally evaluated by the HSE. From anecdotal evidence, HSE believes insurers have not used it to recognise good health and safety performers – which was the original intention.

HSE believes that, following the creation of the Indicator, some individual insurers have developed their own tools. However, of those tools HSE has seen, all appear to be less sophisticated than the Indicator and designed to meet the insurer's own commercial needs, for example reflecting the markets in which they choose to operate.

Individual businesses have shown more interest in the Indicator, as a way of measuring and benchmarking their own health and safety performance. Since its launch in 2005, the Indicator has been completed by more than 10,000 different organisations.

The tool can be accessed at http://www.businesslink.gov.uk/bdotg/action/haspi.

Further information

Beverley Boyce
HSE Cross Cutting Interventions Division
Business Involvement Unit
5S.3, Redgrave Court, Merton Road,
Bootle
Merseyside L20 7HS

4.2.3. Premium Discount Programme in the Farmers' Workers' Compensation Insurance (Finland)

Organisations

The Finnish Farmers Social Insurance Institution (MELA) and the University of Iowa.

Key points

- A premium discount programme in the workers' compensation insurance for Finnish farmers
- Evaluation of the preventive effect of the programme.

Key words

Premium discount programme, workers' compensation insurance, Finnish agriculture sector, prevention, time series analysis, quasi-experimental study

Abstract

In this insurance scheme for self-employed farmers, fishermen and reindeer herders, a premium discount programme ('MATA bonus') was implemented in 1997. Insured people who had no compensated injury or occupational disease claims in the following 12 months received a 10% reduction in their MATA premiums starting 1 July 1998. Thereafter each claim-free year adds another 10% reduction up to a maximum of 50% off after five consecutive claim-free years. Each compensated claim results in a 10% loss of discount, but the premiums never rise higher than the base level even if the personal discount would turn negative from multiple claims. This premium discount gives farmers an incentive to prevent injuries. Using administrative data, Rautiainen et al. (2005a) conducted interrupted time series analyses, which showed that the premium discount decreased the overall claim rate by 10.2%. The fall occurred in minor and moderately severe injury categories (up to 29 disability days). The authors concluded that the relatively low decrease in no-lost-time claims and relatively high decreases in moderate lost-time claims suggest that the decreases cannot be explained by under-reporting alone and that the premium discount has a preventive effect. (Rautiainen et al., 2005a.)

Aims and objectives

- To implement a premium discount programme in the workers' compensation insurance for Finnish farmers
- To measure the changes in injury rates after implementation of the programme.

Background

Agriculture is one of the most hazardous industries (Rautiainen et al., 2005b) and high injury and fatality rates have been reported (McCurdy and Carroll, 2000; Bailer et al., 2003; Rautiainen and Reynolds, 2003). Injuries and occupational illnesses result in significant costs. In a Finnish study (Rautiainen et al., 2005b) it was found that lost time was the highest cost item in the agriculture sector. Overall, injuries were more costly than occupational diseases. The authors concluded that from the cost standpoint, it would be important to focus prevention efforts on the most severe incidents (Rautiainen et al., 2005b).

Insurance incentives could motivate prevention of injuries (Rautiainen et al., 2005a). They are relatively inexpensive and easy to implement, but challenging to evaluate (Rautiainen et al., 2005a). In general, workers' compensation motivates employers to improve safety and save costs, but it seems that it can also create a 'moral hazard' where workers are less careful and report more injuries (Butler and Worrall, 1991).

Scope of the project – what was done

Self-employed Finnish farmers are covered by the Finnish farmers' employment accident insurance (MATA). This insurance programme is nationwide, mandatory, well established and well utilised. It is connected to the MYEL pension insurance and comes automatically with it. All self-employed farmers and their partners having a minimum annual salary of EUR 3,093 (in 2008) and at least five hectares of agricultural land are covered. Until 1 January 1994 the minimum farm size was two hectares. Self-employed fishermen and reindeer herders are also automatically covered if their annual salary is at least EUR 3,093. Family members are insured if their annual salary from the family enterprise or the value of their work is at least EUR 3,093 (in 2008) (Mela, 2008). Employed workers in agriculture, forestry and fishing are excluded from MATA, but they are covered by other workers' compensation programmes. Self-employed farmers/fishermen/reindeer herders who are not automatically covered can sign up for MATA as well. These groups include those with an annual income lower than EUR 3,093, those with small farms (less than five hectares), and the retired.

MATA provides a range of generous benefits, such as medical care, lost-time compensation (per diem) up to one year from the incident, lost-time compensation (accident pension) after one year from the incident, survivors' pension, impairment allowance and rehabilitation. There are no minimum or maximum amounts on medical and income replacement benefits. The injury claim denial rate is about 10-12% (Rautiainen et al., 2005a).

The premium discount programme ('MATA bonus') was implemented on 1 July 1997. Insured persons who had no compensated injury or occupational disease claims during the following 12 months received a 10% reduction in their MATA premiums starting 1 July 1998. Thereafter each claim-free year adds another 10% reduction up to a maximum of 50% off after five consecutive claim-free years. Each compensated claim results in a 10% loss of discount, but premiums never rise over the base level even if the personal discount would turn negative from multiple claims (Mela 2008a). The premium discount gives farmers a new incentive to reduce injuries in any way they can. It also discourages 'small claims' (Rautiainen et al., 2005a).

During the first year of the 'MATA bonus', most people (about 93%) had no claims and received their 10% discount. One claim would return them to the base level. For the next five years, they would be 10% behind, had they not made the claim. The value of the premium discount can therefore be estimated as the accumulation of losses over five years, 10% each year – which equals one half of one annual premium payment. In 1996, the mean annual premium was about EUR 75. In 2004, the full base premium was about EUR 217 at the mean income level. The break-even point for a 'small claim' varies according to the person's income, current discount level, and changes in the base premium rate, but was likely to be in the EUR 50-100 range for most insured persons during the study period (1997-2003) (Rautiainen et al., 2005a).

In 1996, the injury rate was 7.4/100 workers – one injury in 13.5 years on average (Mela, 1997). The actual claims experience varies between individuals. Because both the value of the discount and the injury risk are quite low, the premium discount probably

does not have a dramatic effect on injuries and claims reporting. However, it can provide an additional incentive for farmers to avoid injuries (Rautiainen et al., 2005a).

Outcome and evaluation of the project

In their paper published in the *American Journal of Industrial Medicine*, Rautiainen et al. (2005a) systematically evaluated the effects (changes in accident rates) of the MATA premium discount programme. They measured changes in injury claim rates after a premium discount programme had been implemented and used data from the Finnish Farmers Social Insurance Institution. The data included all injury cases from 1 January 1990 to 31 December 2003. Occupational diseases and back injuries were excluded. For each injury case, they had data on the incident year and month, as well as the length of disability in days.

About 2.7% of the insured were paid family members, 1.1% were fishermen, and 1.3% were reindeer herders. In 1998, 61% of the insured persons were men. The mean age was 46.2 years.

The data consisted of 132,134 injury claims filed from 1990-2003. Injuries were classified in seven severity categories: 0 disability days (n=14,296), 1-6 days (n=17,043), 7-13 days (n=36,735), 14-29 days (n=32,436), 30-89 days (n=23,542), 90-364 days (n=6,738), and 365 days and over (n=1,344).

In their study, Rautiainen et al. (2005a) used the interrupted time series method. Monthly injury claim rates were constructed at seven disability duration levels from January 1990 to December 2003. The primary hypotheses were as follows: first, that the reported injury rate decreased after programme implementation, and second, that the reported injury rate decreased across all severity levels. Potential under-reporting was of specific interest. They examined injury rate trends at seven severity levels. Decreases in claim rates across all severity levels would suggest a decrease in the true underlying injury rate. Decreases in minor claims only would suggest under-reporting. Policy changes (such as the increase in minimum farm size for the mandatory MATA insurance and Finland joining the EU) were taken into account in the analysis.

The results showed that injury claims decreased significantly (at the 5% level) after the premium discount had been implemented. The overall injury claim rate fell by 10.2%. Decreases occurred at four severity levels (measured by compensated disability days): 0 days (16.3%), 1-6 days (14.1%), 7-13 days (19.5%), and 14-29 days (8.4%). In contrast, no changes were observed at higher severity levels. This suggests that under-reporting contributes to the decrease but is probably not the only factor. The value of the premium discount is lower than the value of a lost-time claim, so there was no financial reason to under-report lost-time injuries. Under-reporting would be expected to be greatest in the 0 day category, but that was not the case. Therefore, under-reporting cannot explain the decrease in accidents and the premium discount probably has a preventive effect. (Rautiainen et al. 2005a).

Problems faced

- The injury reduction did not occur across all severity levels
- Farmers may have over-estimated the value of the premium discount; the value of the discount cannot be accurately estimated for an individual.

Success factors

- The insurance programme is nationwide, mandatory, well established and well utilised
- In a self-employed population the employer-employee motivation differences do not exist
- The premium discount is based on the individual's rather than the employer's record; experience rating is applied at the individual farmer level
- Results suggest that actual injury reductions may have occurred
- Accurate population and claims data enabled time series analysis and assessment of policy changes with good accuracy.

Transferability of the project

Similar discount programmes could be implemented in other countries in insurance schemes for self-employed farmers. The general approach is transferable. However, as laws, insurance systems and policies differ between countries modifications are needed. MATA insurance can be considered as a generous policy; in other countries agriculture insurance policies may be less generous.

Further information

MATA insurance and premium discount programme:

The Finnish Farmers Social Insurance Institution (MELA)

P.O. BOX 16, 02101 Espoo, Finland

Tel: +358 20 630 0500

Web: www.mela.fi

http://www.mela.fi/Sisaltosivu.aspx?path=172,117,445,481

Evaluation

Dr Risto Rautiainen, Department of Occupational and Environmental Health, The University of Iowa, College of Public Health, Iowa City, Iowa 52242-5000, USA

E-mail: risto-rautiainen@uiowa.edu

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4.2.4. Reduction of companies' compulsory insurance premium following prevention support measures (Italy)

Organisation

INAIL (Istituto Nazionale per l'Assicurazione contro gli Infortuni sul Lavoro) – Italian Workers' Compensation Authority.

Key points

- Workers' compulsory insurance
- Premium tariff
- Premium tariff variation
- Insurance premium reduction through prevention support measures

Key words

Tariff variation, premium reduction for prevention, premium rate variation, Italian industrial sector, accident prevention incentives

Abstract

Since 2000 Italian companies that carry out activities aimed at improving health and safety – over and above the minimum measures stipulated by the regulations – are rewarded with a 'discount' on the premium they have to pay to INAIL, in a system called 'premium rate variation'.

The Insurance Premium Rate Variation (ex. art. 24 DM 12/12/2000) is a new innovation on the older system of varying the premium according to accident rate, as it introduces a discount based on the level of prevention investment of each company.

Background

INAIL, the Italian Workers' Compensation Authority, pursues several objectives: reducing the number of industrial accidents, insuring workers who carry out dangerous activities, overseeing the rehabilitation and the return to work of the victims of occupational accidents. Over the years the system for worker protection has become increasingly integrated, encompassing prevention at the workplace, economic benefits, healthcare, rehabilitation and other functions.

The insurance cost or premium is paid by the employer, the worker in the case of certain industries, and self-employed persons working in the agricultural sector. In case of employed workers, the premium is calculated on the basis of the salary and the level of danger of the activity carried out. All working activities are divided into four groups, called 'funds' that have specific tariffs.

In line with recent legislation, INAIL has been called on to strengthen its prevention function in terms of information and training, consulting, assistance and support to enterprises, in full collaboration with other authorities and the social partners.

The provisions of Legislative Decree 38/2000 aim at supporting the preventive action of INAIL, whether through incentives to improve company safety, the provision of information and training programmes, or through offering companies variable premiums depending on their safety and health record.

Legislative Decree 38/2000 amends the previous tariff system, introducing a distinction between the four different funds: Industry, Crafts, Service sector and 'Other activities'. Each of these funds has its own tariffs and premium rates corresponding to the average national risk of the sector. These premium tariffs are organised according to a technical classification of work, divided into ten main groups, and then further divided into sub-groups and items. The insurance premium payable by employers is calculated on the basis of the average tariff corresponding to the classification of the type of work, which is then reduced or increased depending on the accident trend or prevention measures taken.

A government Decree of 12 December 2000 (Official Journal no. 17, 22 January 2001) approved new premium tariffs for accident insurance and occupational diseases, as well as the related MAT (Modalità di Applicazione della Tariffa) – Tariff Application Procedure. The MAT determines the premium rate variation – either a reduction or an increase of the national average rate – and is set for each company according to its level of risk.

This case study describes the Italian experience in the reduction of the rate of compulsory insurance for workers adopting prevention measures, as well as the implementation of this initiative by different companies, and the impact it has had on prevention.

Aims and objectives

The main objective of the insurance premium reduction is to encourage companies to go beyond mere compliance with legal provisions by incorporating safety into the overall management framework and striving for continuous improvement of the environment and the organisation of workplaces.

Scope of the project – what was done

1. Premium rate variation mechanisms

In line with its new role as ascribed by the law (Legislative Decree 38/2000) INAIL planned and implemented a new insurance tool aimed at reducing the tariff rate for specific prevention actions.

The bonus-malus system relating to the average premium variation – which has been in force for many years and thus predates the adoption of the new tariffs – was applicable in the first two years of activity on the basis of actual company compliance with accident prevention and hygiene rules and, after the first two years, on the basis of data relating to accident trends. This system was therefore supplemented by the insurance premium reduction through prevention support measures after the first two years of activity (art. 24 of MAT), and suitable self-certification forms were prepared.

Therefore, today there are two types of rate variation:

- variation in the first two years of activity
- variation after the first two years of activity.

The second type is divided into:

- accident trend variation
- variation through prevention support measures.

The first two years of activity

In the first two years of activity, the national average rate can be either reduced or increased by a fixed rate of 15%, depending on the company situation as regards compliance with accident prevention and work hygiene rules. All employers complying with compulsory provisions in the field of accident prevention and hygiene at work can apply for the reduction rate (art. 20 of MAT).

The increasing variation (art. 21 of MAT) is enforced by INAIL whenever the competent public authorities determine that a company is not complying with the accident prevention and hygiene at work rules.

After the first two years of activity

Accident trend variations (articles 22 and 23 of MAT).

Accident trend variations are linked to the company accident record, that is to say the size of the spread between the values recorded in the single company and those recorded at a national level. In particular:

- a rate higher than the average national rate is applied to those companies with a higher accident trend compared to the national average
- a rate lower than the average national rate is applied to those companies with a lower accident trend compared to the national average
- the size of the increase or reduction depends on company size as well as the company's accident record, and it is subject to fixed limits.

The rate developed by INAIL according to the company accident trend is known as the 'applied rate' and INAIL has to inform employers what their applied rate is by 31 December of each year.

Variation through prevention support measures (art. 24 MAT)

As mentioned above, since 2000 companies that carry out actions to improve the hygiene and safety conditions at work, in addition to the minimum actions provided for by the regulations in force, have been awarded a 'discount' on the premium due to INAIL, called the 'variation through prevention support measures'.

The Premium Tax Variation (ex. art. 24 DM 12/12/2000) represented an innovation on the oldest and most classical system of adjusting premiums according to accident trends, by introducing a criterion relating to the prevention investment made by each company.

Rate reduction is granted as follows:

- 5% for companies employing more than 500 workers
- 10% for other companies.

The average rate reduction relates to preventive measures implemented in the calendar year preceding the year in which the application is made; it is valid for the year in which the application is made, and is applied while paying the insurance premium

due for the same year. Beneficiaries must be up to date with insurance contributions and comply with the compulsory provisions in the field of accident prevention and hygiene at work. In the year preceding the application for premium reduction, companies also have to have carried out one of the prevention interventions included in Section A of the application form (see below) or, alternatively, at least three actions listed in Sections B to I of the report, at least one of which (section E) involves the training of workers.

INAIL regional structures perform 'technical evaluations' of the self-certification statements made by companies applying for the rate reduction. The technical body of INAIL in charge of these evaluations is CONTARP (Consulenza Tecnica Accertamento Rischi e Prevenzione) – the Technical Advisory Department for Risk Assessment and Prevention – which uses expert professionals in the field of hygiene and safety.

The reduction granted by INAIL is only valid for the calendar year in which the application was made and is applied by the company itself while paying the insurance premium due for the same year.

Structure of the form

The form has a section applicable to all companies, as well as specific sections for factories at risk of relevant accidents and for temporary or mobile building sites. The different sections include actions relating to corporate social responsibility (CSR) and to the adoption of systems for the management of health and safety at work (SGSL).

The application form includes:

- an information sheet, on which the applicant has to note details such as company name, territorial insurance position and competent INAIL office;
- the reduction application, which also includes the applicant's personal information and company title;
- the applicant statement, which allows companies to self-certify their compliance with the application requirements as per art. 24 of the Conditions for the application of premium Tariffs. This section is divided into three 'clauses': the first is related to the assessment of contributive regularity of the employer petitioner; the second clause refers to the pre-requirements in terms of hygiene and safety. Some of these requirements are the same for all companies, but there are some that are specific to two company types (factories at risk of relevant accidents, temporary or mobile building sites). While all companies are required to comply with the legal provisions in force, the latter two types of companies also have to comply with the specific regulatory obligations as per Legislative Decree 334/99 concerning factories at risk of relevant accidents (Seveso bis Directive) or the specific safety regulations concerning temporary or mobile building sites (the so-called Building Site Directive). Failing to comply with these minimum requirements means the company is not eligible to apply for a rate decrease. The third clause lists the qualifying prevention actions of the company in the field of safety at work, and is divided into nine sections, identified with letters from A to I.

a) Corporate social responsibility (CSR)

The adoption of a socially responsible policy is included among the relevant actions listed on the form, since it is assumed that it goes beyond mere compliance with the regulations in force and the current procedures, and aspires to bring about the highest possible level of safety and wellbeing of the human capital of a company. CSR is, in fact, the voluntary adoption by a company of social and environmental concerns within its business and in its relations with internal and external stakeholders. It is

therefore assumed that many of the conditions provided for in form OT24 will be met, in order to obtain a reduction of the insurance premium. A questionnaire was also prepared (see below) for the evaluation of CSR for the purpose of reducing the average tariff rate which is then subjected to an overall technical evaluation by INAIL. The annex takes into consideration both the SSL and social and environmental concerns.

b) SGSL

Companies that state they adopted a system for the management of health and safety at work (SGSL) have to fill in a questionnaire, as mentioned above. The questionnaire asks for details of the model of management system recognised at a national and international level that the company decided to adopt (for instance, Guidelines UNI-INAIL or OHSAS 18001). Besides stating the compliance with the main and obligatory elements of SGSL, common to all the existing standards or guidelines, the applicant also has to indicate the procedures through which the SGSL policy document was disseminated among the different stakeholders (publication on the website, posting on notice boards, etc.), describe the system indicators adopted by the organisation and concerning health and SSL (frequency index, severity index, hours of training per head, etc.), and describe the ways in which the implementation and efficacy of corrective actions is assessed (adoption of specific procedures, periodic controls through internal audits, etc.).

c) Certified Management System

The third relevant action is the implementation or maintenance of a certified management system. A certification authority is required to certify the compliance of the management system with the reference standard adopted through the control procedures coded by specific rules and regulations. In Italy only OHSAS 18001 can currently be used for this purpose. In order to be eligible for tariff discount, certification has to be done by certification authorities accredited by SINCERT. For this purpose, SINCERT issued – with the collaboration of INAIL, ISPESL and the Social Partners – an accreditation regulation called RT 12-SCR.

A – PARTICULARLY RELEVANT ACTIONS	
1. The company has adopted or maintains socially responsible behavior according to the principles of CSR (Corporate Social Responsibility), briefly highlighted by the statements made by the company in the questionnaire attached to the guide, and subsequently implemented actions to improve health and safety conditions at work.	..
2. The company has implemented or maintains a system for the management of health and safety that meets the criteria defined in standards, guidelines, and rules recognized at a national and international level *(exception made for those companies at risk of relevant accident that are already obliged by law to adopt and implement said system).*	..
3. The company has implemented or maintains a system for the management of health and safety at work that is certified by authorities specifically accredited by SINCERT *(including those companies certified according to UNI 10617).*	..

In section B, 'Prevention and protection', particular importance is ascribed to the risk evaluation process as well as the relevant involvement of workers through their representatives. The involvement of workers prior to changes in plants, in company layout or equipment replacement is also rewarded.

Company actions that qualify for rate reductions include implementing environmental monitoring mechanisms and environmental management systems, as well as the adoption of good practice to improve health conditions and safety at work.

B – PREVENTION AND PROTECTION		
1	Workers' Safety Representative participated actively in risk assessment and provided his/her contribution for the drafting of the relevant document.	..
2	The employer also involves workers by implementing specific procedures ditto the phases of risk identification, assessment and management.	..
3	For companies employing up to 10 workers: risk assessment and emergency plan documents have been drafted.	..
4	For companies employing up to 15 workers: periodic meetings as per art.11 of Legislative Decree 626/94 are held.	..
5	The employer and/or company management attended a training course on safety and health at work during the year.	..
6	First aid and emergency management procedures (also defined in collaboration with the relevant public authorities) are tried out through tests and simulations more than once a year.	..
7	Before renovating plants, changing the company layout or replacing equipment, relevant personnel are consulted, along with the workers' safety representative.	..
8	The company has implemented or maintains an environmental management system.	..
9	The employer systematically collects and analyses information on accidents at work.	..
10	The actions financed by INAIL for the installation of environmental monitoring devices have been implemented.	..
11	The company has a control system, entrusted to internal or external personnel, that allows a periodic overall review of the hygiene and safety levels at work.	..
12	The company has adopted good practice, notified to INAIL and considered suitable for publication by the Institute, to improve the health and safety conditions at work.	..

