

benOSH, a project on the benefits of occupational safety and health

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The project

- Funded by the EU Commission (Progress)
- Study on costs of accidents at work and work-related health problems
- Prevent together with KOOP
- 2009-2010
- Aim: Reinforce the arguments in favour of interventions to improve the health and safety of the workers

The project

- Employer: duty to ensure the safety and health
- However: emphasizing economic aspects can provide additional arguments
 - insight in costs of accidents at work and work-related ill-health
 - demonstrate the benefits of prevention

The project

- Two-track approach
 - 1 Desk research: Literature review and Scoping study
 - 2 Case studies: analysing costs of accidents at work and work-related ill-health/cost-benefit analysis
- 400 cost calculations, 56 cost-benefit analysis
- Final stage: draft report was submitted; gathering comments

Key messages

- Derived from the literature review and the case studies
- *In general*
 - Accidents at work and work-related ill-health hinder economic growth
 - Consequences of accidents at work and work-related ill-health go beyond the workplace
 - Costs are shifted to society and individuals

Key messages

Company level

- Consequences of accidents at work and work-related ill-health are not always noticed
- Consequences of accidents at work and work-related ill-health increase company costs and decrease revenues
- Calculating costs raises awareness about the necessity of prevention
- Accidents at work and work-related ill-health bring about considerable costs
- Investing in occupational safety and health contributes to company performance through tangible outcomes
- Evidence derived from practice: cost-benefit analysis studies show that investing in occupational safety and health yields positive results

hinder for economic growth

- 3.2% of the workforce in the EU-27 reported an accident at work in the past 12 months = approximately 6.9 million workers
- 8.6% of the workers in the EU-27 reported a work-related health problem in the past 12 months = approximately 23 million persons. Musculoskeletal problems were most often reported as the main work-related health problem (60%), followed by stress, depression or anxiety (14%).

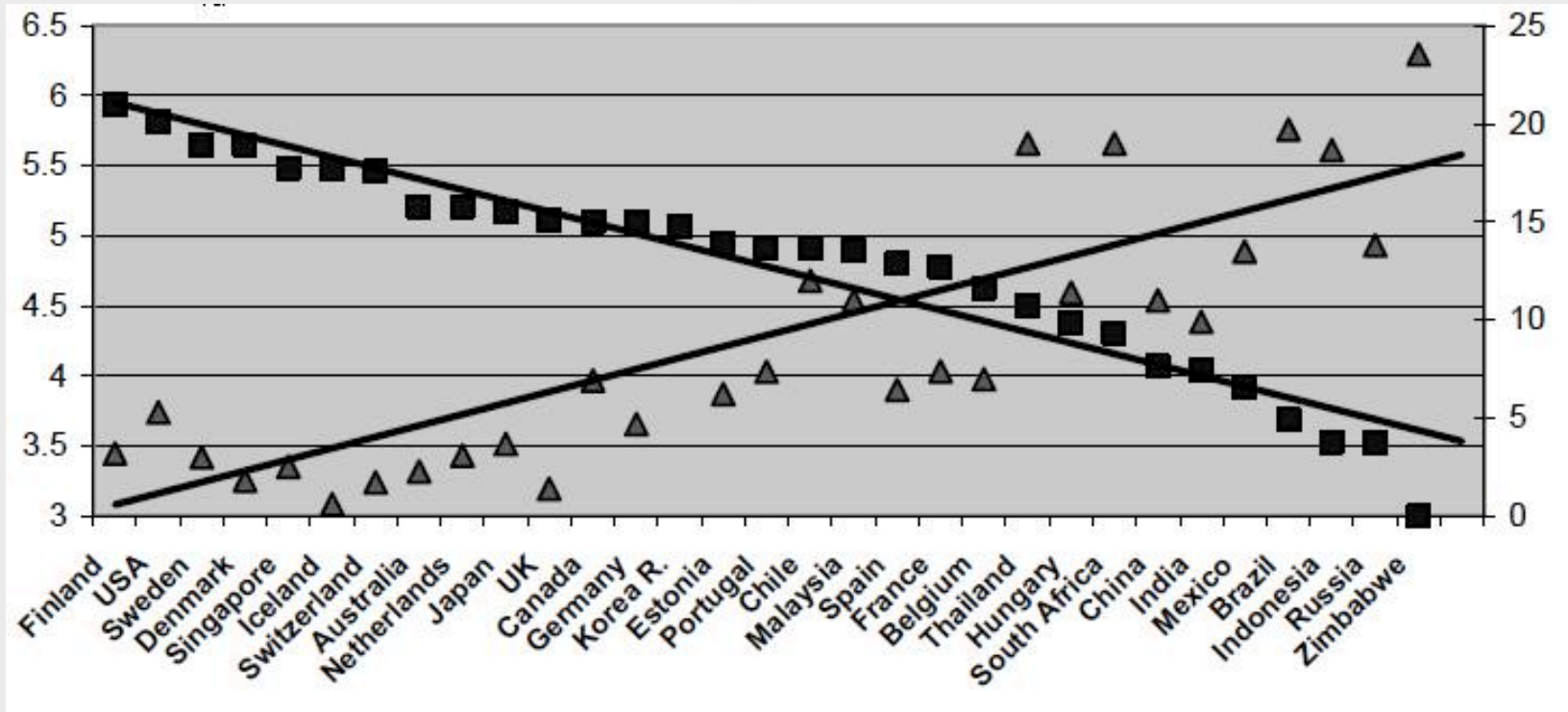
data from 2007, Eurostat 2010



hinder for economic growth

- outcomes of work-related problems have a negative impact on economic growth
- graph demonstrating the strong correlation between national competitiveness and the national incidence rates of occupational accidents.

hinder for economic growth



- Competitiveness, left scale (competitiveness index)
- ▲ Deaths, right scale (fatal accidents/100 000 workers)

Source: ILO, 2006

Consequences go beyond the workplace

- Poor and hazardous working conditions affect several groups
 - society: public or collective funds, healthcare systems, insurance companies;
 - company: OSH services, company/management, shareholders, customers, other companies;
 - individuals: workers, workers' families, friends.