Section C, 'Equipment, machinery and plants' provides for an improvement of production technologies through the replacement of obsolete machinery and plant whose wear and tear or breakdown may cause accidents. Among other things, the planning and regularity of maintenance is rewarded.

C – EQUIPMENT, MACHINERY AND PLANT		
13	The company performs a planned and preventive replacement of the components of machines or equipment whose wear and tear or breakdown may cause accidents.	..
14	Tests, controls and maintenance are carried out on the fire-fighting system and on the relevant fixed and mobile equipment with a higher frequency than the provisions in force.	..
15	The employer systematically collects and analyses information on accidents involving machinery, plant and individual items of equipment.	..
16	The actions financed by INAIL for the improvements of equipment, machinery and plant have been implemented.	..
17	The company has a contract with a firm specialising in the planned maintenance of equipment, machinery and plant.	..

In section D, 'Health surveillance', the figure of the competent doctor is highlighted. Initiatives envisaging workplace visits by the doctor and cooperation not only with the prevention service but also with the worker's general practitioner are rewarded.

D – HEALTH SURVEILLANCE		
18	The competent doctor visits the working environment at least twice a year and drafts inspection minutes, in collaboration with the prevention and protection service.	..
19	The competent doctor fills in workers' health records by collecting information from the workers' general practitioners on current or previous diseases and disabilities and treatments currently being administered.	..
20	The competent doctor collects epidemiological data relating to the territory and of the specific sector in which the company operates.	..

Section E, 'Training', is particularly important and it represents one of the three qualifying prevention actions needed as an alternative to the implementation of one of the relevant actions. In view of the growing use of migrant workers, especially in sectors characterised by a higher accident index, specific attention to this category of workers is rewarded through the integration of training actions including tuition in the Italian language in order to make them more effective.

E – TRAINING		
21	A procedure is implemented that guarantees the correct and ongoing training of workers.	..
22	The standard of learning achieved by each worker in the field of health and safety at work is regularly evaluated.	..
23	Training is organised by productive sector, guaranteeing the sharing of data and of case studies of accidents and occupational diseases in each sector.	..
24	The training of foreign workers includes Italian language courses.	..
25	Interventions financed by INAIL concerning information and training of workers have been implemented.	..
26	Employers that directly perform risk prevention and protection tasks attend training courses in the field of hygiene and safety at work – besides the 16-hour course provided for by the law – specific to their economic sector.	..

In section F, 'Factories at risk of relevant accidents', frequent revision of the safety report and collaboration with the relevant authorities in order to manage emergency situations are rewarded.

F – FACTORIES AT RISK OF RELEVANT ACCIDENTS		
27	A specific process of collaboration is in place with the competent authorities to manage any emergency situation following an accident that involves areas outside the factory.	..
28	The safety report (for companies falling within art.8 of Legislative Decree 334/99) is reassessed several times during each five-year period.	..

Section G is devoted to 'Temporary or mobile building sites'. In this section, the adoption of suitable safety procedures on building sites is rewarded. The section covers the selection of planners, suppliers and fitters, use of machinery and scaffolding, periodic and planned maintenance of machines and equipment, congruity between the provisions of the Safety and Coordination Plan and the provisions of the Safety Operational Plan. Particular attention is paid to worker training on the safe use of scaffolding.

G – TEMPORARY OR MOBILE BUILDING SITES	
29 There are workers specifically in charge of complying with safety measures on the building site.	..
30 The procedures for selecting suitably qualified planners, suppliers and fitters, and for coordinating their activities, are systematically implemented.	..
31 The company in charge of the building site also oversees the use of scaffolding and machinery on the site, as well as the periodic and planned maintenance of machinery and equipment.	..
32 The company trains all workers on the safe installation, use and disassembly of scaffolding.	..
33 The company adopts a procedure by which workers are informed about the behaviour to be adopted on scaffoldings.	..
34 Procedures are in place to assess the implementation of the provisions of the Safety and Coordination Plan.	..
35 Procedures are in place to assess the congruity between the provisions of the Safety and Coordination Plan and the provisions of the Safety Operational Plan.	..
36 Procedures are in place to assess the implementation of the provisions of the Safety Operational Plan.	..

Section H, 'Transportation activities', is particularly innovative and important, considering the high number of traffic accidents affecting the road transport sector.

H – TRANSPORTATION ACTIVITIES	
37 The personnel in charge of road transport attended a specific safe driving course with both theoretical and practical elements.	..
38 The company has installed tachographs even on vehicles for which this device is not compulsory.	..
39 There is a verifiable procedure that guarantees the presence of a second driver when overall travel time exceeds 9 hours a day.	..
40 Planned maintenance is carried out, for at least half of the vehicle fleet, more frequently than compulsory overhauling, at internal or external workshops authorised in compliance with Law 122/1992.	..

Project results and evaluation

Although article 24 of the tariff procedures has the potential to be a major force for prevention, it has not yet had any effect in practice; in fact, according to an analysis carried out by the Actuarial Consulting of INAIL, and as highlighted in the following table, only 36,000 companies (1.09% of the those eligible) availed themselves of the possible premium reduction.

If we analyse this phenomenon at a territorial level, irrespective of the economic sectors, it evident that the North-East and North-West of Italy are the areas with the highest access to article 24: this is probably due both to better organisational ability and a greater availability of information.

In order to promote the use of this insurance/prevention tool more extensively, several initiatives have been adopted.

Agreements have been signed with the industrial trade bodies FEDERCHIMICA, ASIEP and ATECAP allowing companies to obtain a premium discount for 'prevention-positive' behaviour as assessed by INAIL.

Since the actions envisaged are carried out under the guidance and/or control of INAIL, they might reduce the need for on-site assessments of the truthfulness of the applications made by companies during the self-certification phase, and lead to higher participation in this initiative.

The actions on which agreements are made are mostly linked to the implementation of the Systems for the Management of Health and Safety at Work, considered as tools to systematise the prevention efforts of companies with a view to a continuous improvement in safety levels and an increase in the productivity and competitiveness of companies.

These 'sector' agreements may pave the way for other forms of agreement, for instance with the so-called 'industrial clusters'; i.e. groups of companies in the same area belonging to a common productive sector.

Success factors

The reduction of the tariff premium for prevention support measures represents a very important form of support because it is linked to the insurance system and because it innovates the traditional system of increase/reduction of the accident premium by introducing a criterion of 'premium on the prevention investments' of each company.

Leading companies towards the adoption of socially responsible behaviours means guaranteeing the suitability of working conditions, and increasing the wellbeing of workers by protecting their health and safety. The positive consequences include:

- a reduction of safety costs;
- a reduction of production costs;
- an improvement of the internal corporate climate;
- an increase in quality and productivity;
- enhanced company image and reputation;
- a rise in market competitiveness.

Problems faced

When the tariff premium reduction scheme was introduced, a large number of applications were expected, partly because the application process was very straightforward as it was based on self-certification. In reality, the number of applications was low compared to the number of potential beneficiaries.

Possible reasons for this may be:

- insufficient dissemination of information about the measure;
- lack of interest by companies in its use because of limited financial benefit and the fear of inspections;
- lack of interest on the part of business consultants in publicising and supporting the measure.

In future, attempts will be made to overcome these factors by promoting the premium reduction measure to a greater extent and raising companies' awareness of its benefits. The application form will be simplified and the tariff discount increased.

In particular, the measure might be more interesting if:

- the self-certification of the application is retained;
- the percentage of maximum possible reduction is increased;

- discounts are available at different levels, according to the level of effectiveness of the different actions and measures (e.g. via a system of bonus points).

It would also be necessary to raise awareness on the part of trade associations as well as those that are directly involved in safety management within companies (employers, staff in charge of prevention and protection services, external consultants).

It would be appropriate to grant higher discount rates to companies that achieve outstanding results in their health and safety interventions, and it would be possible to hypothesise an annual increase of the discount rate, according to the progress made by the company.

The interventions proposed should also be associated with a statement on the future prevention benefit expected in terms of risk reduction, determined through prevention indicators that are not based on past performance, as those linked to the accident trend (bonus-malus) currently are.

These 'ex post' indicators are meaningful in large and medium-sized companies, but have no prevention validity in small and micro-enterprises (which account for nearly 97% of Italian companies). For such companies, the use of these figures can mean that no harmful events are recorded for decades for purely statistical reasons, irrespective of the actual health and safety conditions at the company. It would therefore be important to link the actions carried out to prevention indicators able to provide an indication of the effective commitment to improving health and safety at work.

Finally, the award of a certificate testifying to the company's commitment to prevention might also be used to enhance the image of the applicant company.

Further information

Mrs Liliana Frusteri
INAIL-Consulenza Tecnica Accertamento Rischi e Prevenzione (CONTARP)
Via Roberto Ferruzzi 40, 00143 Rome

Tel: 0654872876
Fax: Fax 0654872365
Email: l.frusteri@inail.it

Mr Claudio Mercuri
INAIL-Direzione Centrale Prevenzione
Piazzale Giulio Pastore 6, 00144 Rome

Tel: 0654872500
Email: c.mercuri@inail.it

Mr Fabrizio Benedetti
INAIL-Consulenza Tecnica Accertamento Rischi e Prevenzione (CONTARP)
Via Roberto Ferruzzi 40, 00143 Rome

Tel: 0654872126
Fax: 0654872365
Email: f.benedetti@inail.it

4.2.5. Snapshot: Premium differentiation in occupational accident insurance (Belgium)

Organisation

Belgian Federal Public Service Employment, Labour and Social Dialogue

Aims and objectives

- To stimulate employers to invest in accident prevention
- To reward companies that have invested in accident prevention

Key points

The premium differentiation in the occupational accident insurance is based on the Royal decree of 8/5/2007 (*Moniteur Belge* 14/6/2007) and stipulates that accident insurance institutions have to apply a bonus-malus system. This will be done through a 'credibility' formula that takes into account the period of the temporary incapacity for work as well as medical costs. The formula also considers the size of the company. The smaller the company, the smaller is the impact of the injury statistics. This means that if an occupational accident happens in the smaller companies even though they invested in a prevention policy, there is no disproportionate increase of their 'malus'. In the past small companies paid a premium determined at sector level, which penalised companies that performed better than the sector average and did not encourage companies to improve.

In the new system, which came into force on 1 January 2009, a negative injury statistic can lead to a 30% increase in the premium, whereas positive statistics can mean a 15% fall in the premium for the smallest companies. Large companies can obtain a greater bonus depending on their results. The government will evaluate the results and preventive effects of the new system annually.

Further information

Persdienst van minister van Werk en Informatisering

Koningsstraat 180

1000 Brussel

Lore Abrahams

Tel: 02/209.33.30 – 0473/73.05.81

Email: lore.abrahams@work.fed.be

Reference

PreventActua, 'Een systeem van premiedifferentiatie toegepast op arbeidsongevallen', PreventActua, nr. 13, 2007.

4.2.6. Enterprise for Health: Promoting health management among companies in Lower Saxony (Germany)

Organisation

Allgemeine Ortskrankenkasse Niedersachsen (AOK Lower Saxony), in cooperation with:

- ITA: Institut für Technologie und Arbeit, Technische Universität Kaiserslautern (Institute for Technology and Work, Technical University of Kaiserslautern)
- WHO: World Health Organisation, Regional Office for Europe.

Key points

AOK Lower Saxony started pilot projects encouraging small and medium enterprises to introduce integrated health management systems.

Stimulus is a health insurance premium variation (bonus) granted to companies that succeed.

Key words

Integrated health management systems, workplace health promotion, health insurance premium variations, evaluation criteria and indicators

Abstract

AOK Lower Saxony and its project partners started pilot projects aimed at encouraging small and medium-sized enterprises (SME) to introduce integrated health management systems. This has been done using reimbursements of the health insurance premium for companies that participate successfully. The monthly health insurance premium represents a significant part of the ancillary costs for the employer, amounting to as much as 7.3% of the total workers' wage bill. Successful companies were granted an insurance premium bonus amounting to one-twelfth of the annual premium.

The project was expanded step by step. The indications are that the measures taken have been effective. Nevertheless, further evaluation criteria will be developed for a better quantitative and qualitative evaluation.

Background

In a globalised economy, high productivity and high quality standards are prerequisites for the competitiveness of European companies. Both depend not only on education but also on the health of the workers. High absence rates among workers can lead to delays in production and delivery and to a decline in productivity and profits. Experts estimate that between 30% and 40% of absence rates due to illness could be avoided by better health management in the companies concerned (BAuA, 2006).

On the other hand, 30% of workers fear that their work is endangering their health. Despite this, health management is still often aimed at large companies, unsystematic, oriented to the short term and not embedded into management processes. Small and medium-sized enterprises (SMEs) are particularly reluctant to introduce additional health management systems (ITA, 2001).

In view of this, AOK, WHO and ITA started two projects. They decided to implement them in Lower Saxony as the size of this German state (some 7.5 million inhabitants)

and its health insurance system were such that if a project was successful here, it would probably be transferable to other European countries (WHO, 2004a). The projects were intended to determine whether SMEs in particular could be motivated to mainstream health management systems into general management, and if such management systems could have a positive outcome for companies, workers and health insurance companies.

Aims and objectives

The project partners wanted to find out if and to what extent economic incentives, in this case the reduction of health insurance contributions – part of the employer's ancillary costs – can influence the decision of companies to introduce health management systems.

The idea was also to evaluate the effectiveness of such health management measures, asking:

- Will they have positive effects on the productivity of the company?
- Will they have positive effects on health and satisfaction of the workers?
- Will they have positive effects on costs on site of the health insurance company?

Scope of the project – what was done

a) Framework of the action

Most of the workers in Germany are members of the Statutory Health Insurance (Gesetzliche Krankenversicherung, GKV). Some 70 million people are insured with one of the 250 insurance companies of the GKV; the largest of them is AOK with some 26.5 million insured persons (members and relatives). Under the roof of one federal organisation, AOK Niedersachsen (Lower Saxony) is one of 15 regional insurance bodies and counts some 2.2 million members (2008).[9]

The GKV is financed by membership fees which are paid by employers and workers. The monthly contribution has been defined by law since January 2009 and is currently at 15.5% of the worker's gross income. The fee is paid jointly by employer and worker: the employer pays 7.3% of the worker's gross income, while the worker pays a so-called augmented premium of 8.2%. Nonetheless, at 7.3% of the total wage bill, the monthly health insurance premium represents a significant proportion of the ancillary costs for the employer.

This was the starting point for the AOK, ITA and WHO projects: In their common project 'Betriebliches Gesundheitsmanagement in niedersächsischen Unternehmen' (Health management in companies in Lower Saxony) the partners wanted to set economic incentives for implementing and certifying health management systems by promoting a prospective reduction of the membership fees for health insurance (ITA, 2004):

- Companies that participated in the programme had to set the organisational framework for the implementation of health management and of general health promotion measures. The health management had to be certified annually.
- After certification, the company could apply for a reduction of membership fees. To be granted the reduction, the company needed to prove the success and sustainability of the measures and management system implemented.

9 See also: Federal Association of AOK at http://www.aok-bv.de/ and AOK Niedersachsen at http://www.aok.de/niedersachsen/wir-ueber-uns/aok-niedersachsen-profil-23240.php

- If these conditions were fulfilled, a reduction of the membership fees of AOK Lower Saxony was granted to the company and to the workers (members of AOK only), totalling one-twelfth of the annual contributions.

In total, 37 companies of different sizes and from various industries in Lower Saxony participated in the project, which was carried out and evaluated between 1996 and 2004. The project team decided on an eight-year time frame because it takes time to implement the new management system and to promote it successfully among workers and management representatives. The project budget was approximately EUR 25 million for consulting, evaluation and reimbursement (WHO, 2004b).

In a second project, 'Integratives betriebliches Gesundheitsmanagement in KMUs' (Integrated health management in SMEs), the partners aimed to develop approaches and instruments for improving health situations in small and medium-sized enterprises (SMEs). The second project was carried out between 1998 and 2001 (ITA, 2001).

From 2001 on the project was expanded to further federal states of Germany; participating health insurance companies were AOK Hessen and AOK Rheinland-Pfalz.

b) Description of the action

The action covered several activities: first, the implementation of a (safety and) health management system into the company's management processes. Second, health promotion in a general sense was required to be carried out in the company. Third, further management processes needed to be adapted to the ideals of health promotion and good quality of work. Examples of measures are (WHO, 2004b):

- improving human resources management and application procedures
- implementation of health circles
- allowing workers to choose their shifts
- work rotation
- re-organising work plans to promote work–life balance and accommodate family life
- promoting vocational training
- promoting diversity in the workforce
- supporting sports activities among the workers
- defining annual goals for environment and safety.

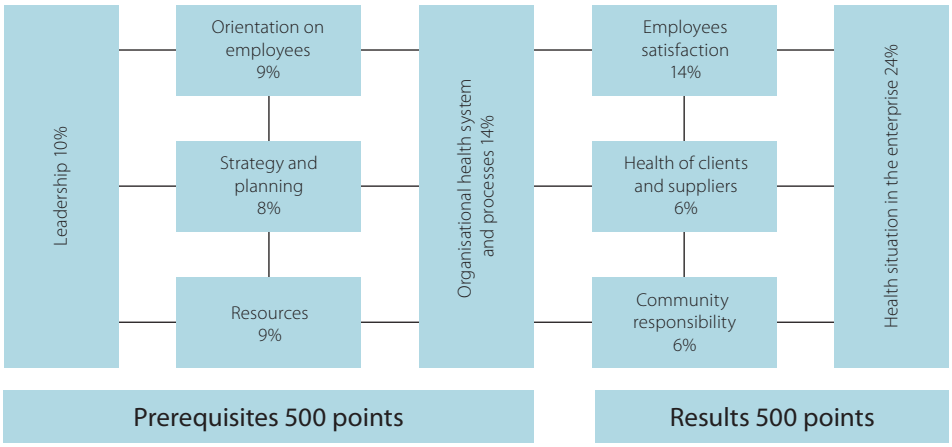
The management was expected to work out processes and goals for the company by themselves. The idea was that they should be tailor-made for the company and take into account its background (size, sector, culture). Throughout the process, a project manager helped and advised the management. At the end of the project, the company had to carry out a self-assessment of the measures taken in order to apply for the reduction of health insurance contributions.

In the assessment phase both the status quo and the progress during the five-year project were taken into account. Aspects assessed were:

- Has management shown commitment and are enough resources allocated to health promotion and management?
- Do management representatives provide a role model for the workers?
- How far is 'health' taken into consideration in the strategic development of the company and in operational decisions?
- Does the management invest in workers' training and development and does it take care in a general sense?
- Do workers participate actively in health promotion and management?

Criteria for the assessment of the results of the action were indicators for worker satisfaction, indicators for corporate health status and health promotion with regard to customers and suppliers.

Figure 5: The different fields of action and criteria that are taken into account for evaluation purposes



Outcome and evaluation of the project

As general findings, it could be observed that among the participating companies the amount of sick leave per worker declined, job satisfaction increased, and there was a rise in satisfaction with worker–management relations and productivity. Nonetheless, the outcomes varied considerably between companies. One reason can be seen in the individual design of the measures and the size and business of the participants: different companies set different goals and defined their own priorities (WHO, 2004a).

The success can also be seen in the number of reductions granted by AOK Lower Saxony and the interest of companies from all over Germany in the project: many of them wanted to join the programme and asked if the project could be launched in other federal states and be supported by further health insurance companies. But it has to be stated that the incentive of one-twelfth of the annual contribution was a political decision and resulted in high costs on the part of the insurance company.

Further problems arose when it came to evaluating the project: evaluation criteria and indicators had been identified by the project partners, including criteria in companies and workers (indicators based on sick leave, accident ratio, wellbeing at work and job satisfaction) and on an insurance basis (especially costs for benefits, e.g. for medical treatment, prescriptions and sick pay). Unfortunately the benefit costs could not be broken down completely to each participating company. Furthermore company data can only be given for successful participating companies. Further effort needs to be made to sharpen evaluation criteria (see: Zink et al., 2009). Nevertheless it was possible to carry out some analyses on the basis of existing data for the partner project in Hessen:

- On the insurance level, sick pay for participating companies has remained constantly below sick pay for the sectors concerned and shows positive tendencies: it was at 85.3% at the start of the project, 80.8% in the second year, 74.3% in the third year and 79.5% in the fourth year (increase due to a significant fall in the overall sick pay).
- In the same time the absolute sick pay dropped steadily from EUR 24,833 (per 100 insurance members/years) to EUR 22,955 (100 i.m./years).
- Overall annual benefits paid by the health insurance per insurance member also increased at a slower rate than for the sector overall.
- On a company level, it could be observed that days of sick leave also dropped steadily in participating companies, by a total of 6.7% during the first three years.
- Further qualitative effects that can be taken into consideration are improving the company's image as well as the image of AOK, and drawing attention to occupational health and the importance of a healthy lifestyle.

Problems faced

During the project it proved difficult to persuade management representatives that investing in safety and health is not an economic burden for the company but an investment in competitiveness. Furthermore, in some cases workers proved to be rather stubborn over changing personal habits or certain behaviour (WHO, 2004a).

One structural obstacle is certainly the differentiation in the German health insurance system: There are some 250 health insurance companies in Germany, but AOK Lower Saxony can only include its own members and can grant reductions only on their membership fees. This means a double problem in the sense that:

- The more AOK members a company employs, the higher the economic incentive.
- Workers of the same company who are not members of the AOK do not profit from the reduced membership fee.

Furthermore, the system seemed to be more interesting to medium-sized and even large companies than to small and micro-enterprises. One reason for this may be the type of management system promoted. Generally, it can be said that the smaller a company is the easier the solution must be (EU-OSHA, n.d.).

The AOK Lower Saxony found the scheme made high demands on its resources (costs and manpower for assessment) (WHO, 2004a). Cost pressure is extremely high in the German health insurance system and it is doubtful whether the system could be introduced nationwide without increasing the general health insurance contributions of workers and employers.

Success factors

The success of the project was largely due to the enormous commitment of AOK Lower Saxony. Their project managers helped companies remain on the right track with their advice and experience. At the same time they gave the management a free hand in defining priorities and approaches in health promotion and health management (WHO, 2004a).

Experience gained from several years of operation, and ongoing evaluation of the measures implemented, have proved fruitful in transferring individual measures into management routine. This is important, because results can only be achieved in the long term if sustainability can be ensured (ITA, 2004).

The economic incentive is considered to be helpful in encouraging companies to implement health management systems as well as carry out ongoing improvements. Nonetheless, the quantitative effectiveness of such incentives has to be seen in correlation to the possible savings: in the participating companies a significant 'start effect' could be observed in the quantitative (cost-related) criteria. This also implies that the savings eventually reach a natural limit ('ceiling effect'; see evaluation in Zink et al., 2009).

Transferability of the project

The follow-up to this project has been quite positive. ITA and AOK started two follow-ups for the years 2001 too 2003, changing the focus slightly:

- In 2001, partner projects were started in other Federal States of Germany, for example in Hessen and Rhineland-Palatinate.
- In 2003, the project proved to be an inspiring example for a new German federal law (Gesundheitsmodernisierungsgesetz), allowing bonuses and gratuities in health insurance on company level.

The project was given an award by the WHO for its innovative approach to mainstreaming health promotion in enterprises.

In general, the project can be a role model for health insurance premium variations in all countries that have a health care system based on membership fees. In the European Union countries with such a health insurance system are Austria, Belgium, Czech Republic, Germany, Estonia, France, Greece, Hungary, Luxembourg, Lithuania, the Netherlands, Poland, Slovakia and Slovenia (for further information on the different health insurance systems in EU-27, see BMAS, 2007).

Further information

Institut für Technologie und Arbeit

Technische Universität Kaiserslautern

Dr Martin Thul

Head of Department 'Integrated Management Systems'

Tel: +49-631-3168011

Email: martin.thul@ita-kl.de

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Technische Universität Kaiserslautern: http://www.uni-kl.de/5098.html?L=1

World Health Organisation, Occupational Health Programme: http://www.who.int/occupational_health/regions/en/

4.2.7. Snapshot: Farm Health and Safety Initiative (Ireland)

Organisations

TEAGASC (Agriculture and Food Development Authority) and Health and Safety Authority (HSA), Ireland

Aims and objectives

- Develop a code of practice and risk assessment document
- Evaluate strategies to help farmers implement the code of practice and risk assessment documents
- Commence a national programme to help farmers comply with legislative requirements

Key points

A three-year initiative began in Ireland in 2005 to develop a Code of Practice, required by new legislation, to help farmers implement safety and occupational health control measures at farm level. The initiative consists of three phases: Phase 1 (2005) aimed to develop a risk assessment document and evaluate its use and implementation by a sample of 1,000 farmers who participated in a half-day training course; Phase 2 (2005-2006) aimed to develop a code of practice document and conduct a consultation process for the documents developed in phases 1 and 2; and Phase 3 (2007-2008) aimed to commence a national training programme to help farmers comply with

legislative requirements. One insurance company in Ireland now offers a 10-15% discount on insurance premiums for farmers who complete the risk assessment (developed during Phase 1) in addition to attending an extra training course. The insurance company offering the economic incentive (undisclosed) is not the main supplier of insurance to farmers in Ireland. No evaluation exists on the cost-benefit of the risk assessment and training.

Further information

John McNamara

Teagasc Health and Safety Officer

Tel: + 353 (0)51 644537

Email: john.g.mcnamara@teagasc.ie

Web: http://www.teagasc.ie

4.3. State subsidies, grants

4.3.1. Supporting SMEs in OSH management (Poland)

Organisation

Polish Agency for Enterprise Development

Key points

- Preparing OSH consultants to work with SMEs
- Providing advice and grants for SMEs to support them in fulfilling legal requirements

Key words

OSH-related expertise, OSH-related advice, OSH subsidies

Abstract

This programme was implemented by Poland's Agency for Enterprise Development. The main objective was to increase the capacity of Polish SMEs to implement the legal requirements in the field of occupational safety and health and to encourage employers from SMEs to improve safety and health in their enterprises. Within the project free training on OSH was organised all over Poland. Subsides were provided to SMEs that were interested in improving OSH performance by implementing OSH management principles.

Aims and objectives

The overall objective of the project was to increase the capacity of Polish SMEs to implement and enforce EU legislation in the field of occupational safety and health (OSH). The detailed goals of the project were:

- To initiate investigations on working conditions with a view to initiating an ergonomic approach in SMEs in the following sectors: construction and chemical, rubber and plastic industry.
- To build up the capacity of employers, employees and representatives of chambers of commerce in implementing, assessing and improving OSH and working conditions.
- To encourage SMEs to develop an OSH culture.

Background

Recent research and statistical data show that the role of the SME sector in the Polish economy is increasing in importance. To expand further the sector needs to be supported in a number of key ways; notably in the area of technological development.

For most SMEs, the main advantages of technological advancement are the introduction of new products, production methods, processes and equipment, as well as the reduction or elimination of risks, or, in the case of chemicals, using substitution as a way of eliminating risk, or replacing it with a lesser one. To enable companies to do this properly, the project 'Occupational safety and health in the SME sector' was implemented within the PHARE 2002. The over-riding priority of the actions within this project was the protection the protection of workers. This is not incompatible with the need to support the competitiveness of enterprises, especially SMEs. The measures aimed at reducing the costs (to employers, workers and State) of ill-health and accidents can all play their part in the development of an efficient competitive, quality-based economy. In addition, the workforce convinced that serious efforts have been made to protect its safety will respond with improved productivity. This in turn contributes to better employment performance.

The project covered two sectors: (1) construction and (2) chemical, rubber and plastic industry. According to data from Central Statistical Office (2006) in the construction sector 74% are small enterprises (up to 50 workers) that employ two- thirds of the man power of the whole sector. The number of fatal work accidents in the construction sector amounts to about 25% of the total number of fatal work accidents. In the chemical, rubber and plastic industry about 95% are small enterprises (less than 50 employees). Each work accident results in 42 lost days, and the number of injured workers per 1,000 employees has increased (about 40 per cent) since 1996 (Chief Labour Inspector Report on National Labour Inspection Activities in 1999).

Scope of the project – what was done

The project 'Occupational safety and health in the SME sector' was implemented within the EU funding programme PHARE 2002 (Poland and Hungary Aid for the Reconstruction of the Economies) framework under the direct auspices of the Ministry of Labour and Social Policy in cooperation with the economic ministry. The overall responsibility for managing and monitoring the project rested with the Polish Agency for Enterprise Development. The Central Institute for Labour Protection – National Research Institute was involved in activities aimed at achieving the second goal of the project.

An essential part of this project was an investigation of the configuration of the working environment and the effects on the safety and health efforts of prevention objectives in SMEs in the construction, chemical, rubber and plastics industries. 425 of the 4,000 small and medium-sized enterprises canvassed sent in questionnaires developed for the purpose. The investigation was intended to gather information on:

- the influence of excessive stress and perception of risk by workers on the incidence of workplace accidents, occupational disease and work-related diseases;
- the impact for health and safety of new technologies, production techniques; and
- the exposure of workers to potential health and safety hazards such as chemical agents, dusts, physical agents, etc.

The findings of the investigation were used as a starting point to identify needs in the field of working conditions (work organisation, ergonomic approach, duration and adaptation of working time, workload, work rate and stress at work) in SMEs as well as for preparing guidelines on hazard identification and the assessment of risk associated with these hazards in the workplace, and manuals for training OSH consultants.

On the basis of the results obtained, educational materials have been developed for the training of each group of participants (i.e. employers, employees and consultants). The materials include the following thematic modules:

- methodology of training and OSH promotion;
- legal aspects of occupational safety and health;
- assessment of conformity of machinery, devices and collective and personal protective equipment to OSH requirements;
- psychosocial problems in the work environment;
- ergonomics;
- occupational safety and health management;
- noise;
- mechanical vibration;
- lighting;
- electromagnetic fields;
- aerosols in the work environment;
- chemical agents in the work environment;
- mechanical risks;
- risks caused by production machinery;
- electrical energy and static electricity;
- major chemical hazards;
- fire and explosion hazards;
- biological agents in the work environment;
- personal protective equipment;
- first aid.

Training has been provided for more than 160 OSH consultants, 50 representatives of chambers of commerce, 400 employers and 800 employees from SMEs. The task was carried out by the Central Institute for Labour Protection. The Central Institute for Labour Protection has issued certificates to the OSH consultants trained within the programme.

- During the programme each enterprise (all of which were SMEs) could apply for co-financing grants: to implement technical safety measures necessary to eliminate or to

limit occupational risks, e.g. the purchase of additional protective equipment and the replacement of work equipment not complying with the relevant legal requirements (machinery guard, control system, isolation device from sources of energy, emergency stop controls, noise protection, warning devices, markings, signs, lighting);

- Grants could also be used to pay for advisory services to assess risks and to implement OSH systems (risk assessment, safety management, measurement of noise, pollutants at workplace, lighting, work postures, accident analysis, set-up of prevention measures, chemical risk analysis, diagnosis of machinery, ventilation system, etc.).
- The financial support granted could cover up to 50% of the expenditure, from EUR 500 to EUR 4,000 for advisory services and from EUR 2,000 to EUR 50,000 for introducing technical safety measures. The overall budget for the programme was EUR 7,729,900.

To obtain a grant for advisory services and/or an investment grant, an SME had to develop a project, presenting a safety plan for the enterprise, including the key relevant economic aspects of production processes used, presenting risk assessment, identifying the key issues with a view to safety and prevention measures (technical and organisational), defining priorities and objectives, implementation schedule, expected results and implementation costs. SMEs had to pass an open and public selection procedure that was undertaken by the Selection Committee established by representatives of the Ministry of Labour and Social Affairs, Central Institute for Labour Protection and Polish Agency for Enterprise Development assisted by the consultants trained by the project.

Outcome and evaluation of the project

The project goals have been completely achieved by:

- providing assessment of needs in the field of working conditions in SMEs;
- developing guidelines for hazard identification and risk assessment in the workplace;
- developing manuals for the training of OSH consultants;
- establishing a network of OSH consultants;
- providing OSH-related training for over 1,250 workers, employers and representatives of sectoral chambers of commerce;
- providing grants to co-finance advisory services in the field of OSH; and
- providing grants to co-finance the purchase of individual and collective protective equipment and emergency and information devices.

Problems faced

The main problem was to ensure that sufficient companies participated in the investigation of working conditions to ensure that OSH-related needs in the construction and chemical, rubber and plastics industries were identified properly. Other problems were to ensure effective promotion of training courses and proper distribution of published brochures. No figures are available showing to what extent the subsidies have achieved their goal, and if SMEs have also collaborated without the financial incentive.

Success factors

Motivation of SMEs to participate was the key factor influencing the success of the programme. The chambers of commerce were very supportive in explaining

that participation in OSH training is not a waste of time but can be beneficial for enterprises. Consultants from chambers of commerce and the Polish Agency for Enterprise Development have also supported companies in preparing applications for grants.

Transferability of the project

This initiative is transferable to other industries and countries. It requires thorough initial investigation of working conditions among a huge number of enterprises in order to ensure that OSH-related needs are identified properly.

Further information

Polish Agency for Enterprise Development

Pańska Str. 81/83, 00-834 Warsaw

Tel: +48 22 432 80 80; +48 22 432 71 25

Fax: +48 22 432 86 20; +48 22 432 84 04

Web: http://www.parp.gov.pl/

4.3.2. Promoting a systematic approach to OSH management in Polish enterprises (Poland)

Organisations

Central Institute for Labour Protection, National Labour Inspectorate

Key points

- OSH-related advice and expertise offered to help companies implement effective occupational safety and health management systems
- Successful implementation of OSH management system contributes to fall in insurance premiums

Key words

Insurance premium reduction, OSH management system

Abstract

The programme was implemented by the Central Institute for Labour Protection – National Research Institute in cooperation with the National Labour Inspectorate. The main objective was to promote a systematic approach to OSH management in companies. The project included training, consultation and audits on OSH management systems in participating companies. The enterprises that implemented OSH management systems experienced an improvement in working conditions and a fall in the costs of occupational accidents and insurance premiums.

Aims and objectives

The overall objective of the project was to promote a systematic approach to occupational safety and health management in Polish enterprises. The detailed goals of the project were:

- to increase employers' awareness of OSH-related issues and to improve the level of occupational safety and health in enterprises; and
- to strengthen cooperation between industry, the research institute and the labour inspectorate.

Background

For many years, legal regulations have had a decisive influence on occupational safety and health management in companies. Not only do they define the minimum requirements for the quality of the working environment but they also determine activities necessary for ensuring employees' safety and health protection. The most important regulations for occupational safety and health management in companies of the European Union and associated countries are resolutions of directives, especially of the framework directive 89/391/EC. The directives state the basic rules of OSH management as they define obligatory activities including: occupational risk assessment, education and training of employees in occupational safety and health, monitoring the work environment and keeping appropriate records, as well as the necessity to involve employees in activities relating to safety and health protection.

To help companies fulfil these legal requirements, in 1999 the Polish standard PN-N-18001: 'Occupational Health and Safety Management Systems: Specification' was developed. It is intended for voluntary implementation. The main objective of the standard is to provide basic rules for designing and implementing an effective OSH management system that supports companies in fulfilling legal requirements and designing a safety culture. The standard is based on the rules of management systems that are common to the quality management system laid down in the PN-ISO 9000 standards and the environment management systems laid down in the PN-EN ISO 14000 standards. The requirements of the standard are to a large extent identical to the 'Guidelines on occupational safety and health management systems' (ILO-OSH 2001) published by the International Labour Organisation. This standard, together with new legal requirements, has contributed to the popularisation of the rules of systematic occupational health and safety management in Poland and to their implementation in Polish companies.

The SMIP programme (Safety Management Implementation Programme) was launched to support the promotion of systematic occupational safety and health management.

Scope of the project – what was done

In 1999 the Central Institute for Labour Protection – National Research Institute (CIOP-PIB) in cooperation with the Polish National Labour Inspectorate (NLP) launched the SMIP programme (Safety Management Implementation Programme) aimed at promoting OSH management systems.

Activities in the programme included:

- training for company representatives in designing and implementing occupational safety and health management systems;
- training for NLP inspectors in auditing OSH management systems;
- developing plans for implementing OSH management systems in companies;
- seminars for companies implementing OSH management systems; and
- internal audits of OSH management systems conducted by companies' auditors together with NLI inspectors and experts from CIOP-PIB.

Voluntary certification of OSH management systems was also offered to companies, after which they were exempted from routine NLI inspections. The programme was open to any company interested in real improvement of working conditions. Advice and expertise was provided free of charge or at a low cost. NLI inspectors were responsible for recruiting enterprises for the programme.

Outcome and evaluation of the project

Ninety-two enterprises nationwide have participated in this programme. In order to assess economic costs and benefits resulting from the implementation of OSH management system in these companies, research has been conducted by the Central Institute for Labour Protection – National Research Institute.

Findings of the research conducted in 35 companies that have implemented OSH management systems according to the Polish standard PN-N-18001 show that:

- in 70% of companies accident rates and consequently costs of occupational accidents have decreased significantly;
- in 50% of companies the number of employees working in hazardous conditions (in which exposure exceeds MAC or MAL) has decreased;
- 70% of companies will benefit from a drop in their insurance premium;
- The successful implementation of an OSH management system was put forward as the direct result of the collaboration, and the decrease in insurance premium as an indirect result.

The additional benefits noticed by companies include an increase in quality, productivity and awareness. At the same time in most cases the additional costs related to improving OSH management amounted to a fraction (1.5-25%) of the costs of fulfilling legal requirements.

Other research shows the positive impact of implementing OSH management system on companies' OSH performance and awareness of OSH-related issues. The companies that implemented OSH management systems more frequently implemented actions directed at improving OSH management such as:

- programmes motivating employees to participate in OSH activities;
- training related to OSH management improvement;
- actions directed at improving OSH information and communication;
- improving risk assessment; including emerging risks in assessments;
- reporting and analysing incidents at work;
- evaluating subcontractors, taking into account their OSH performance;
- monitoring and analysing work-related diseases and sick leave.

In addition, the representatives of companies that implemented OSH management systems more frequently reported that:

- employee involvement in OSH planning processes and ergonomic improvements positively influences work satisfaction;
- increasing employees' competences and involvement resulted in a fall in the number of accidents and incidents at work;
- motivating employees and involving them in OSH issues and good communication positively influence their knowledge and competences;
- popularisation of OSH issues positively influenced the company's overall performance.

Problems faced

The main problem faced during the project was in recruiting enterprises interested not only in the implementation and certification of a formal OSH management system but in real improvement of OSH management and working conditions.

Success factors

Close cooperation between experts from the Central Institute for Labour Protection and labour inspectors contributed to the effective implementation of OSH management systems in participating enterprises. Strong and visible leadership and commitment of top management in the occupational safety and health activities was equally important in achieving success.

The main incentives for enterprises were the free or low-cost advice and expertise offered within the project and consequently the possibility of adopting new OSH-related organisational solutions to improve the safety level and hence reduce insurance premiums.

Transferability of the project

This initiative is transferable to any country. It requires good cooperation between the labour inspectorate, research bodies and industry.

Further information

Central Institute for Labour Protection – National Research Institute

Czerniakowska Str. 16, 00-701 Warsaw

Tel: +48 22 623 30 00

Fax: +48 22 623 36 93

Web: http://www.ciop.pl/

4.3.3. Low-cost consultancy for safety and health management (SGM) by Austrian SMEs (Austria)

Organisation

AUVA (Allgemeine Unfallversicherungsanstalt)

Key points

- Companies are helped, at low cost, to introduce safety and health management systems
- Easy to implement safety and health management systems, suitable for all kinds of enterprises

Key words

Low-cost consultancy for health and safety management systems

Abstract

AUVA has developed a safety and health management scheme (SGM; Sicherheits- und Gesundheitsmanagement) in order to provide small and medium-sized enterprises

with a comprehensive approach to occupational safety and health. The aim is to give the enterprises a tool for (re)structuring their processes, taking into account OSH issues. Experience showed that SMEs, especially rapidly developing ones, were in need of assistance concerning the integration of OSH in their organisational structure. AUVA experts provide low-cost consultancy for the application of SGM. The Austrian Safety Certificate Contracts (SCC) Committee considers AUVA's SGM-certificate as proof that OSH matters have been considered and are being applied in the organisation.

Introduction

The Austrian Social Accident Insurance, AUVA, offers consultancy for companies to implement OSH management systems. In order to reach Austrian SMEs, AUVA developed a safety and health management system which is easy to implement and suitable for companies of every size. This system, called SGM, can be certified by AUVA and integrated into existing management systems.

Aims and objectives

- To help small and medium enterprises to introduce safety and health management systems at a low cost
- To reduce occupational hazards and risks by consolidating the broad spectrum of activities of a company
- To reduce occupational accidents through the integration of an OSH management system in everyday work life
- To focus on occupational health risks and occupationally induced illnesses

Background

OSH management systems began to spread throughout Europe in the late 1990s. At that time the Austrian Labour Inspectorate had already published a brochure on the various OSH management systems available. In addition, the Safety Certificate Contractors (SCC; Sicherheits-Certifikat-Contraktoren), developed for subcontractors in the petrochemical sector, had started to spread across Austria and had already been identified as a relatively good, though incomplete, approach to managing OSH matters in companies. Given this start, in 2000 the Austrian Social Accident Insurance (AUVA), which is part of the country's social security system, developed an OSH management system for Austrian enterprises. This was brought about with the help of committed AUVA employees. The new system, called SGM, followed the approach and structure of ISO 9001:2000. It should be noted that after the publication of the Austrian Guideline on Occupational Health and Safety Management Systems (Ö-SGMS) by the Ministry of Economy and Labour, SGM was revised according to the guideline. The latest version of SGM was published in October 2006.

Since the beginning of 2006 AUVA's Department for the Certification of Personal Protective Equipment and Management Systems (Sicherheitstechnische Prüfstelle) has been able to certify these OSH management systems. In June 2008, a second company named SystemCert in southern Austria was accredited to certify AUVA-SGM.

It is important to note that from the very beginning of the initiative low-cost consultancy for SMEs was thought to be an integral part of SGM.

Scope of the project – what was done

AUVA offers help and advice covering all occupational safety and health problems. As a statutory accident insurance body it promotes accident prevention and good work

practices. The implementation of a safety and health management system has many advantages: it defines targets and responsibilities for safety issues, it systematises and documents safety measures, it makes workers aware of safety matters and it promotes good work practices and the company's image.

Unfortunately, small and medium-sized enterprises fear high costs and the extra work associated with implementing an OSH management system. In order to ensure high consultancy standards, AUVA has invested in training its own personnel as well as external consultants. Since 2002 its employees have been implementing and auditing OSH management systems, primarily SGM, but also OHSAS 18001.[10]

AUVA consultants provide their services at comparatively low cost to companies interested in introducing SGM. The first meeting with the company's representatives is always free of charge. AUVA consultants explain the advantages and opportunities of implementing SGM. SGM was in fact designed to be self-explanatory so that a company would be able to implement it without external consultancy. For those preferring professional assistance, AUVA provides its expert services. A visit by AUVA experts to a company costs EUR 80 per hour. There is no extra charge for the accommodation or transport of AUVA consultants and no extra charge if more than one consultant is present during a consultation or audit. All audit prices are low compared to market prices, either for certification or for surveillance of the SGM system.

The general idea behind the SGM approach is that companies of all sizes and sectors that follow a strategic approach to OSH will eventually have fewer OSH-related accidents and diseases and thus will make higher profits due to minimised losses. SGM is process-oriented and can easily be implemented in existing management systems, such as ISO 9001,[11] ISO 14001[12] or EMAS.[13] One of the most important aspects of SGM is that employees and/or their representatives are closely involved in planning and implementing SGM in the company. AUVA provides all technical means for the implementation of SGM. These include technical guides and manuals, course modules, presentations, case studies, CD-ROMs, information through the internet, training, seminars, on-site visits, etc. All available information can be downloaded from www.auva.at/sgm. The latest available service is a brochure on examples, tips and

10 OHSAS is an international occupational health and safety management system specification. The OHSAS specifies the requirements for an occupational health and safety (OHS) management system, to enable an organisation to control its OHS risks and improve its performance. It does not state specific OHS performance criteria, nor does it give detailed specifications for the design of a management system. OHSAS 18001 has been developed to be compatible with the ISO 9001 (Quality) and ISO 14001 (Environmental) management systems standards, in order to facilitate the integration of quality, environmental and occupational health and safety management systems by organisations, should they wish to do so.

11 ISO 9001 is an international standard for the quality management of businesses. It applies to the processes that create and control the products and services an organisation supplies. It prescribes systematic control of activities.

12 ISO 14001 is the international standard for the environmental management of businesses. It lays down controls for those activities that have an effect on the environment including the use of natural resources, handling and treatment of waste and energy consumption.

13 EMAS stands for Eco-Management and Audit Scheme and is a voluntary initiative designed to improve the environmental performance of organisations. EMAS is compatible with the international standard for environmental management systems, ISO 14001, but is perceived to go further in its requirements for performance improvement, employee involvement, legal compliance and communication with stakeholders.

tricks for the implementation of SGM (*Anleitung und Beispielsammlung zum Regelwerk AUVA-SGM*).

Outcome and evaluation of the project

The first company certified by AUVA for its SGM was EAS Engineering Application Software in September 2006. The company has calculated that the implementation costs were EUR 3,000 for consultancy and certification. Its employees spent about 1,000 working hours setting up the system. A new audit is conducted every three years. Up to August 2008, 31 companies had been certified. Although no concrete figures on participation rates are yet available, participation is rising as AUVA promotes the idea through lectures and seminars, especially in German-speaking countries. Consultancy during the implementation phase costs EUR 80 per hour at the company's premises. No travel or accommodation expenses have to be paid by those interested. The audit costs start at EUR 400 and can rise to more than EUR 3,200, depending on company's size and organisation level. The annual charge for certification is EUR 110 for small enterprises and EUR 220 for medium and large enterprises. The company pays the consultancy costs.

Problems faced

The following factors could explain the low participation rate:

- AUVA-SGM is available only in the German language. Therefore, many companies working on the international level tend to implement OHSAS 18001 instead of SGM.
- The management system approach is a new idea within AUVA itself as well as for companies. Companies are therefore slow to accept it and sometimes extensive discussion is required with the CEO before they show an interest.
- AUVA employees have many other duties besides promoting management systems.
- No information is available on whether the consultancy cost is low enough to provide an extra incentive to companies.

Success factors

- Concerning the initiators of the project:

Professionals with experience applying various management systems (ISO 9001, etc.) receive support from well-trained staff on environmental and quality management systems and from experts who are trained on OSH matters.

- Concerning AUVA consultants:

The head of the SGM department as well as all AUVA consultants have a high level of expertise.

- Concerning the target group:

AUVA consultants have publicised the SGM approach well throughout Austria.

- Concerning the methodology used:

The process-oriented approach made it easier to carry out, especially for small enterprises which have not had much experience with OSH management systems.

- Concerning the consultancy costs:

Consultancy fees are relatively low. Should the company need more consultancy hours, these are provided free.

Transferability of the project

The SGM is easily transferable within the European Union, especially in German-speaking countries. Since its structure is similar to those of most management system standards, it can easily be adapted to fit the existing organisation of a company. Legal requirements in each country do not change its approach significantly. AUVA intends to promote the SGM scheme to other countries through lectures, seminars, etc.

Further information

Barbara Libowitzky
Sicherheits- und Gesundheitsmanagement (SGM)
AUVA
Adalbert Stifterstraße 65
A – 1200 Wien

Email: barbara.libowitzky@auva.at
Tel: +43 1 33 111-987
Fax: +43 1 33 111-347
Web: www.auva.at/sgm

4.3.4. Snapshot: Funding health promotion activities (Austria)

Organisation

Fonds Gesundes Österreich (FGÖ; 'Fund for a Healthy Austria')

Aims and objectives

FGO aims to raise public awareness about health promotion and prevention through project funding, networking, special events and PR. They support and fund projects in the fields of health promotion and primary prevention. These include practical and scientific projects based on a holistic concept of health, development of structures, networking and ongoing education. A priority area concerns 'Employees in small and medium-sized enterprises': creating a supportive environment and developing new tailor-made strategies. The projects are open to all companies, which can apply for funding by filling in the project template.

Key points

- Sustainability, transferability and cooperation are elementary prerequisites for financial support of the projects
- Minimum project budget should be EUR 10,000 (EUR 5,000 for particular cases)
- 1/3-2/3 of the overall budget can be funded by FGÖ
- Projects are funded by a spin-off company of the Federal Ministry for Health, Family and Youth
- All results are collected in an online archive and available as good practice examples for further interested parties.

Further information

Fonds Gesundes Österreich, ein Geschäftsbereich der Gesundheit Österreich GmbH
Mariahilfer Straße 176/5
1150 Wien

Tel: +43-(0)1-895 04 00
Fax: +43-(0)1-895 04 00/20
Email: info@fgoe.org
Web: http://www.fgoe.org/fond-gesundes-oesterreich

4.3.5. The Prevention Fund (Denmark)

Organisation

Forebyggelsesfonden, Denmark

Key points

- There is a need to increase the number of workers in Denmark
- Denmark established the Prevention Fund to prevent the early retirement of workers
- The Fund supports applications from enterprises, municipalities, associations and organisations
- Projects that are supported by the Fund must involve the cooperation of both employees and management

Key words

Early retirement, retraining, mental disabilities in workforce, physical disabilities in workforce, retraining and vocational rehabilitation of sick and disabled persons, reducing staff turnover

Abstract

In 2007, Denmark set up a Prevention Fund to reduce the early withdrawal of Danish workers from the labour force as a result of physical and mental ill health. The purpose of this scheme is to finance innovative measures to combat health problems that impact negatively on individuals' working life, and thereby to improve occupational health and safety in the workplace. The overarching goal is to increase the number of workers in Denmark's workforce.

Aims and objectives

The overall aim of the fund is to support projects that prevent the early withdrawal of Danish workers from the labour market as a result of mental and physical disabilities.

Background

In order to improve working conditions and reduce the attrition rate of employees, Denmark implemented the Prevention Fund (Forebyggelsesfonden) on 30 January 2007. The purpose of the Fund is to manage financial support to projects that aim to retain employees in the workplace. The Fund has a capital of DKK 3 billion (EUR 403 million). It supported projects up to a total amount of DKK 200 million (EUR 27 million) in 2007

and DKK 350 million (EUR 47 million) per year from 2008. The Fund will be in operation for a ten-year period from 15 September 2007 to 1 February 2017.

The projects supported by the Fund should are those that aim:

- to improve the working environment within industries and vocational groups threatened by physical and mental disabilities
- to improve re-training and the rehabilitation of sick and/or disabled workers
- to increase awareness about the risks of smoking, alcohol, obesity and a sedentary lifestyle.

Scope of the project – what was done

The Fund provides financial support to both private and public enterprises for carrying out specific projects within the following four key categories:

- Category 1: Projects to prevent routines and work procedures that lead to attrition
- Category 2: Support for the development of new technologies to prevent routines and work procedures that may lead to attrition
- Category 3: Projects to improve the retraining and rehabilitation of sick and disabled persons
- Category 4: Projects to raise awareness of the risks connected with smoking, alcohol, obesity and physical inactivity.

The Fund stipulates that backing will only be available for innovative projects, i.e. those projects that seek to improve on tried and tested techniques and go beyond the recipients' statutory obligations and normal activities.

The Minister for Employment appointed a Board to manage the Fund and choose the projects that will receive funding. Before applications go to the Board, they are first checked by a body of experts who ensure that the applications have met certain technical criteria as laid down by the Board.

Funding is available for projects implemented by private companies, local authorities or organisations, and in order to be eligible for funding, the projects must be put into practice at one or more workplaces. The Fund will analyse the labour market regularly to identify sectors and job categories where the risks of attrition appear particularly high. So far the following sectors have been identified as having a high risk of attrition: Cleaning, Home care/care of elderly persons, Hotels and restaurants, Transport of goods, Transport of passengers, Slaughterhouses, Fishing, and Building and construction.

The recipients have to report the results of the funded projects, which are then disseminated by the Fund, e.g. on a website, so that they can be of benefit to other organisations.

The funding received by successful applicants covers the following:

- Payroll costs for the employees taking part in the project (only the costs of the working time actually spent on the project are covered).
- Costs of hiring external consultants to help carry out the project.
- Costs for meetings and travel related to the project.
- The operating costs of the project (e.g. purchase or hire of material or equipment required for the project).

To ensure that the Fund is focused projects that aim to improve on productivity and other such activities are not being considered for funding. They are seen as more

suitable for employment aid or training aid that can be obtained within the relevant Community provisions.

Outcome and evaluation of the project

Thus far the Fund has supported 82 projects. Organisations that have successfully applied for funding range from large private sector companies to municipalities. In the first round of applications, the Fund received more than 300 digital applications within the four-week deadline; from these, support was given to 42 projects. The Fund is particularly interested in organisations that join forces to carry out projects; for example large and small enterprises, or those from the public and private sectors, or those enterprises that link with, for example, trade associations.

Table 9: Projects supported by the Prevention Fund

Number of projects	Number of employees				
Sector	0-9	10-49	50-249	250+	Total
Other		2	1	7	10
Municipal			11	27	38
Private	2	5	4	15	26
State			4	4	8
Total	2	7	20	53	82

One project that has received support aims to improve problematic and heavy handling and lifting at three key Danish kitchen manufacturers. CPH Design is developing new concepts for the handling of kitchen elements during production and transport. Initial work involves detailed analyses of the logistics and lifting techniques employed for the handling of goods within the companies' production and packing departments. The participating companies are HTH Køkkener, TMK, Invita, CPH Design and the adviser on work environment BST Thy, Mors, Salling. (http://www.cphdesign.com/news/21/)

Problems faced

As the Fund is new, specific challenges have not been highlighted to date. However, the Fund has very specific criteria that must be met if the application is to be approved. For example, projects that are funded must lead to useful results and large enterprises will receive a supplement only if they are working with small and medium-sized enterprises (SMEs). It will be interesting to assess these factors when the overall project is being evaluated.

Success factors

The fund has a limited administration budget and has been able to process applications and interact with applicants using a digital case management system. This is an electronic-based online system through which organisations were able to submit their applications within two months of the Prevention Fund being established. The system also allowed built-in communication with the applicants from the start of the process and was useful in maintaining timely contact between the parties.

Transferability of the project

The concept of the Fund can be transferred to other countries. Throughout Europe there is a need to retain workers in active employment due to the ageing workforce. Advancing financial support to both public and private enterprises for projects that aim to change strenuous routines and work functions that can lead to attrition of workers can be beneficial.

Further information

Lone Clausen

Landskronagade 33 2100 Copenhagen

Email: lc@forebyggelsesfonden.dk

Web: www.forebyggelsesfonden.dk

References

'Application and case processing system, forebyggelsesfonden', in Selected References: E-government, Resultmaker, Copenhagen (n.d.).

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4.3.6. Business financing for programmes and projects in occupational safety and hygiene (Italy)

Organisation

INAIL (Instituto Nazionale per l'Assicurazione contro gli Infortuni sul Lavoro) – The Italian Workers' Compensation Authority

Key points

Funding allocated to small and medium-sized enterprises and agricultural and craft sector companies for programmes focusing on compliance with safety regulations and for information and training projects.

Key words

OSH financing, business finance for occupational safety and health, prevention initiatives for SMEs, accident reduction schemes

Abstract

This case study concerns the allocation of financial resources for programmes aimed at making the working premises and working equipment of small and medium-sized enterprises (SMEs) and agricultural firms compliant with safety regulations, and for information and training projects targeting workers, workers' safety representatives, emergency management staff, employers, and prevention and protection service managers (in compliance with Articles 21 and 22 of Legislative Decree 626/1994).

The system promoting prevention initiatives by companies was provided for by Ministerial Decree of 15 September 2000. Investments aimed to foster an improvement

of health and safety standards in companies, not only through technological innovation in equipment and systems but also through the introduction of innovative organisational and management systems.

Introduction

In Italy, the costs of occupational accidents and diseases are still rather high, both in terms of lives lost and financially (loss of production, damage to facilities and machinery, increase in insurance premiums, damaged company image, customer dissatisfaction, low staff morale, etc.). SMEs (which make up about 99% of Italian enterprises) do not tend to invest in prevention and safety because profit margins have already been reduced by current economic circumstances, and financial resources are devoted almost exclusively to production activities. Hence the Italian state places a priority on policies aimed at improving occupational safety and health (OSH) in order to reduce the costs of accidents and diseases, and also to improve business competitiveness and efficiency.

In the past decade remarkable efforts have been made by the various public and private actors responsible for safety (institutions, the social partners, associations, companies) to promote the improvement of health and safety conditions. One of the preventive solutions which proved particularly effective in the Italian industrial sector was the payment of financial incentives to SMEs for reducing health and safety risks. The case study below considers the first Italian experience, promoted at the legislative level and implemented by INAIL, of financing safety-related initiatives implemented by SMEs and agricultural and craft sector companies.

Background

Funding for this business support and assistance project came from the 1999 Budget, which established that INAIL should allocate EUR 308.974 million to support companies that invested in safety, both to make their organisation compliant with the law and to implement the training and information activities foreseen by Legislative Decree 626/94 (Directive 89/391/EC).

The subsequent Legislative Decree 38/2000 set out the areas which would obtain financial support and INAIL was asked to define the initiative's regulatory provisions. The implementation regulation defined priority criteria for eligible projects, formulation criteria, deadlines for submission, and the amount of resources to be allocated to individual projects. Following on from experience gained between 2002 and 2006, improvements are under development, with a view to institutionalising investments by INAIL in the field of occupational health and safety in favour of small and micro-enterprises, as foreseen by the recent Legislative Decree 81/08.

Aims and objectives

The goal of the initiative was to boost safety and health performance in Italian small and medium enterprises, as well as in craft and agricultural enterprises, by financing prevention projects and inviting companies to go beyond the notion of mere compliance with the law in favour of continuous improvement. INAIL funding is aimed at fostering a strong decline in the number of occupational accidents and injuries, considering as priority categories for the allocation of funding those affected by the greatest number of injuries, according to the severity index.

1. Compliance programmes

By promoting programmes aimed at making facilities and organisations compliant with safety regulation, the legislation aimed to encourage not only the renewal of machinery, the refurbishment of work premises, and the installation of monitoring systems to reduce exposure to hazardous substances in the workplace, but also the promotion of a safety management system based on the notion of continuous improvement.

2. Information and training

This initiative is a result of the effort to reduce as much as possible the impact of human error resulting in accidents or injuries, by making workers aware of the risks they may run, and by increasing their knowledge of the dangers of substances, processes and activities involved in their production cycle, as well as of the prevention and emergency procedures to be followed in the event of accidents.

3. Tools and products

The goal of the initiative was to provide the largest possible number of workers with innovative information and/or training tools that were comprehensive, specific and easy to understand.

Scope of the project – what was done

Based on the tasks conferred on INAIL by the legislator, three calls for proposals were published in 2002, 2004 and 2006. These calls gave details about the submission of applications, deadlines, credit institutions which would issue the soft financing, conditions for obtaining funding, and distribution of the financial resources.

The experimental activity involved two types of projects:

- programmes focusing on making facilities and organisations compliant with safety regulations;
- training and information projects aimed at promoting compliance with articles 21 (information) and 22 (training) of Legislative Decree 626/94 (Directive 89/391/EC).

1. Project financing

75% of the total amount available was allocated to compliance actions, while the remainder was devoted to information and training actions.

Some EUR 310 million (amounting to 600 billion ITL) were divided among:

- compliance programmes: approx. EUR 232 million
- training and information projects: approx. EUR 78 million.

All three calls for proposals provided funding for compliance programmes (interest account and capital account), whereas the 2002 and 2004 calls also financed training and information projects (capital account).

The interest account funding (zero interest rate) opportunity covered the opening of a credit line (up to a maximum of EUR 155,000) by banking institutions, the related interest charges and additional charges to be paid by INAIL. In the relevant section of the application for the interest account funding, companies also had to state whether they wished to apply for the additional capital account funding, for programmes that would fall within the scope of one or more funding strands, and having a special

value and qualities in terms of prevention goals and the opportunity for expansion to other production sectors.

In the case of the capital account financing (non-repayable) opportunity, INAIL could provide 30% (up to a maximum of about EUR 46,500) of the interest account funding allocated if the compliance programmes proposed by the company had special quality and excellence features.

In this case two funding strands were established, concerning the modification and re-engineering of systems, machinery, devices and processes, levels of exposure to chemical, physical and biological agents, on the elimination or reduction of the use of hazardous substances; the refurbishment of work premises with a view to increasing safety was also considered. 90% of the funding was set aside for these purposes. The remaining 10% was devoted to the implementation of corporate safety management systems, compliant with international standards. With reference to the funding awarded, special controls were put in place to assess the programmes implemented by companies.

In summary, the financing initiative may be outlined as follows:

AREAS ELIGIBLE FOR FINANCING		BENEFICIARIES	TYPE	AVAILABLE AMOUNT
Programmes aimed at making facilities and organisations compliant with regulations in the field of occupational safety and hygiene, implementing Legislative Decree 626/94 (Directive 89/391/EEC)		SMEs Agricultural sector Craft sector	A. Interest account (zero interest rate): INAIL covers the interest of the loan (maximum approx. EUR 155,000) provided by the banks.	350 billion ITL, approx. EUR 181 million
			B. Capital account, non-refundable, paid by INAIL, amounting to 30% (maximum approx. EUR 46,500) of the financing applied for in A.	100 billion ITL, approx. EUR 51.650 million
Projects aimed at	Fostering compliance with articles 21 and 22 of Legislative Decree 626/94 (Directive 89/391/EC) and subsequent amendments.	All companies	Capital account, non-refundable, amounting to: 1. 75% of the cost of the project 2. maximum 100 million ITL (EUR 51.645 million)	128 billion ITL, approx. EUR 66.1 million
	The development of information, multimedia, graphic-visual tools and products, and data banks to make publicly available free of charge or at production cost.		Capital account, non-refundable, to cover the entire cost of the project. Maximum amount 300 million ITL (approx. EUR 155,000).	22 billion ITL, approx. EUR 11.36 million

2. Type of projects financed

2.1 Compliance programmes

With reference to compliance programmes, five action strands were identified:

Strand	Project
1	Elimination of equipment without the EC brand, and its replacement by EC-branded equipment (including equipment for lifting and handling goods).
2	Purchase, installation, refurbishment, modification of systems, machinery and equipment in order to increase safety levels, reduce workers' exposure to chemical, physical and biological agents, to eliminate or reduce the use of hazardous substances from production cycles.
3	Installation of systems to monitor the status of the working environment in order to control workers' exposure to chemical, physical and biological agents.
4	Refurbishment and/or structural modification of the working environment.
5	Implementation of corporate safety management systems.

Applicants

Italian small and medium enterprises, craft and agricultural sector companies.

2.2 Projects aimed at promoting information and training on safety and health in the workplace

Types of projects

These projects can be divided into:

- Training (courses, workshops) and information actions (drafting and dissemination of brochures, posters, audiovisual tools, meetings, workshops) aimed at workers, workers' safety representatives, emergency management staff, employers, prevention and protection service staff.
- Information, multimedia, graphic, visual tools and products, and databanks to be disseminated all over the national territory, of interest from the standpoint of innovation, exportability, and users.

Applicants

According to INAIL, companies, consortia or groups of companies, public law bodies, non-profit associations, institutes and bodies operating in the field of prevention, public administration bodies, employers' associations, trade unions, joint committees and bilateral organisations are all eligible for funding.

Target groups

The people targeted by the projects must be employed in companies belonging to the same INAIL premium rate group and fall into similar risk categories.

Funding strands

In order to be eligible for financing (non-refundable), projects must fall within one or more of the strands foreseen, according to the following breakdown:

Strand	Project	% of funding
1	Worker information and training	58
2	Training of workers' safety representatives (WSR)	18
3	Training of staff responsible for emergency management	12
4	Training aimed at helping employers and the staff responsible for prevention and protection services	12

The individual projects submitted could apply for more than one funding strand.

Project features

Information and training actions should:

- be relevant to manufacturing processes, the related technologies, machinery, equipment, systems, working premises and the risks existing in the companies which the target group members work for, as well as to the safety management organisational and procedural elements in use in the company;
- in the case of actions aimed at workers' safety representatives and staff responsible for emergency management, content should also be related to the specific role that these target groups play in the corporate safety management system;
- be appropriate, in the case of actions aimed at employers or at the staff responsible for prevention and protection services, to promote the development of in-house information and training activity;
- include practical exercises to be carried out, if possible, in the actual working premises;
- be started within three months of the date of communication of the awarding of the loan, and be completed within the deadlines set in the approved project;
- have a maximum number of participants not exceeding 30 trainees per individual course;
- have recourse to communication forms and content appropriate to the level of knowledge of the target group.

The training can also be carried out in the form of distance learning.

Priority criteria

The score attributed to the projects submitted would follow specific criteria such as:

- occupational injury category in the production sector corresponding to the INAIL premium rate group that the target groups belong to;
- number of workers in the production sector corresponding to the INAIL premium rate group of the target groups;
- percentage of target groups;
- assessment of trainees' learning level;
- information of joint bodies;
- participation by the Public Bodies indicated in Article 24 of Legislative Decree 626/1994;
- features of the project submitted.

Tools and products

In the case of tools and products used for education and training, the features the projects should possess were defined, and an evaluation commission was set up, while controls were performed during project implementation.

As to evaluation criteria, specific scores were established, which would consider the following aspects:

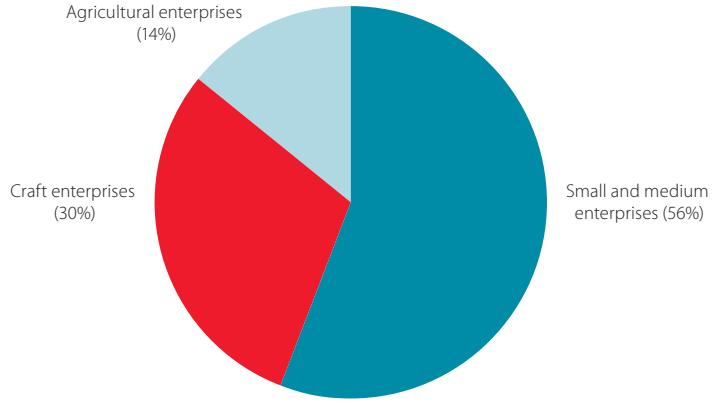
- index of national-level hazardousness attributed to the manufacturing activity;
- number of members in the target group;
- completeness and adequacy of content *vis-à-vis* the topics dealt with;
- communication effectiveness compared with the types of target groups;
- degree of innovation with reference to existing tools and products;
- level of usability by the target groups;
- applicant bodies;
- level of exportability.

INAIL acquired the intellectual property rights of the products developed and/or to be reproduced. All information and training products should be disseminated free of charge.

Outcome and evaluation of the project

As this was the first funding initiative adopted by INAIL, it was decided to involve all types of companies regardless of their activities and processes, favouring those affected by the highest number of injuries. Figure 6 shows the percentage of funding applications by category.

Figure 6: Breakdown of funding applications by category of company

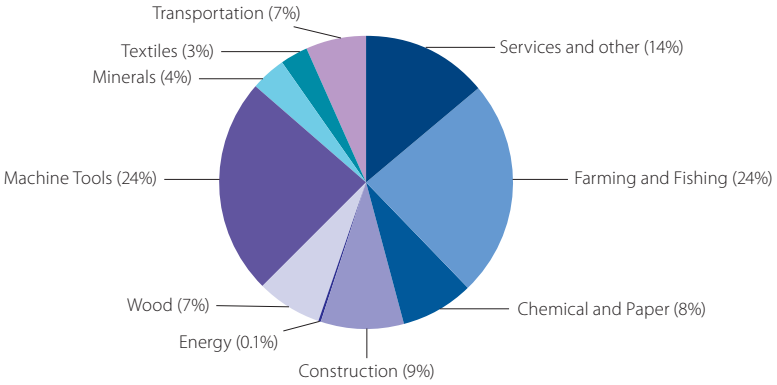


In the final part of the experimental phase of the business incentive system, it was noticed that it was attracting increasing interest. When the third call was published in 2006, there was a 15% increase in the number of eligible applications in comparison with previous calls.

The experimental phase yielded good results, with a growing interest by companies across the three calls for proposals published. 14,612 companies applied, involving over 900,000 workers. As the first Italian experience, it can be considered a satisfactory response.

In particular, by analysing all applications per working sector (Figure 7), what emerged was that the most interested ones were the machine tool and agricultural sectors (24% each).

Figure 7: Breakdown of funding applications by manufacturing sector



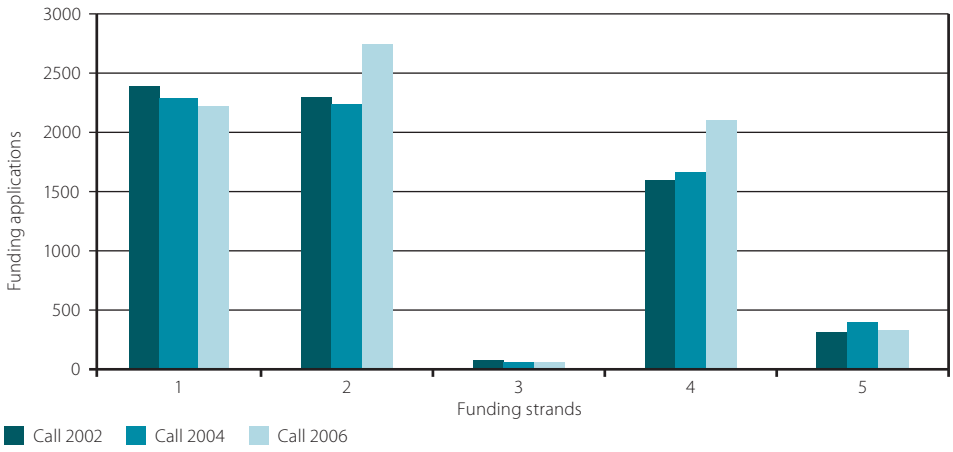
1. Compliance programmes

Following the publication of the two calls for proposals in 2002 and 2004, over 6,400 companies benefited from soft loans issued by banks for over EUR 511 million. The third call, published in 2006, is still being implemented and companies can access bank credit until 2009.

From the overall evaluation of the sample of funding projects examined, it emerged that the compliance programmes proposed deal in a less detailed manner with hygiene-related and environmental issues (i.e. improvement of the conditions of exposure to chemical, physical and biological risk agents) compared with actions concerning prevention and the reduction of occupational injuries.

The type of funding applications mainly concerned strands 1, 2, and 4, related to 'tangible' actions, ignoring strand 3, which focuses risk monitoring, and showing little interest for strand 5 (safety management) (Figure 8).

Figure 8: Total number of funding applications for compliance programmes



However, if the size of the companies applying for funding is considered, it emerges that actions were focused on different solutions:

- micro-enterprises applied for funding to replace equipment, also with a view to increasing productivity; whereas
- companies with more than 10 employees focused more on actions aimed at improving work organisation.

In addition to general considerations, further distinctions may be made with reference to the individual strands.

Strand 1: this strand received the highest number of applications for the 2002 call for proposals, and was among the most applied for in the 2004 and 2006 calls. This is most likely linked to the twofold advantage it provided: increased safety for workers and higher productivity for the company – both goals achieved through the replacement of obsolete equipment without the EC brand.

Strand 2: the installation or renovation of systems received the greatest amount of the funding allocated; among the types of projects proposed, actions focusing on electrical systems and fire prevention systems are among the most popular. In agricultural firms, funding was provided for cattle nutrition and milking systems, entailing a lower risk for workers during all the phases in which they work closely with cattle. A number of programmes (for instance related to separation tanks, waste water treatment plants, exhaust fume reduction systems, etc.) were also aimed at compliance with the regulations in force in the field of environmental protection.

Strand 3: this strand was largely neglected, probably due to its complexity and the minimal advantage that companies could gain over the short term; indeed, monitoring actions imply technical issues that are difficult for some of the company types addressed by the call to manage.

Strand 4: this strand ranked second in terms of importance, both from the standpoint of the capital invested, and the number of projects submitted. The projects mainly applied for funding to be used to refurbish premises, to organise working spaces better, or to improve buildings by removing or deactivating materials containing asbestos. Some actions focused on enlarging working spaces.

Strand 5: applications for funds to be used to implement a workplace health and safety management system were almost invariably made by companies with more than 16 staff, clearly possessing a stronger safety culture, and having a department devoted to improving corporate safety. The applications eligible for Strand 5 in the 2002 call for proposals were few. In the following call (2004), however, there was a remarkable increase (+36% approximately) in the number of applications focusing on the implementation of a health and safety management system, and another rise in the 2006 call. This also bears witness to the fact that awareness of the existence of safety management tools and methodologies, which were new and little known in 2002, had undoubtedly grown.

2. Training/information projects

The financing phase concerning training/information projects ended earlier, both because the related calls for proposals were published first, and the resources available were less conspicuous, and, last but not least, because bodies and organisations were directly motivated to implement the activities backed by the financing, which helped in promoting and disseminating the initiative.

With reference to training and information projects, 4,789 training projects and 118 information projects received funding.

Table 10: Training and information projects

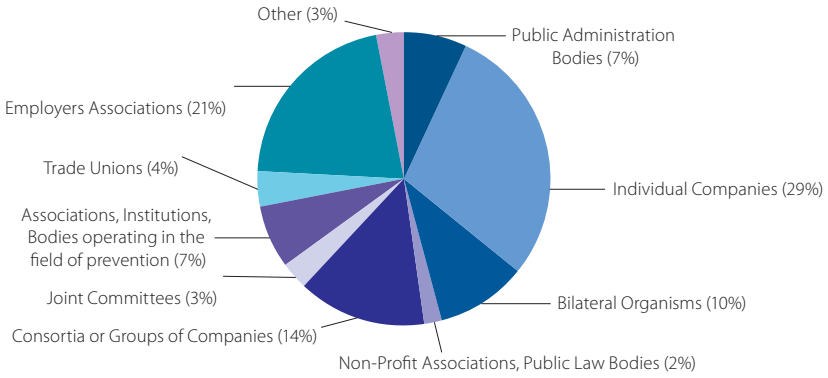
Resources	EUR 66,106,483
Funding applied for	EUR 113,040,642
Projects submitted	6,340
Eligible and financed projects	4,789
Rejected projects	1,551

Table 11: Tools and products development projects

Resources	EUR 11,362,051
Funding applied for	EUR 95,414,117
Projects submitted	829
Eligible projects	761
Rejected projects	68
Financed projects	118

Employers' associations, consortia of companies, and bilateral organisations were especially active in proposing training/information projects (Figure 9).

Figure 9: Breakdown of applicants



The following two tables show the funding strands with the related amounts applied for and awarded in 2002 and 2004.

Table 12: 2002 Call for proposals: training/information projects

Strand	Amount allocated (EUR)	Amount applied for (EUR)
1: Workers	38,341,760.19	82,887,472.00
2: Workers' safety representatives	11,899,166.96	6,318,532.39
3: Emergency management staff	7,932,777.97	15,425,543.31
4: Employers and Prevention & Protection Service Managers	7,932,777,97	8,409,094.50

Table 13: 2004 Call for proposals: training/information projects

Strand	Amount allocated (EUR)	Amount applied for (EUR)
1: Workers	3,582,258.00	14,924,522.02
2: Workers' safety representatives	5,451,646.00	1,313,347.47
3: Emergency management staff	730,803.00	2,171,811.92
4: Employers and Prevention and Protection Service Managers	3,049,290.00	948,597.65

If working sectors are analysed, training/information activities were mainly focused on the services, construction, agricultural and metal working sectors.

The products developed may be consulted free of charge on INAIL's website. They have been collected in a series devoted to prevention. Products are organised with reference to the various production sectors, including the construction, wood and chemical sectors.

Table 14: Types of products developed

Type of product	Number
CD	541
Brochure	265
Audiovisual tool	166
Software	117
Databank	21
Other	233

Statistical analysis on the effectiveness of the prevention activity

An initial statistical analysis was performed on the effectiveness of the prevention activities resulting from the financing of compliance projects following the 2002 call for proposals. The analysis was performed by comparing two homogeneous groups of statistical units which either benefited or did not benefit from the incentives proposed. The first group is made up of companies that obtained the funding; the second was identified by drawing from the population an overall sample of companies, as similar as possible in terms of features and production sectors to the ones in the first group.

Injury trends were observed over the period 2001-2005. The data obtained were used in a statistical model aimed at identifying differences, if any, among the two groups, and the impact of the time variable on injuries, evaluated in terms of the frequency of the injuries reported. The aim was to find out whether or not there was a decrease in the number of injuries in the group of companies benefiting from funding as a result of prevention activities.

The average frequency indexes in the reports filed in the two groups made the object of a statistical model of the Ancova type (analysis of covariance) in which the statistical significance of variables 'year' and 'group', and the interaction among the two was studied, i.e. the presence or absence of a different time trend in frequency indexes. The trend analysis performed over the two groups showed for the injury frequency index a stronger decrease in the group benefiting from funding, compared with the control group.

A more recent statistical analysis used an X2-test and extended the observation period until 2007. The analysis was performed by comparing three homogeneous groups of statistical units which benefited or did not benefit from the incentives proposed. The first two groups are made up of companies that obtained the funding (in 2002 and 2004 respectively); the third one was identified by drawing from the population an overall sample of companies as similar as possible in terms of features and production sectors to those in the first two groups. Injury trends were observed over the period 2001-2007.

The first group (2002) has shown a significant reduction of claims (down 25.5% vs. the control group); the second has seen a decline of 13.4%. These results are related mainly to injuries of mean severity (receiving temporary INAIL compensation).

Further in-depth analyses and controls will have to be repeated in order to widen the observation period, which is still too short, and to cross-check results over a greater number of years, taking into account, naturally, also the subsequent calls for proposals (2004 and 2006).

Problems faced

Some problems and critical aspects emerged in the field, which need to be analysed and solved.

Among the funding applications filed, approximately 30% were rejected. Out of these, about 70% were rejected for banking reasons, i.e. credit unworthiness (neither INAIL or the banks took the risk of credit loss); 30% for administrative and technical-prevention reasons (i.e. at times it was not clearly stated what would happen to the obsolete equipment to be replaced, or the action was unclear in terms of risk reduction goals, etc.).

Following the monitoring of the initiative both during and after the experimentation phase, the most relevant indications to improve the instrument included the following:

- link economic incentives to local and sector needs; decentralise administrative and technical management; decentralise regional resources with the aim of better responding to the needs expressed on a local level;
- simplification of procedures, with greater attention devoted to speeding them up;
- simplification of relations with banks;
- improvement and diversification of the communication tools used to disseminate the initiative (it is advisable to involve local organisation and the social partners to promote the initiative);
- preference given to capital account, accessibility through all bank counters, soft conditions to be agreed with the banking system;
- cooperation with the social partners and local bodies, to identify the production sectors locally that are more in need of financial aid to be devoted to prevention activities;
- use of indicators, making it possible to evaluate the needs of applicant companies concretely;
- follow-up and monitoring of the companies funded over a number of years, in order to assess the effectiveness of the solutions adopted, and guide them along the road of continuous improvement;
- promote the adoption of a workplace health and safety management system and organisation and management models implementing the principles of corporate social responsibility.

Success factors

The initiative was aimed at giving companies the opportunity to benefit from funding to meet the high costs entailed by the enforcement of legal provisions in the field of occupational safety and hygiene. In fact, the investments have led to an improvement of health and safety standards in companies thanks to technological innovations in equipment and systems, targeted actions aimed at improving the health levels in workplaces, and the introduction of innovative organisational and management systems. This initiative has also proved the great benefits that can arise when an insurance institution gets involved in prevention activities, thanks to the top-level synergies it can put in place at financial, technical, technological, management, organisational and IT level, to support businesses.

Transferability of the project

The project could be transferred to other European contexts, with the necessary changes and adaptations aimed at directing funding towards sectors most affected by occupational injuries or with a high number of victims of occupational injuries. To this end, professional unions may play a central role by adopting initiatives aimed at involving the greatest number of firms.

Further information

Ms Liliana Frusteri
INAIL – Consulenza Tecnica Accertamento Rischi e Prevenzione (CONTARP)
Via Roberto Ferruzzi 40, 00143 Rome – Italy

Tel: + 39 0654872876
Fax: + 39 0654872365
Email: l.frusteri@inail.it

Mr Claudio Mercuri
INAIL – Direzione Centrale Prevenzione
Piazzale Giulio Pastore 6, 00144 Rome – Italy

Tel: + 39 0654872500
Email: c.mercuri@inail.it

Mr Fabrizio Benedetti
INAIL – Consulenza Tecnica Accertamento Rischi e Prevenzione (CONTARP)
Via Roberto Ferruzzi 40, 00143 Rome – Italy

Tel: + 39 0654872126
Fax: + 39 0654872365
Email: f.benedetti@inail.it

4.3.7. The Experience Fund (Belgium)

Organisation

Federal Public Service employment, labour and social dialogue

Key points

- Improving the working conditions of older workers to prevent them dropping out of the labour market
- Stimulating companies to improve the working conditions of older workers in order to retain them in the job and to profit from their experience and knowledge
- Improving the employability rate of the Belgian workforce

Key words

Subsidy, ageing workforce, improved working conditions, job retention

Abstract

The Experience Fund promotes initiatives and projects carried out by companies to improve the working conditions of older workers. The objectives are to improve the working conditions of ageing workers, to stimulate companies to improve the working conditions of these workers to improve the employability rate of the Belgian labour market and to deal proactively with an ageing workforce. Companies and sectors that set up projects to improve working conditions for older workers can obtain a subsidy.

Introduction

Belgium has pledged to raise the activity level of ageing workers (workers aged 45 and over) to 50% by 2010. In 2002, only one in four (26.6%) older people were employed, and Belgium was far behind the European average. The average Belgian worker retires at 57, and this low retirement age will become unsustainable for social security in the future.

Aims and objectives

The Belgian Experience Fund was set up by the Federal government (Federal Public Service employment, labour and social dialogue) in 2001. The Experience Fund assists companies that invest in improving the working conditions of ageing workers.

The aims of the Fund are:

- to improve the working conditions of ageing workers to prevent them dropping out of the labour market;
- to stimulate companies to improve the working conditions of older workers in order to keep this category of workers in the job longer and to profit from their experience and knowledge;
- to improve the employability rate on the Belgian labour market and to offer a response to demographic changes (ageing workforce).

Background

The Experience Fund began its activities in 2004. In 2006 the target group was broadened and the possibilities for obtaining subsidy were evaluated. It is not only employers that can apply for funding; Subsistence Funds that support 'older' people (>45 years) are also eligible.

The Fund aims to give experienced workers the opportunity to try new experiences and to validate their past experience in new work challenges. It also aims to ensure the intergenerational transfer of knowledge. Fund investments should make the overall working environment more pleasant for ageing workers. The fund also

envisages stimulating companies to invest in an HR policy that takes into account more experienced workers.

Legislative background

Loi du 5 septembre 2001 visant à améliorer le taux d'emploi des travailleurs (Moniteur belge du 15 septembre 2001) (Law of 05/09/2001 aiming at improving the employment rate of workers)

Arrêté royal du 1er juillet 2006 portant sur la promotion des possibilités d'emploi, la qualité des conditions de travail ou l'organisation du travail des travailleurs âgés dans le cadre du Fonds de l'expérience professionnelle (Moniteur belge du 1er août 2006). (Royal decree of 1/07/2006 to promote the employment possibilities, the quality of working conditions or the work organisation of older workers under the framework of the Experience fund (MB 01/08/2006)

Scope of the project – what was done

Subsidies for companies

Employers who set up projects to improve working conditions for older workers can obtain a subsidy. Every employer that is part of a Joint Committee can submit a proposal for the improvement of the quality of work of employees of 45 and over. These employees have to have a contract with the employer. Projects from organisations in the public sector (state institutions, communities, provinces, schools, etc.) are not eligible.

The project is co-financed by the government. This means that the company has to invest some of its own resources in the project. The amount the company receives depends on the number of employees. In order to get funding the project has to be carried out in collaboration with the older worker(s), the committee for safety and health at work, the prevention service(s) of the company and the social partners. The law of 2001 stipulated that smaller companies could receive a higher maximum amount than big companies because they often employ a lot of older workers and need to hire external HR services to fulfil the project requirements. The new legislation of 2006 changed these provisions.

Table 15: Allocations in the old system

Number of employees	200+	50-199	20-49	Fewer than 20
Adaptation				
Percentage	50	60	70	80
Maximum amount (EUR)	5,000	7,500	10,000	12,500
Research				
Percentage	30	30	30	30
Maximum amount (EUR)	4,000	6,000	8,000	10,000
Research (1)				
Percentage	50	50	50	50
Maximum amount (EUR)	5,000	7,500	10,000	12,500
Adaptation and research				
Percentage	-	-	-	-
Maximum amount (EUR)	8,000	12,000	16,000	20,000

(1) the subsidy for a study can be higher if it meets two conditions: the study has proven that it can be easily transferred to other companies and sectors; and the author(s) of the study share this knowledge without any compensation

Table 16: Allocations in the new system

Companies	Measurements or diagnostic instruments	Specific solutions (2)	Measurement + solution
Amount per employee	EUR 12		
Max per employee/month		EUR 500	EUR 750
Max. percentage of the total budget	70%	50%	70%

(2) For a maximum of 24 months

In order to be eligible the employer should also demonstrate that:

- he consulted the company health and safety committee (including representatives from the workers and the employer), or in case of absence the union delegation, or in case of absence the employees themselves, on the planned project and obtained positive advice;
- employees who will be affected will be involved in the execution of the activities individually or in a group;
- an internal or external prevention service has given positive advice;
- he intends to employ the workers concerned during the entire period of the project and for a minimum of 12 months (unless the employee is fired on an emergency basis).

The company can file a request for the subsidy at the Ministry of Labour by using a specific form (www.ervaringsfonds.be). The form must be accompanied by a file with the details of the project. If the minister approves the request, payment can be made to the employer based on financial documents that prove the expenditure made by the company.

Type of projects

The fund supports projects that follow these steps:

1. measuring the degree of employability of ageing workers. The measurement tool should be approved by the government.
2. analysing the work environment and detecting the aspects in the work environment that contribute to improving or maintaining the employability of the workers. This analysis enables the proposals to be better targeted.
3. advancing specific solutions to the problem.

- initiatives to adapt working conditions and the work organisation, e.g. training for older workers so that they can function as coaches, teleworking, greater flexibility;
- preliminary studies that analyse the possibilities for adapting the working conditions and the work organisation, e.g. stress analysis, specific risk analysis.

Some examples of specific solutions

- Enrichment, reorientation of tasks in order to balance workload, rhythm and work schedule.
- Adaptations to the work organisation.
- New ways of collaborating, of structuring schedules, e.g. by invoking self-steering teams, shifts, flexible working hours, telework, etc. can reduce the load for older workers.
- Training of workers and maintenance of knowledge and experience for the company. Guidance programmes for older workers.
- Initiatives that promote an 'age conscious' company policy and organisational culture.
- Training for mentorship and guidance programmes, etc.

Subsidies for sectors

Joint committees such as subsistence funds on a sector level and joint training institutes (collaboration between social partners) can also apply for funding. Since these organisations are in continuous contact with companies, the government hopes to create a multiplier effect and reach more companies. Unlike individual companies, which can apply via an individual form, sectors have to apply for funding through a collaboration protocol.

The protocol has to lay out the specific aims and means (budget). It is an agreement between the federal government (FPS employment, labour and social dialogue) and the subsistence fund or joint training institute. It has to contain a qualitative and quantitative analysis of the sector situation. Three types of initiatives can be undertaken in sector approaches: 1) awareness-raising and promotion campaigns on ageing, 2) development or personalising of a measurement or diagnostic instrument, 3) ageing workers who change from night shifts to day shifts.

Subsidy for sectors

The subsidy is agreed via the collaboration protocol. Criteria depend upon the aims and the number of (ageing) workers in the sector with a maximum of EUR 100,000.

Table 17: Subsidy criteria

Sectors	Awareness-raising and promotional activities	Measurements or diagnostic instruments	From night to day shift
Maximum amount	100	25	Amount stipulated in the collective work agreement of the sector
Max. Percentage of the total budget		70%	

The SPF has engaged six employees to develop the activities of the Fund. The idea is that they can learn from their experiences and advise other companies initiating specific projects.

In order to stimulate the sharing of knowledge and help monitor the projects, a team of experts has been designated at government level. The aim is to organise an open and relevant debate on the ongoing projects. Social partners are also invited to collaborate.

Outcome and evaluation of the project

In 2006 the Experience Fund received 238 new applications, up from just 41 companies in 2005. In total the Fund received 286 applications for 4,065 workers over the age of 45. Of these applicants 74% were accepted, 18% were not accepted and further details were requested from 8%.

Most applications came from the health sector (22%); 13% from the construction sector, 9% from other services, and 7% from retail and the textile sector.

32% of the applicants employ fewer than 20 people, 23% have 20 to 49 employees, 21% have 50 to 199 employees and 24% have 200 or more employees.

Most of the project applications were for a single worker, 15% are for 2 workers and 5% for 3 workers. This means that most of the projects are small, 'custom-made' projects. A possible explanation for this may be found in the legislation concerned. Until the end of October 2006, the criteria and allocated budget were more favourable to small companies (in terms of number of employees) than to large companies.

With regard to the content of the projects, 18% of applications concerned a change in work organisation (change in location or work schedule, telework), 32% related to ergonomic changes (appliances to lift or carry objects, to reduce routine movements), 42% concerned a change of the job function (reducing physical or psychological workload) and 9% established extra support for the worker(s) concerned during the job. Some of the projects covered a combination of all the abovementioned types of changes. Projects were mostly curative rather than preventive. They dealt with a specific problem and were targeted at an individual.

The results of the Fund are considered positive. Good practice is shared on the SPF website. A typology of projects has been defined and will be continuously refined in future. This should lead to a more transparent policy regarding the criteria used to accept or reject an application, including the possibility of monitoring double governmental allowances for the same project.

At the moment the results of the projects are not structurally monitored. There is, however, a yearly evaluation. Thanks to this evaluation the legislation of 2001 has been amended and the age of the workers concerned lowered from 55 to 45. The

procedure has also been simplified. Nevertheless, a more thorough evaluation of the project results is needed for more effective monitoring of projects in future.

According to the National Labour Council, the number of companies with fewer than 50 workers applying has decreased. It is considered important by the council to maintain a balance between applications from bigger and smaller companies in the future.

The National Labour Council has also recommended a thorough and scientific evaluation of the impact of the financial incentive on the target group and the employability of older workers. The expectations of the companies *vis-à-vis* the Fund should also be clearly evaluated and lead to an adjustment of the actions programmed.

The achievements of the fund led the National Labour Council to recommend the introduction of a specific financial incentive for enable workers over 50 doing heavy work to switch to a lighter job in the company. The company would receive a temporary financial incentive to cope with the adaptations.

Problems faced

After a difficult start in 2004 the fund is now fully operational. There was at first a low awareness of the existence of the Fund.

A study by Kippers et al. (2006) of employers in SMEs showed that the Experience Fund suffered from low visibility. Only 24% of the respondents were aware that the Fund existed, and only 1.20% were aware of its existence and had used the fund to set up an initiative. 74 (61%) of the employers had never heard of it. This means that more promotional activities are needed. A change in the mentality of employers is also needed, but it is unclear to what extent these types of incentives can support this process. Often it is not only the employer who expects the older worker to stop working at the age of 50; employees are also often counting on taking early retirement.

It might be useful to provide SMEs with more specific information on the measures and incentives available. This would also prevent unfair competition between them and bigger companies, which are often better informed on the various measures and incentives.

There has been a certain lack of transparency in the acceptance criteria of the applications. The provision of a database including the different funded projects should solve this.

The fact that there was no database listing the applicants, and no information exchange between different government departments providing funding, also led to double funding of projects. There is no evaluation of the actual impact of the projects and the usefulness of the incentives.

A study by De Coen et al. (2007) looked more generally at the awareness of companies about the existing incentives to retain older workers and to employ older workers and found that incentives are probably important in the employment policy regarding older workers, not least because they help make companies aware of the importance of engaging and keeping older workers. Nevertheless there is too little information on the impact of the incentive and whether the amount of money is sufficient to stimulate companies to change their company policy. Other questions remain: What is the dead weight loss effect? Are there any differences between small and large companies? Besides that, different incentives exist and are issued by different public

departments. They can be accumulated, which raises the question of efficiency and transparency. The effects of the different existing incentives on one another should also be evaluated. At the moment there are different incentives for older workers as well as younger workers, some concentrating on employment and reinsertion, others (like the Experience Fund) focusing on retention. A possible side effect is that older workers are driven out of the labour market for the benefit of unemployed workers if the incentives are not adjusted/compatible.

Success factors

- The incentive is open to all companies. Economic sectors can apply, which enables them to collectively address the specific problems of companies and to fine-tune the measures to the specific needs of the sector.
- The provisions of the incentive are clearly laid out in national legislation.
- Constant evaluation of the incentive and the resulting changes/effects is planned.
- A database of good practice enables the government as well as companies interested in changing their work organisation to learn from the experiences of others.

Transferability of the project

This project concerns a very relevant issue, that of an ageing workforce, which will be increasingly important in Europe in the years to come. Good practice and experiences arising from the project can provide an inspiration to other countries. The procedure for applying is clear-cut. Nevertheless it is important to make sure that the incentive fits in the specific context and security systems of the country and takes into account existing incentives.

Further information

Mrs Anne Himpens
Coordinator
Service public fédéral Emploi, Travail et Concertation sociale
Direction générale Humanisation du travail
Fonds de l'expérience professionnelle
rue Ernest Blérot 1 – 1070 BRUXELLES

Tel: +32 2 233 45 80
Fax: + 32 2 233 46 39
Email: fonds.experience@emploi.belgique.be.

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4.3.8. Subsidies for innovative work equipment: the FARBO regulation (Netherlands)

Organisations

Ministry of social affairs and employment, Ministry of finance

Key points

- List of innovative and ergonomic equipment and tools that decrease exposure to physical agents, noise or dangerous substances
- Companies that order items on the list can ask for a subsidy of up to 10% of the total cost, up to a maximum of EUR 50,000
- The list of products is revised every year

Key words

Subsidy, ergonomic equipment, physical and chemical agents, safety measures incentives

Background

The Farbo regulation (Fiscale aftrekmogelijkheid van investeringen in arbeidsomstandigheden) provides a subsidy to encourage companies to purchase worker-friendly equipment that reduces exposure to OSH risks and prevents harm to or improves the health and safety of employees using the equipment. The government issues an annual list of eligible equipment.

The purpose of the subsidy is to make investments in OSH friendly equipment more attractive to employers. It was developed first as a tax system but, after thorough evaluation of the effects, has been converted into a subsidy system.

The Farbo regulation was set up in 1998 as a tax incentive aiming at providing an alternative to the introduction of binding legislation to encourage companies to invest more in occupational health and safety. It was developed in the spirit of Dutch government policy in which market forces, deregulation (a conscious decision to decrease interference by the public authorities) and the encouragement of citizens and companies to fulfil their responsibilities became increasingly important.

The incentive was launched by the Ministry of social affairs and employment and the Ministry of finance. The purpose was to create a tax-efficient climate for investment in equipment that reduces the risks of workers' ill health to a minimum. At first, the system was only available to profit-making companies, but since 2001 non-profit-making companies have also been eligible.

The system responded to a perceived gap in the legislation. The amendment of the Working Conditions Act (1994) and the increase in the accountability of the employer for high levels of employee absenteeism had already served as a major stimulus for companies to take responsibility. Nevertheless, it was still felt that delayed health effects such as noise-induced hearing loss, backache, and diseases caused by long-term exposure to dangerous substances were not being tackled adequately. Because of the latency period, these diseases often only appear after several years and legislation would not suffice to tackle these problems.

From a tax system to a subsidy system

The system was first developed as a tax system, and in 2005 it was converted into a subsidy system. The reasons for this were twofold:

- larger companies in particular seemed to enjoy the maximum tax benefits, instead of small companies and not-for-profit organisations; and
- many employers (80%) declared that they would have made the investment even without the financial benefit attached.

In the old system only 3.5% of costs were reimbursed, which was often too little to persuade companies to purchase the equipment; in the new system, this has increased to 10%.

Scope of the project – what was done

The Farbo regulation concerns a subsidy that can be applied for by all Dutch organisations (companies, the self-employed and not-for-profit institutions).

Organisations receive a reimbursement of 10% of the purchased equipment up to a maximum of EUR 25,000 per item of equipment/year. A maximum amount per employer is also fixed at EUR 50,000 per year. The equipment has to be innovative and worker-friendly and reduce the exposure to physical strain, noise or dangerous substances.

Annual budget

The available budget provided for by the government is evaluated every year. Once the budget ceiling has been reached, the Agency (Agentschap SWZ) does not take new applications. The budget tends to diminish in size over the years.

Year	Budget (EUR)	Budget attained
2005	4,500,000	3,907,000 [14]
2006	4,400,000	
2007	3,400,000	4,618,000
2008	1,900,000	?

The list of the eligible work equipment is available on: http://docs.minszw.nl/pdf//135/2008/135_2008_1_18656.pdf

The conditions

Subsidies are provided for equipment that is on the list. This list is determined every year by the Agency (agentschap SWZ). Equipment that is older and/or more generally applied is removed and replaced by new and innovative equipment.

Different conditions for reimbursement exist:

- the equipment must be on the equipment list that the government amends every year;
- the work equipment must have been purchased between 1 January and 31 December of the relevant year;
- the invoice must have been paid in its entirety before the application and must not relate to a leasing contract;

14 Tweede Kamer der Staten-Generaal, Jaarverslag en slotwet van het Ministerie van Sociale Zaken en Werkgelegenheid (XV) voor het jaar 2007, 21 mei 2008, vergaderjaar 2007-2008, 31 444 XV, nr. 1, http://docs.szw.nl/pdf/34/2008/34_2008_3_11785.pdf

- the application must be submitted within three months after the date of the invoice;
- the amount of the subsidy must be higher than EUR 250 (excl. VAT);
- the equipment must be new (no second-hand equipment);
- the equipment must be used in a company in the Netherlands;
- the equipment must already be in use at the time of the application.

An employer can apply for subsidy of more than one piece of equipment and for identical pieces of equipment.

Certain costs related to the purchase are not eligible, such as:

- the installation costs of the equipment
- costs of certain construction needs in order to put the equipment in place
- maintenance costs.

The project budget has been decreasing over the past few years. In 2008 it was EUR 1,900,000.

Application procedure

An applicant who needs certain equipment consults the list to see if there is an innovative version that he can receive a subsidy for. He fills out the form on the website of the ministry. This can be done on paper or electronically.

If necessary, certain documents have to be delivered, such as:

- a copy of the EC declaration of conformity
- a copy of the content of the Dutch instruction manual relating to the equipment concerned
- relevant information on noise exposure, dust exposure and biodegradable, non toxic hydraulic oil.

Once the application has been sent in, the applicant receives confirmation that it has been registered. This does not automatically mean that the application has been approved.

The social affairs and work agency (Agentschap SWZ) analyses the application and if necessary requests more details about the equipment, or visits the company to check the information provided.

Within 13 weeks of the application, applicants learn whether they have been successful. Applicants can object to the decision of the Agency. Subsidies that are not rightfully earned have to be reimbursed immediately, including the interest and administrative costs.

Evaluation and amendments to the list

The Ministry of Social affairs and employment is responsible for monitoring and updating the list of eligible equipment. Companies can propose new equipment if the tools fulfil the following conditions:

- the use of the equipment leads to a considerable improvement of the working conditions;
- the tool is innovative. This means that the tool is not yet widely used in the Netherlands but is reliable and without any technical deficiencies and risks;
- the equipment should be widely applicable in large companies as well as SMEs;
- the equipment has to aim to tackle risks at source.

Outcome and evaluation of the project

Evaluation method

The new regulation (2005) was evaluated in 2006. The auditing organisation Research voor Beleid developed the methodology for the assessment, which is based heavily on the Dutch VBTB[15] quality system for policy research. The method comprises a set of performance indicators measuring the performance of the Farbo regulation for a number of topics.

Selected indicators were Input (the Farbo regulation), Output (use of the regulation) and Effects (direct effects for the users of the regulation).

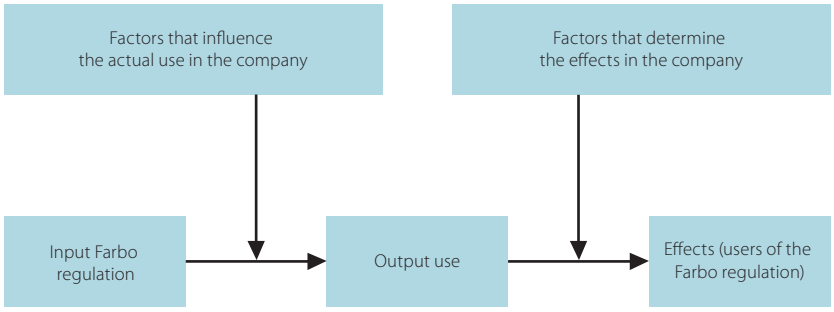
In total 1,168 organisations that applied for the subsidy were asked to participate in the evaluation. 541 organisations accepted (response rate of 46%). At the time the evaluation took place, one-third of the applicants that participated had already received a subsidy, 50% had not received an answer yet and 10% had been refused.

Limitations of the evaluation

The overall effect of the system on working conditions in the Netherlands has not been evaluated because the auditing company considered this to be dependent on a larger framework of policies (including governmental OSH policy, 'arbobeleid') and the socio-economic context. The effect of long-term use of the equipment on the health of workers has not been evaluated either, because the researchers believe that individual health is also dependent on a diverse range of factors.

However, the evaluation has taken into account the effect of the Farbo regulation on companies' reputation for OSH, and on the perceptions of workers involved.

Figure 10: Performance indicators of the Farbo regulation



(Source: Bos and Engelen, 2006)

15 'Van Beleidsbegroting tot Beleidsverantwoording' or 'from budget to balance sheet'.

Table 18: Elements of the different performance indicators

Input	Output (use of the regulation)	Effects (users of the regulation)
Content of the Farbo regulation and the changes in comparison with the former regulation	The number of applications (per sector)	The adequate use of the new equipment
Instruments to direct the use of the regulation	The number of allocations/ refusals (per sector)	The degree of use of the equipment per employee and number of hours a day
Organisation of the implementation	The number of tools from the Farbo list purchased	
Budget of the Farbo regulation	Unintended use (proportion of users that would have purchased the tool even without the subsidy)	
	Factors that influence the scale of the output	
	The knowledge of the employers on the regulation	
	The image of the Farbo regulation	
	The relevance of the list (do the listed tools fit in the production process of the company?)	
	Exogenous (socio-economic) stimuli for employers to purchase equipment	

Outcome and evaluation of the project

An evaluation of the 'old' system (tax incentive) revealed that the not-for-profit organisations did not benefit from the system. Therefore a subsidy system was designed to reach a greater number of companies. An evaluation that took place in March 2006 (Bos and Engelen, 2006) established that there is no major difference in the number of applications from profit-making and not-for-profit companies.

An assessment in 2006 evaluated the results for the year 2005. The study illustrated that the subsidy was especially popular in the health care and social welfare sectors, and in agriculture.

In total, 2,304 applications from 1,325 organisations had been received by the end of 2005. The budget ceiling was attained and some applications were refused. The budget ceiling is not always reached; only in 2005 and 2007 was the ceiling attained.

In 2005 it was found that a quarter of organisations only discover the regulation after they have already taken the decision to purchase the work equipment. Only 12% of the employers knew about the subsidy regulation, and most of these were in large companies.

In 2007 many items of equipment were removed from the list and substituted with more innovative examples.

The most popular items of equipment on the 2005 list were:

1. forklift truck with stabilisation system
2. active or passive lifting elevator / elevator to stand in / shower seat that can be lifted
3. paving machine
4. height-adjustable bed
5. agricultural tractor

An estimated 20,000 to 25,000 people have used the equipment. This estimate has to be treated with caution, however, because the researchers were unable to check every detail of the estimate.

The majority of users (61%) use the tool continuously during the day (at least 6 hours) or regularly (between 1 and 6 hours a day).

Adverse effects

The subsidy should make investing in OSH-friendly equipment more attractive to employers. One risk of these types of regulations is the so-called 'dead weight loss' or the unintended effect, which means that in many cases the equipment would have been purchased even without the existence of a subsidy.

In 2003, according to a rough measurement, the unintended effect amounted to 83% and in 2005 to 84%. A more reliable measurement calculated 74% of unintended use of the subsidy regulation.

This means that at least three-quarters of the users would have made the investment anyway. At the moment the subsidy regulation functions as a bonus system rather than as a tool to promote the purchase of safe work equipment.

Effects on working conditions and absenteeism

This part of the evaluation measured the employer's perceptions of the effects of the purchased equipment on working conditions. 40% said that the equipment was beneficial to the working conditions in the company 'to a high degree'; 36% that it was beneficial 'to a reasonable extent'. With regard to the reduction of workers' health complaints after using the equipment, 33% answered that the reduction was 'certain', 17% believed that the tool 'probably' reduced the complaints and 7% indicated that complaints had 'partly' disappeared.

7% of employers answered yes to the question whether they had noticed a positive effect on absenteeism in the company, 21% indicated that this had 'probably [had] an effect' and 37% experienced no change in the absenteeism rate of the company.

Employers thus clearly have a positive perception of the effect of the equipment on the health and safety of their employees. The researchers point out, however, that the improvement cannot be attributed only to the regulation, since many employers would have purchased the equipment anyhow.

The researchers also asked whether the use of the equipment had led to a reduction in ill-health. 46% of employers indicated that there had been no complaints by workers before the equipment was introduced. In 57% of the companies a reduction in complaints was observed. One-third of the organisations said they were certain that was a link between the reduction in complaints and the use of the work equipment. 17% had 'the feeling' that complaints had fallen.

Improvement of the image of OSH within the organisation

More than half of the organisations (56%) indicated that the use of the regulations had increased the attention paid to OSH in the company, whereas 39% of them did not notice any change.

The researchers also tried to measure the image of OSH in general. They noticed that the applicants for funding under the regulations were not forerunners, but neither were they 'stragglers'.

Sector approach

In addition, sector associations, for instance, appear to use the list as a guideline for their advice. For example, the sector association of agriculture provides details of the list on its website. The agricultural sector has made it clear that the Farbo regulation is essential in enabling small agricultural companies to purchase equipment that promotes the health and safety of the workers and especially to reduce their physical load.

The sector assessed the positive effects of the system and concluded that the advantages were (Hendrix et al, 2000):

- a decrease in the number of absent workers and consequently in the costs of sick leave[16]
- an improvement in productivity
- a reduction in staff turnover
- reduced costs.

Problems faced

First system of tax incentives and solutions

After a thorough evaluation by TNO,[17] The first system was abandoned and replaced with a subsidy regulation. The main reason for this was that, because it was applied through tax, it was more difficult to impose a budget ceiling and the available budget was exceeded several times. The government decided to impose a budget ceiling anyway, but to accomplish that a complex legislative procedure had to be applied every time the budget was exceeded.

The incentive was at first only available to the profit sector. Since not-for-profit companies do not pay corporate tax, the system as it was originally set up in 1998 was not suitable for them. A parallel system of tax rebates on the salary taxes and a premium on the national insurance was developed.

The evaluation found that larger companies were able to make greater use of the tax benefits than small companies and not-for-profit organisations, even after the subsidy was extended to non-profit companies.

Another problem was the so-called 'dead weight loss': many employers (more than 80%) declared that they would have made the investment even without the financial benefit attached. The reasons behind this could be traced back to two aspects of the current list: a very broad application of the conditions for inclusion of products in the

16 A premium rise is imposed on the employer if employees are on sick leave for a longer period. This measure has been implemented due to the high number of workers taking sick leave in the Netherlands.

17 Klein Hesselink, D.J., Jongen, M.J.M., *Onderzoek toepassing Farbo-regeling*, TNO-Arbeid, 19 December 2003.

list and an actual benefit that is too small (3.5%). The proposed solution was to tighten up the scheme so that fewer items were included on the list. Having fewer items would also reduce accounting expenses, as well as making it possible to increase the benefit. This would not be successful in a tax reduction scheme, so in 2005 the scheme was changed to a subsidy scheme.

Problems in the new system

The 'dead weight loss' is a remaining factor in the new system even though the benefit has been increased from 3.5% to 10%. More than 70% of companies indicate that they would have purchased the equipment without the subsidy. However, it can be assumed that this figure may be inflated because employers wish to show that they care for their workers' welfare, regardless of whether they get a bonus or not. Evaluations of real outcome data, such as absenteeism and accident rates, would perhaps give more accurate results.

Because of the argument over the 'dead weight loss' the new government decided to abolish the Farbo regulation from 1 April 2009 onwards. The regulation was not considered successful enough and the budget was not distributed evenly amongst sectors. Furthermore, it was concluded that the regulation no longer fits with current policies that hold employers and employees jointly responsible for healthy and safe working conditions. The budget will be shifted to research on OSH risks.

Success factors

- The success of the incentive was due to the thorough evaluation of the scheme and the resulting changes that were made in 2004. The system evolved from a tax system to a subsidy regulation, as described above.
- The budget ceiling was easier to manage under the subsidy system and the administrative procedure was simplified. No complex procedures had to be applied to recalculate tax refunds. The 'first come, first served' principle was applied, which means that once the budget ceiling had been reached no further subsidies were granted.
- The benefits were raised to 10%, which made it more worthwhile for small companies to apply. With the introduction of the new system, there was a single system for all companies. This reduced the administrative burden for companies as well as for the government.
- The procedure was easy for companies to carry out. The application form was filled out online and all relevant documentation made available on the ministry website.
- The reward was paid out promptly. Applications were dealt with in the order they were received, and applicants given a clear indication when they would hear if they have been successful. A decision was taken within 13 weeks. The former tax refund sometimes took up to year to be paid out.
- The list of equipment was flexible and the budget was adapted every year according to current needs.

Transferability of the project

The subsidy regulation is easily transferable to other countries. The conditions of eligibility are clear and the system is suitable for small companies. Costs can be easily proved and, since it is no longer linked with the tax system, the refund can be easily calculated and paid out.

Further information

FARBO
Vestiging Den Haag, team Nationale Regelingen
Wilhelmina van Pruisenweg 52
2595 AN Den Haag
Postbus 93249
2509 AE Den Haag

Tel: +31 70 315 21 88
Fax: +31 70 315 21 00
Email: farbo@agentschapszw.nl

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Incentive based on internal evaluation of cost-benefit

4.4.

4.4.1. Snapshot: The TYTA Model (Finland)

Organisations

- Ministry of Social Affairs and Health
- Department for Occupational Safety and Health
- Occupational Health and Safety Inspectorate of Uusimaa

Aims and objectives

- To develop a user-friendly computer model to analyse the economic effects of the working environment
- To encourage and motivate the management to improve working conditions

Key points

The TYTA model is a computer program which makes it possible to analyse and evaluate the economic effects of the working environment. The model produces information on costs caused by absenteeism due to illness, accidents, staff turnover, disability and alterations in working conditions. At the same time it is a tool to

motivate the management to improve working conditions more systematically. The model is applicable in medium-sized and large companies that have high accident rates and high rates of sick leave. The model is freely available in Finland and has been used mainly in the area covered by the Uusimaa Occupational Health and Safety inspectorate in the south of the country. The model was developed in the 1990s and has remained unchanged since its publication in 1999. However, it is still fully usable.

Further information

Keijo Päivärinta
Occupational Health and Safety Inspectorate of Uusimaa
Siltasaarenkatu 12 A
PL 46, 00531 HELSINKI
Finland

Tel: +358 40 510 21 21
Email: keijo.paivarinta@tsp.stm.fi

References

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4.5. Summary of case studies

This collection of successful case studies shows that economic incentives can be effective in a great variety of settings in order to promote OSH. All the incentive schemes presented have been managed efficiently and undergone some kind of evaluation. In six case studies we even have quantitative indicators for positive effects on the working conditions for the participating companies (see also table in Section 4.6):

- In the German butchery sector participating enterprises have seen an over 25% fall in reportable accidents since the introduction of the incentive scheme in 2001
- In the Finnish agricultural sector the accident rate dropped by more than 10%
- Of the Polish enterprises that introduced a funded OSH management system, 70% reported fewer accidents and lower insurance premiums, and 50% reported that fewer workers were working in hazardous conditions
- The Italian Workers Compensation authority subsidises bank credits to stimulate OSH investments in SMEs, which subsequently reported 13-25% fewer accidents than comparable enterprises
- In a German health insurance incentive scheme sick pay dropped and absenteeism decreased significantly when enterprises introduced a modern health management system
- The Dutch subsidy programme for investments in new OSH-friendly machinery and equipment led to better working conditions in 76% of enterprises (40% of employers said that new equipment was highly beneficial, 36% reasonable beneficial).

The focus was on incentive schemes that encourage future OSH activities and are not based only on past events. In addition, most of the incentive models presented are open to all sizes of enterprises including SMEs, or even offer special benefits for small enterprises such as the Danish Prevention Fund or the Belgian Experience Fund.

Larger companies are usually better informed and have more resources to deal with the administrative requirements of the projects. Incentive programmes should take into account the most appropriate methods of informing and supporting the target group. In several cases, it was noted that small and micro-enterprises were more difficult to motivate than larger ones. The complexity of some of the projects may have deterred SMEs.

Traditional experience-rating schemes which are based only on accident figures sometimes work against SMEs because of statistical effects. Even if SMEs have more accidents per worker than larger companies, a work accident is still a very rare event in a small enterprise. Even though the SME puts a lot of effort into prevention work, it still can have bad luck and is 'punished' with a malus on its insurance premium.

On the other hand an SME that pays no attention to OSH at all may still be lucky and sustain no accidents for a longer period, and be rewarded by lower insurance premiums. In larger enterprises these random effects are reduced because of the higher number of events, but in SMEs they can have a demotivational result. Many insurance schemes also limit the bonus or malus to between 15% and 30%. In an SME this threshold is often reached after just one accident per year and so it does not matter whether one or ten accidents occur during that year.

Therefore, incentive schemes that focus on prevention efforts, such as training or investment in safer machinery, are more attractive for SMEs. If the companies see a clear link between their prevention effort and the reward by an insurance or funding scheme, the motivational effect will be much higher. Investigating the specific needs of the target group beforehand can improve the adherence to and effectiveness of the incentive.

Nevertheless, the example of the Finnish agricultural sector has shown that an experience-rating scheme can still be successful in a sector that is dominated by SMEs, if the incentive scheme is targeted on the specific needs of the sector.

Some case studies, mainly those based on subsidy schemes, report difficulties in motivating enterprises to apply for the scheme. Different reasons have been put forward to explain these problems and several solutions have been proposed.

Some case studies consider the size of the incentive to be the critical indicator in stimulating companies to take action. A few case studies indicate, however, that it is unclear whether the size of the incentive has in fact played a role in persuading companies to apply, and whether an increase in the budget would stimulate more companies to take action. In addition, the outcome of the project can often be related to the size of the incentive. In the German butchery sector case, the financial advantages brought about by the incentive can be directly linked to a better performance. In this regard it is also important for companies to be able to estimate the financial extent of the incentive accurately beforehand.

The transparency of the criteria for applying and low administrative burden (speed, availability of project sheets, etc.) can increase the attractiveness of a project. This means that the criteria have to be very clear to the coordinators who examine and approve the applications.

Other success factors include the presence of an evaluation system with clear indicators, support from local bodies, associations at sector level and social partners to monitor actions over time and to guide and support the companies in establishing and implementing them.

Another principle to enhance coverage of the incentive might be the formal character of the incentive. Incentives based on government legislation can improve the coverage, visibility and support nationwide. It proved advantageous to cooperate with sector and trading organisations in order to promote the incentive scheme among enterprises.

The various incentives issued by a diverse range of national parties should be compatible with one another in order not to create adverse effects. Making sure that the target group can actually benefit from the incentive and that the system is compatible with other legislation/systems is crucial. In the case of the Dutch Farbo system, the incentive was at first only available to the commercial sector. Since not-for-profit companies do not pay corporate tax, the system was not suitable for them. This increased the complexity of the refunds. A parallel system of tax rebates on income taxes and a premium on the national insurance had to be developed.

An incentive system that is too complex increases the administrative burden for both participating enterprises and incentive-offering organisations. A fast and simple application procedure will increase the transparency of the scheme and motivate more companies to take part. Nowadays modern technology can simplify administrative procedures a great deal, e.g. when applications for funding are sent via an internet module that can process the data automatically to a large extent. For example the German butchery sector insurance fund did not have to employ any more staff to administer the incentive system, because most applications are sent in via internet and paper questionnaires can be scanned automatically. The Danish Prevention Fund and the Dutch Farbo Scheme also report that an internet-based application system greatly reduced the administrative work.

Country	Title	Type of incentive	Initiators	Scope	Rewarding	Evaluation	Target group
		Insurance premium variation/ subsidy, grant, bank credit	*Insurance bodies/ government*	*Type of action stimulated by incentive (e.g. ergonomics, work organisation, OSH management, etc.)*	*Effort or results*	*Effects on working conditions, management of project, participation rate*	*Company/ Sector/SME*
Germany	Statutory Accident Insurance of the Butchery Industry	Insurance premium variation	Accident insurance	Investment in specific preventive actions, stimulate more OSH effort by giving premium rebates for fewer accidents.	Results (accident rates), AND future prevention efforts (premium system).	■ Survey on the effectiveness of premium variation ■ Monitoring of accident rates ■ Accident rates of participating enterprises are much lower than average for sector	Butchery sector, SME friendly
Finland	Premium Discount Programme in the Farmers' Workers' Compensation Insurance	Insurance premium variation	Social insurance	Stimulate more OSH effort by giving premium rebates for fewer accidents.	Past results (accident and injury rates).	■ Monitoring of accident rates/ injury claims ■ Since the introduction of premium rebates, the accident rate has fallen by more than 10%	Agriculture sector/ SME friendly
Germany	Enterprise for Health: Promoting health management among companies in Lower Saxony	Insurance premium variation	Health insurance	Health management	Effort: setup of health management system and certification.	■ Monitoring of the number of premium discounts ■ Participating enterprises had 20-25% less sick pay than average ■ Reduction in sick leave achieved	Individual company, SME possible

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Country	Title	Type of incentive	Initiators	Scope	Rewarding	Evaluation	Target group
Poland	Supporting SMEs in OSH management	Subsidy	Government	Capacity-building, OSH management and preventive culture	Future efforts	■ Project has been successfully managed ■ Good collaboration with partners from trade organisations	SME focus
Poland	Promoting a systematic approach to OSH management in Polish enterprises	Subsidy Indirect effect: premium discount	Government	Promotion of OSH management	Future efforts	■ 70% of companies have fewer accidents since introduction of OSH management system ■ 50% report fewer workers in hazardous conditions ■ 70% have seen insurance premiums fall	Individual companies, SME possible
Austria	Low-cost consultancy for safety and health management (SGM) by Austrian SMEs (Austria)	Low-cost consultancy	Accident insurance	OSH management	Future efforts	■ Since the project started in 2006 participation rate is growing ■ Low-cost consultancy service for enterprises	Individual companies, SME possible
Denmark	The Prevention Fund	Subsidy	Government fund	Prevention of early retirement	Future efforts	■ Monitoring of applications and approved projects ■ Management of projects with low administrative burden	Sectors, vocational groups, companies, SME friendly
Italy	Business financing for programmes and projects in the area of occupational safety and hygiene	Subsidised bank credit with lower interest rate	Workers' compensation body - government	Compliance with OSH requirements, OSH management, decrease in accidents and injuries	Future efforts	■ Statistical analysis of the effectiveness of prevention actions ■ Participating companies have 13-25% fewer accidents than average	Sectors, groups of companies, SMEs

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Country	Title	Type of incentive	Initiators	Scope	Rewarding	Evaluation	Target group
Belgium	The Experience Fund	Subsidy	Government	Employability of older workers	Future efforts	■ Yearly evaluation of results ■ Monitoring of the types of workplace adaptations applied for	Sectors, companies
Netherlands	Subsidies for innovative work equipment, the FARBO regulation	Subsidy	Government	Innovative and ergonomic equipment for improvement of working conditions	Future efforts	■ Assessments of the number of applications/ allocations/purchased tools; the efficiency of the scheme ■ effects on working conditions: 76% of employers said that new equipments is beneficial for working conditions, 57% said that health complaints have been reduced	Companies

5.

CONCLUSIONS

5.1. Introduction

Economic incentives in occupational safety and health (OSH) refer to processes which reward organisations that develop and maintain safe and healthy working environments. These processes may include, for example, linking the OSH performance of an organisation to fiscal incentives such as lower insurance premiums or tax rates. There is increasing interest in such economic incentives as instruments to motivate organisations to invest in OSH, because regulatory enforcement alone is often not sufficient to persuade organisations of the importance of OSH. Economic incentives can complement regulatory dictates as they stimulate organisations at the financial level and thus add weight to the business case for good OSH in a way that is clear to company managers across all Member States.

This section provides concise synopses of the three main sections in this report: Section 2, the literature review on the subject of economic incentives in OSH; Section 3 (policy overview) – a report on existing economic policies in relation to economic incentives and OSH in EU Member States; and Section 4, the case summaries and snapshots of successful economic incentives in OSH. The aim of Section 5 is to bring together the key findings of each of those previous sections, so that the most important issues of each and themes that recur across the report can be highlighted.

5.2. Summary: Literature review

The literature review provides an overview of international policy measures and scientific research on how organisations can improve OSH by means of economic incentives. Economic incentives may be internal or external to the organisation, but the focus of this review is on external incentives. Economic incentives include purely financial incentives such as insurance premium variations, bonuses, subsidies/subsidised bank credits, and non-financial incentives such as awards promoting the reputation of an organisation (where the award does not have substantial financial implications).

Mixed evidence was found to support a reduction in the frequency of work-related injuries as a result of introducing government legislation. A recent study by Foley et al. (2009) has shown positive results through the introduction of a new ergonomics rule in Washington State (US), which was then reversed again by the rule's repeal. With regard to the enforcement of economic incentives, specific deterrents were found to have a significantly higher impact on sick leave than more general deterrents. However, the effectiveness of specific government (external) incentives was not always clear. Some findings are: (1) Tax reductions can be effective in helping an organisation invest more in OSH. This type of incentive can only be effective for a limited number of organisations (i.e. those paying corporate tax). (2) Linking economic incentives to audits/intervention programmes was another promising means of improving OSH. (3)

Matching funds – where governments provide a grant proportional to the amount of money spent by an organisation on workplace health – are a potential method to improve OSH. This type of economic incentive has high administrative costs for both the organisation involved and the government.

In order to make employers aware of the costs of OSH issues, insurance premiums may be linked to disease outcomes. However, this requires differentiation in terms of outcomes so that minor accidents are not treated in the same way as severe ones. Moreover, organisations may attempt to gain insurance benefits by using medical tests to recruit a healthy workforce, or by pressurising employees not to claim for accidents or diseases. Evidence on the effectiveness of insurance-related incentive schemes in improving OSH was mixed. Moreover, employee behaviour at work may be affected by changes to insurance benefits. For example, workers may pay less attention to safety when they know that their actions are covered by the terms of the organisation's insurance policy (known as the 'risk-bearing moral hazard'). Similarly, the likelihood that an employee will report a health condition caused by his or her job may be affected by insurance-policy incentives, if that employee knows that his/her condition will not qualify for disability benefits (known as the 'claims-reporting moral hazard'). One solution to this problem is experience rating of workers' compensation insurance, whereby adjustments to workers' compensation assessment are based on the firm's claim history rather than its accident history. This provides an impetus for organisations to manage accident claims as well as carry out prevention. So far research shows mixed results, but most studies using meta-analysis state at least moderate evidence for the effectiveness of experience rating. Premium assessment rates – linking the cost of injuries to the performance of similar organisations and to the firm's claim history – may provide a better, more flexible method of experience rating. Partial insurance and employers' liability insurance may also be targets for OSH schemes, but little consistent research was found in these areas.

Overall, there was a strong argument for the benefits of economic incentives arising from sources outside a company to improve occupational health and safety. This finding is tempered by methodological difficulties in evaluating the effectiveness of various incentive schemes, and it was suggested that further research is required to clarify ambiguous results in the research literature. Insurance-related economic incentives were an effective way to motivate organisations to invest in OSH. Evidence suggests that economic incentives alter employees' behaviour or incident rates in organisations. Evidence for improving OSH in SMEs was very limited in the literature reviewed, and contained a great deal of subjective opinion. Difficulty exists in extrapolating effective practice from one organisation to another.

Four policy recommendations were advanced: (1) legal regulations should be supported by economic sanctions and/or incentives to make these regulations effective; (2) Government taxes have been found to be effective for both punishing and rewarding organisations for good and bad OSH practice, respectively; (3) cash benefits for work-related accidents or illnesses in the form of workers' compensation is not the best option regarding insurance-related benefits, and experience rating or premium assessment rating appear to be better options; and (4) internal economic incentives (not a direct focus of the literature review) are another effective method for improving OSH.

5.3. Summary Policy Overview

The policy overview focuses on existing economic incentive schemes and their national context within the 27 EU Member States. Information from each country has been collected to allow easy comparison of how economic incentive systems are handled in the various Member States. The results are presented in Table 19, which shows different prevention and social security system typologies, and related economic incentives in OSH.

The primary focus of the report is on financial incentives, though non-financial incentives are also mentioned briefly. In addition to enforcement of OSH regulations, there are two main types of economic financial incentives for stimulating employers to invest in making the workplace healthier and safer. The first type of incentive relates to insurance strategies, where employers receive some form of financial support or reward for efforts to improve OSH and prevent occupational accidents and diseases. The second type of incentive relates to tax and funding schemes, which are separate from insurance policies, but which aim to promote the same kind of attention to OSH management.

The detailed analysis of the policy report has been summarised in Table 19, using the most important categories. The social security systems in Europe are either predominantly Beveridgean (11 countries, mainly tax-based contributions) or Bismarckian (16 countries, mainly insurance-based contributions). The second criterion specifically concerns the accident insurance system, which is either a state-run monopoly (19 countries) or a private competitive market (8 countries). In the EU 27 there are two dominating models: mostly we have a state-run monopoly with a Bismarckian tradition (14 countries) or a competitive market and in a Beveridgean system (6 countries). There are also several mixed forms with a Beveridgean system predominating (5 countries) and a competitive market in a Bismarckian system (2 countries: Belgium and The Netherlands).

Table 19: Overview of social security and incentives systems by country

Country	Predominantly BE (Beveridgean) BI (Bismarckian)	Accident insurance SM (State-run monopoly) PC (Private competitive)	Insurance incentives	Tax	funding	non-financial incentives
Belgium	BI	PC	yes		yes	yes
Bulgaria	BI	SM	yes		yes	
Czech Republic	BI	SM	yes			
Denmark	BE	PC			yes	yes
Germany	BI	SM	yes	yes	yes	yes
Estonia	BI	SM				
Greece	BE	SM				
Spain	BE	PC	planned		yes	
France	BI	SM	yes		yes	

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Country	Predominantly BE (Beveridgean) BI (Bismarckian)	Accident insurance SM (State-run monopoly) PC (Private competitive)	Insurance incentives	Tax	funding	non-financial incentives
Ireland	BE	SM				
Italy	BE	SM	yes		yes	
Cyprus	BE	PC				
Latvia	BI	SM		yes		
Lithuania	BI	SM			yes	yes
Luxembourg	BI	SM	yes		yes	
Hungary	BI	SM	planned			
Malta	BE	SM				
The Netherlands	BI	PC	yes	yes	yes	
Austria	BI	SM			yes	yes
Poland	BI	SM	yes		yes	yes
Portugal	BE	PC	yes			
Romania	BI	SM				
Finland	BE	PC	yes		yes	yes
Slovenia	BI	SM				
Slovak Republic	BI	SM				
Sweden	BE	SM				
United Kingdom	BE	PC				

In several EU countries (Denmark, Estonia, Greece, Spain, Sweden, UK) insurance-based incentives (i.e. incentives relating to insurance tariffs) do not exist. In these countries, insurance premiums may be set, for example, using a risk category system. Methods for setting risk category premiums cannot, however, be regarded as true economic incentives, which should aim to motivate individual enterprises to improve OSH. Other EU countries (Belgium, Bulgaria, Czech Republic, Germany, France, Italy, The Netherlands, Poland, Portugal, Finland), have a type of economic incentive where premium variation is based on experience rating (the bonus-malus system). An additional way of persuading employers to invest in OSH is through insurance-related incentives, where specific prevention efforts are rewarded according to a predetermined model. Such approaches exist for example in Germany (which has a sectoral occupational insurance approach), and The Netherlands (specific insurance-related incentives are set within the framework of contracts between employers, private insurers, and safety and health services). In some countries, such as Belgium, France, Poland and Finland, company size is taken into account when setting insurance premiums. France and Finland also have different premium systems for larger and smaller companies.

Although insurance-related economic incentives are important to promote the prevention of accidents and diseases in the workplace, they are not the only alternative and should, therefore, be regarded as a single strategy within a group of initiatives, including tax incentives and funding schemes. Tax-related incentives in OSH are very rare within the European Union. Funding schemes for OSH, on the other

hand, are found in nearly every EU country. Funds (subsidies, grants) are provided for a wide range of practices, from the purchase of certain materials and tools to the implementation of OSH management systems. These funding schemes are established mainly by public bodies. Economic non-financial incentives in OSH aim at giving recognition to enterprises that have put special effort into improving OSH. Examples of such recognition schemes are found in several countries.

Regarding the basic criteria of social insurance systems and workers' compensation approaches there are not very many differences in Europe. Most countries designed their social security system in the Bismarckian tradition and the accident insurance institutions are based on a state-run monopoly. There is a significant group of countries with a competitive market in a Beveridgean system and two smaller groups of countries with mixed forms. So the variety of different accident insurance and social insurance system is fairly limited regarding basic criteria, even though there are probably many more differences in detail.

Regarding the transferability of economic incentive schemes this means that it is possible in many cases, provided that some country-specific adjustments are taken into account. The criterion of Beveridgean or Bismarckian tradition seems not to be as important when it comes to the question of workers' compensation. The Beveridgean approach of tax-based contributions applies in most cases only for health insurance, whereas the accident insurance or workers' liability insurance against occupational accidents is usually paid by employers' contributions. So the decisive criterion regarding the transferability of an incentive scheme is related more to whether there is a state monopoly or a competitive market in workers' compensation.

The policy review reveals that examples of economic incentives exist in all EU Member States. Some countries appear to implement economic incentives as a macro-economic instrument to improve the quality of the working conditions, because they are using a great variety of economic incentives. As shown in Table 19, nearly all larger Member States, except the UK, are rather active in offering economic incentives. Germany, France, Italy and Poland all offer various incentives through their public insurance system, often not only insurance premium variations, but subsidy programmes for specific investments in OSH as well. In Spain insurance incentives are planned in the national OSH strategy and a great variety of OSH subsidy programmes is offered on a national as well as regional level. Of the smaller Member States Belgium, Finland and The Netherlands are the most active, showing that economic incentives are also possible in private accident insurance systems.

All in all the overview shows that economic incentives can be offered in all Member States, regardless of their social security system traditions or whether the accident insurance system is private or public.

5.4. Summary Case Studies Review

The case studies review presents a number of case studies and snapshots of successful economic incentives in OSH. Two main types of financial incentives emerge from the report: (1) incentives that are based on an occupational accident insurance premium

variation; and (2) incentives by means of a subsidy, grant or financial reward (most often granted by national or local government).

This collection of successful case studies shows that economic incentives can be effective in a great variety of settings in order to promote OSH. All incentive schemes presented have been managed efficiently and undergone some kind of evaluation. In six case studies we even have quantitative indicators for positive effects on the working conditions for the participating companies (see also the table in Section 4.6):

- In the German butchery sector participating enterprises have seen an over 25% drop in notifiable accidents since the introduction of the incentive scheme in 2001.
- In the Finnish agricultural sector the accident rate dropped by more than 10%.
- Of the Polish enterprises that introduced a funded OSH management system, 70% had fewer accidents and lower insurance premiums, while 50% reported fewer workers working in hazardous conditions.
- The Italian Workers' Compensation authority subsidises bank credits to stimulate OSH investments in SMEs; participating companies had 13-25% fewer accidents than comparable enterprises.
- In a German health insurance incentive scheme sick pay and absenteeism decreased significantly when enterprises introduced a modern health management system.
- The Dutch subsidy programme for investments in new OSH-friendly machinery and equipment led to better working conditions in 76% of enterprises (40% of employers said that the new equipment was highly beneficial, 36% that it was reasonably beneficial).

The focus was on incentive schemes that encourage future OSH activities and are not based only on past events. Most of the incentive models presented are open to companies of all sizes including SMEs, or even offer special benefits for small enterprises – such as the Danish Prevention Fund or the Belgian Experience Fund.

Larger companies are usually better informed and have more resources to deal with the administrative requirements of the projects. Incentive programmes should take into account the most appropriate methods of informing and supporting the target group. In several cases, it was noted that small and micro-enterprises were more difficult to motivate than larger ones. The complexity of some of the projects may have deterred SMEs.

Traditional experience-rating schemes which are based only on accident figures sometimes work against SMEs because of statistical effects. Even if SMEs have more accidents per worker than larger companies, a work accident is still a very rare event in a small enterprise. Even though the SME puts a lot of effort into prevention work, it still can have bad luck and is 'punished' with a malus on its insurance premium.

On the other hand an SME that pays no attention to OSH at all may still be lucky and sustain no accidents for a longer period, and be rewarded by lower insurance premiums. In larger enterprises these random effects are reduced because of the higher number of events, but in SMEs they can have a demotivational result. Many insurance schemes also limit the bonus or malus to between 15% and 30%. In an SME this threshold is often reached after just one accident per year and so it does not matter whether one or ten accidents occur during that year.

Therefore incentive schemes which focus on prevention efforts, such as training or investment in safer machinery, are more attractive for SMEs. If the enterprises see a clear link between their prevention effort and the reward by an insurance or funding

scheme, the motivational effect will be much higher. Investigating the specific needs of the target group beforehand can improve the adherence to and effectiveness of the incentive.

Nevertheless the example of the Finish agricultural sector has shown that an experience rating scheme can still be successful in a sector which is dominated by SMEs, if the incentive scheme is targeted to the specific needs of the sector.

Some case studies, mainly those based on subsidy schemes, report difficulties in motivating enterprises to apply for the scheme. Different reasons have been considered to explain these problems, and several solutions have been proposed.

Some case studies consider the size of the incentive to be the critical indicator in stimulating companies to take action. A few case studies indicate, however, that it is unclear whether the size of the incentive has in fact played a role in persuading companies to apply, and whether an increase in the budget would stimulate more companies to take action. In addition, the outcome of the project can often be related to the size of the incentive. In the German butchery sector case, the financial advantages brought about by the incentive can be directly linked to a better performance. In this regard it is also important for companies to be able to estimate the financial extent of the incentive accurately beforehand.

The transparency of the criteria for applying and low administrative burden (speed, availability of project sheets, etc.) can increase the attractiveness of a project. This means that the criteria have to be very clear to the coordinators who examine and approve the applications.

Other success factors include the presence of an evaluation system with clear indicators, support from local bodies, associations at sector level and social partners to monitor actions over time and to guide and support the companies in establishing and implementing them.

Another principle to enhance coverage of the incentive might be the formal character of the incentive. Incentives based on government legislation can improve the coverage, visibility and support nationwide. It proved advantageous to cooperate with sector and trading organisations in order to promote the incentive scheme among enterprises.

The various incentives issued by a diverse range of national parties should be compatible with one another in order not to create adverse effects. Making sure that the target group can actually benefit from the incentive and that the system is compatible with other legislation/systems is crucial. In the case of the Dutch Farbo system, the incentive was at first only available to the commercial sector. Since not-for-profit companies do not pay corporate tax, the system was not suitable for them. This increased the complexity of the refunds. A parallel system of tax rebates on income taxes and a premium on the national insurance had to be developed.

An incentive system that is too complex increases the administrative burden for both participating enterprises and incentive-offering organisations. A fast and simple application procedure will increase the transparency of the scheme and motivate more companies to take part. Nowadays modern technology can simplify administrative procedures a great deal, e.g. when applications for funding are sent via an internet module that can process the data automatically to a large extent. For example the German butchery sector insurance fund did not have to employ any more staff to administer the incentive system, because most applications are sent in via internet and paper questionnaires can be scanned automatically. The Danish

Prevention Fund and the Dutch Farbo Scheme also report that an internet-based application system greatly reduced the administrative work.

The case studies and snapshots presented in this report come from a variety of Member States and industrial sectors. Despite this wide variety of organisational contexts, certain issues emerged as important to the success of economic incentives in OSH. Incentives were more successful when the cost benefit was clear to the organisation, when the duration of an incentive was known before participating, when there was clear support from local bodies, etc. Another theme to emerge from the case studies and snapshots was the need for improvements in the evaluation of incentives. This is a clear development opportunity, and an issue that stakeholders should be aware of in future attempts to improve OSH through economic incentives.

5.5. Overall Conclusions

This section takes into account the results of all three parts of the report. First the evaluation of incentive schemes is discussed critically and the evidence on experience rating reviewed. Then we consider which incentive schemes are suitable for which kind of social system in the various Member States, using evidence from the policy overview, research literature and case studies. In conclusion the general success factors of economic incentive schemes are identified on the basis of evidence from the literature review and case studies evaluation.

5.5.1. Evaluation

It has been pointed out several times in this report that more and better evaluation of economic incentive schemes is needed in order to determine which types of incentives are most effective under which circumstances. Taking the results of the three parts of the report together it is possible to draw some conclusions about the current state of the debate.

There has been a reasonable amount of research regarding experience rating in workers' compensation, which usually consists of a bonus-malus system for insurance premiums based on the individual accident rates of a company. This approach is often combined with a prior risk categorisation, e.g. according to a specific risk of a sector. The literature review analysed several research papers about the effectiveness of experience rating and found at least moderate evidence (e.g. Tompa et al., 2007) that a lower frequency of claims is achieved.

In the case studies presented, experience rating is used by German and Italian insurers as one element of their incentive scheme and the effect of experience rating is analysed in depth in the incentive scheme of the Finnish agriculture sector. Using administrative data, Rautiainen et al. (2005) conducted interrupted time series analyses which showed that the premium discount reduced the overall claim rate by 10.2%. However, the authors do not exclude the possibility that under-reporting could have contributed partly to the claim reduction, although actually no farmer would benefit economically from such a practice. The possible bonus in the insurance

premium would always be much lower than the cost of an accident which would not be reimbursed if it was not reported.

Under-reporting is often discussed as a possible negative side effect of experience rating. As the Finnish example shows, such a practice hardly ever leads to a positive economic benefit for the under-reporting company, if the incentive scheme is designed in the right way. Under-reporting probably becomes more of an issue in case of incentive systems that are internal to a firm, where managers can earn high bonuses from the in-house reward system if they report fewer accidents. However, these practices were not the scope of this report, which focuses on external incentive schemes provided by third party organisations, such as insurance institutions.

In Germany the accident premium variations have had a long tradition since they were made possible by the accident insurance law in 1884. Nowadays it is even a legal obligation under §162 SGB VII (German social law), which requires all accident insurers to offer a premium differentiation. According to several authors (e.g. Kötz, 1989; Schulz 1996, 1999) the bonus-malus systems of German accident insurers has certainly had a positive effect, because accident rates have declined sharply in the past few decades. However, it is difficult to measure the exact influence of the premium differentiation, since other factors such as technological improvements and better prevention strategies have also contributed to fewer accidents. As Kohstall et al. (2006) suggest, a stronger premium differentiation would probably be more effective, but this may contradict the spirit of solidarity of the public social insurance system.

Kohstall et al. (2006) also propose that both positive and negative incentives should be used in an incentive system. By negative incentives (in effect, fines), companies that remain significantly above the sector's average accident rate can be obliged to pay an augmented insurance premium. This would increase the visibility of bad OSH performance and therefore raise awareness in the enterprises concerned. The normal insurance premiums are usually planned into the budget of companies. A positive variation is of course welcomed, but only a negative variation will force companies to adapt their budget planning and therefore make them think more deeply about taking preventive measures. Further negative deviation in insurance premiums can serve as a psychological 'foot in the door' for labour inspectors or safety representatives trying to persuade an enterprise to put more effort into OSH.

Overall research literature provides some evidence for the positive effects of experience rating, but nevertheless there are some potential shortcomings connected with this method. SMEs in particular rarely profit from such incentive schemes (see Section 5.4) and therefore the insurance case studies of FBG (Germany) and INAIL (Italy) combine an experience rating system with a funding system that rewards specific prevention activities as well. The statistical evaluations of both case studies have proven the effectiveness of such an approach, leading to significantly lower accident rates and better health outcomes among participating enterprises.

However, there is certainly a need for more and better research regarding the preventive effect of economic incentives. As shown in the literature review, it is difficult to compare several studies, since they often use a different set of variables to measure the success of incentive schemes. In addition, studies from various countries take place under diverse legal and political framework conditions which can have different motivational side effects.

Generally evaluation studies about economic incentives have to take place in a natural setting and that means that it is never possible to exclude all potential side effects, as it is in a laboratory setting. This also makes it difficult to design randomised

controlled trials. An insurance or other incentive-offering organisation will be highly unlikely to offer an incentive randomly to only half its clients just for research reasons. Beside the political concerns, and in competitive market systems also the economic damage for the insurer, there are also ethical concerns. If such incentive schemes are to reduce accidents and ill-health in a high share of participating enterprises, as shown in several of our case studies, it can be argued that every enterprise should have this opportunity from the beginning to protect the health of its workers equally.

Another point of discussion regarding experience rating and economic incentive schemes in general is the so-called 'dead weight loss' effect. It was mainly discussed in the Dutch case study of the Farbo model. Despite the positive effects of the incentive on working conditions, the evaluation showed that between 75% and 80% of employers said they would have invested in the more OSH-friendly equipment anyway. However, the answers may have been influenced by the fact that most employers wanted to demonstrate that they care about their workers' welfare regardless of the economic incentive. In order to find out the true dead weight effect, a comparison of the machinery markets would be interesting to identify the market shares of the promoted equipment in other countries without incentives.

Regardless of the true effect, a certain dead weight loss probably has to be accepted in any kind of economic incentive scheme. This seems to be generally accepted in other policy areas as well. For example, currently many European governments are subsidising the purchase of new cars to fight the economic crisis, without knowing whether they are subsidising people who would have bought a new car anyway, without any incentive.

Furthermore, it is worthwhile looking at alternatives to promote OSH, and their specific dead weight loss effects. For example, information campaigns will always reach a large number of enterprises that are convinced of the importance of good OSH anyway. In addition, many enterprises that consult OSH-related websites such as EU-OSHA or national sites like HSE, BAuA or INRS will already be quite advanced in their preventive activities.

There is always a danger of 'preaching to the converted', and the challenge is to reach target groups that are still unconvinced. In this regard economic incentives are of course not the only way to stimulate more OSH activities among companies, but well-designed incentives could certainly help to win over some of the unconverted. As the incentives strengthen the OSH business case they are more likely to resonate with businessmen generally and are probably able to reach additional target groups.

Beside the objective of motivating enterprises to improve their OSH performance, experience rating and other economic incentives have been introduced in many countries because the issue is perceived as a question of justice. According to the 'user-pays principle' those enterprises that cause more costs to the community should also contribute more. Economic incentives have always been applied also for ethical reasons in order to reward good moral behaviour of enterprises. From this perspective the added motivational effect for improving OSH performance is a desired one, but surely not the only reason for introducing an incentive.

5.5.2. What kinds of incentives fit with which social systems?

One purpose of this report is to find out which types of incentive schemes are likely to be successful under which national political and legal conditions. As the conclusions

of the policy overview (see Section 5.3) pointed out, despite the apparent variations in Europe's social security systems there is a high degree of similarity between the countries regarding basic criteria. In addition, all kinds of incentives are used in all Member States regardless of their social insurance system.

When it comes to economic incentive schemes, the fundamental difference between countries is whether the workers' compensation scheme is based on a competitive market between private insurance companies or whether it is based on a kind of monopoly structure, where the employers do not have the choice between several insurance companies. Regarding this criterion, a clear majority of 19 of the Member States have decided for a monopoly system. It is beyond the scope of this report to discuss the advantages and drawbacks of the various accident insurance systems. However, it is important to analyse how these differences can influence the possibility of economic incentives.

Insurance premium differentiations in the form of experience rating are possible in all systems. In a competitive market it is even argued that experience rating could strengthen the competition between insurance companies, as they are forced to offer more individual premium rates (Clayton, 2002). However, it becomes difficult for insurers in a competitive market to offer rewards for specific prevention activities, such as training, investment in OSH-friendly equipment or the certification of OSH management systems. Subsidising these preventive activities can be regarded as an investment by the insurance company, which it hopes will pay off in future years because fewer claims will be received. However, in a competitive system enterprises are able to change their insurance providers at short notice and an insurance company runs the risk that a subsidised client may change to another, possibly cheaper, competitor, after having enjoyed the incentives and consultancy provided by the original insurer.

Investments in health and safety usually pay off only after a longer period of time, and this contradicts to some extent to the free choice of insurance companies in a market-based system. A possible solution could be the introduction of more long-term contracts, but it may be difficult to persuade employers to give up their freedom of choice. Another possibility would be that all private insurance companies would contribute equally to a common prevention fund that can subsidise clients' OSH activities. By financing the prevention activities this way, companies that change their insurance provider would not receive an unfair advantage, as the fund would have been financed by all insurance companies. Some countries with a private insurance market have already developed such model, e.g. the Work Environment Fund in Finland.

In monopoly structures the problem of changing clients does not exist. Enterprises have to stay with the same insurance company and hence it is guaranteed that the insurer will benefit from better prevention among its clients. In this regard it is much easier in a monopoly system to offer incentives that reward prevention efforts as well as prevention results.

The challenge is rather to find out which OSH activities are most likely to deliver a significant improvement in OSH performance in the future, and at the same time are relatively easy to control. As the insurer is subsidising these activities there is a certain potential for the abuse of the system in that companies could try to claim for activities that have not in fact been carried out. The case studies collected in this report provide an overview of how such approaches can be successfully managed, whether in an insurance-related or a state-run subsidy system.

The policy overview shows that insurance-based incentives are quite common in Europe, but that in some countries they do not exist at all (Denmark, Estonia, Greece, Spain, Sweden, UK), whereas subsidy schemes are used in nearly all Member States. It is also apparent that some countries without any insurance incentives offer, as a kind of compensation, more public subsidy schemes (e.g. Spain, Denmark). Therefore it could be useful to discuss which of these incentive approaches serves best to achieve what kind of objectives.

Insurance-related schemes like the funding scheme of the German butchery sector (Section 4.2.1) are advantageous if a large number of companies can take advantage of them. The incentive scheme is simple to apply for, as the company only has to complete a two-page questionnaire. In addition, participating companies can be sure that if they fulfil the specific criteria of the list of specified prevention activities, they will be awarded a certain number of bonus points and receive a proportionate reduction in their insurance premium. The fact that the bonus is deducted directly from the insurance premium further simplifies the administrative process. The clear relationship between the company's prevention effort and the reward, which is paid without delay, make the incentive scheme very motivating. This is shown by the high number of participating companies (46% of all potential users) and by the success in preventing accidents and ill-health among them compared to the non-participating companies. However, such incentive schemes with a closed list of activities are less likely to stimulate innovative OSH solutions.

Subsidy schemes are more appropriate, if the aim is a targeted promotion of specific prevention activities, for example to keep older workers in employment (e.g. Danish Prevention Fund, Section 4.3.5, Belgian Experience Fund, Section 4.3.7). Innovative solutions can be supported taking into account the individual needs of each enterprise. Often these schemes are open for all sectors and sizes of companies.

Subsidy schemes usually have a limited budget because public institutions have to plan their expenses on a long-term basis. However, this advantage for the incentive-offering organisation can have some drawbacks for applying companies. For example, an application for a subsidy could be awarded to one company but refused another company with matching criteria, simply because the second application was handed in a few days after the first, and the funding budget had been used up. In addition, subsidies are sometimes refused because the application does not meet the criteria of the scheme, e.g. it may be judged to be not innovative enough.

If governments wish to support OSH financially and reach a larger number of enterprises this could also be achieved through tax incentives. They could be based on a closed list of OSH activities or investment in equipment, such as shown in the Dutch Farbo scheme (see Section 4.3.8). As such schemes are easy to apply and relationship between effort and reward is quite clear, they can have a highly motivating effect on companies. However, tax schemes can incentivise only taxable organisations and therefore leave out most public and non-profit organisations.

The differences between countries and economic incentive schemes naturally have an influence on the potential transferability of incentives models in OSH. Subsidy systems, tax incentives and non-financial incentives should be theoretically possible in all EU countries. Regarding insurance incentives, it is useful to distinguish between two major groups of countries with a different workers' compensation approach: 19 countries have a monopoly structure regarding the accident insurance scheme and eight have a private competitive insurance market. Experience rating approaches can found in both competitive and monopolistic markets. However, there are differences when it comes to the funding of future-oriented prevention efforts, such as training

or OSH investments. This should be no problem for monopolistic approaches, because the insurance company can be sure it will benefit from the positive effect that investments will have on the claims rate. In a competitive market, however, the insurance company runs the risk that enterprises could change their insurance provider at short notice and therefore investments in prevention efforts could benefit its competitors rather than the original insurer. A possible solution for competitive markets could be the introduction of long-term contracts over several years or the creation of a common prevention fund which is financed equally by all insurers.

5.5.3. Success factors for economic incentives

Summarising the three parts of the report the following success factors could be identified:

1. The incentive scheme should not only reward past results of good OSH management, i.e. past accident rates, but should also reward specific prevention efforts which aim to reduce future accidents and ill-health.
2. The incentive scheme should be open to all sizes of enterprises and pay particular attention to the special needs of SMEs.
3. The incentive should be high enough to motivate employers to participate.
4. There should be a clear and prompt relation between the desired prevention activity of the enterprise and the reward.
5. The incentive system should have clear awarding criteria and should be designed to be as easy to use as possible, in order to keep the administrative burden low for both participating enterprises and incentive-offering organisations.
6. If the incentive needs to target a large number of enterprises, insurance or tax-based incentives with precisely defined criteria are most effective (closed system).
7. If the desire is to promote innovative solutions for specific areas, subsidy schemes are most effective (open system).

Regardless of the national framework conditions, the introduction of economic incentives is of course always a political decision for each country. Each society has to decide where it places itself in the continuum between the two extreme points of solidarity and individual responsibility, i.e. in the case of workers' compensation if there is the same premium for all enterprises (high solidarity) or if a sharp experience rating is introduced, making every company pay according to its individual risk (high individual responsibility). This report aims to give an overview of the state of research and the current policies of Member States, and to provide good practice examples through case studies. Organisations that would like to offer economic incentives to promote OSH can find some suggestions in this report but we do not recommend any specific incentive system.

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European Agency for Safety and Health at Work

Economic incentives to improve occupational safety and health: a review from the European perspective

Luxembourg: Publications Office of the European Union

2010 — 208 pp. — 21 x 29.7 cm

ISBN 978-92-9191-299-5

doi:10.2802/21517

Price (excluding VAT) in Luxembourg: EUR 15

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TE-31-09-255-EN-C

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Gran Vía 33, E-48009 Bilbao
Tel.: +34 944794360
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Price (excluding VAT) in Luxembourg: EUR 15

ISBN 978-929191299-5

Publications Office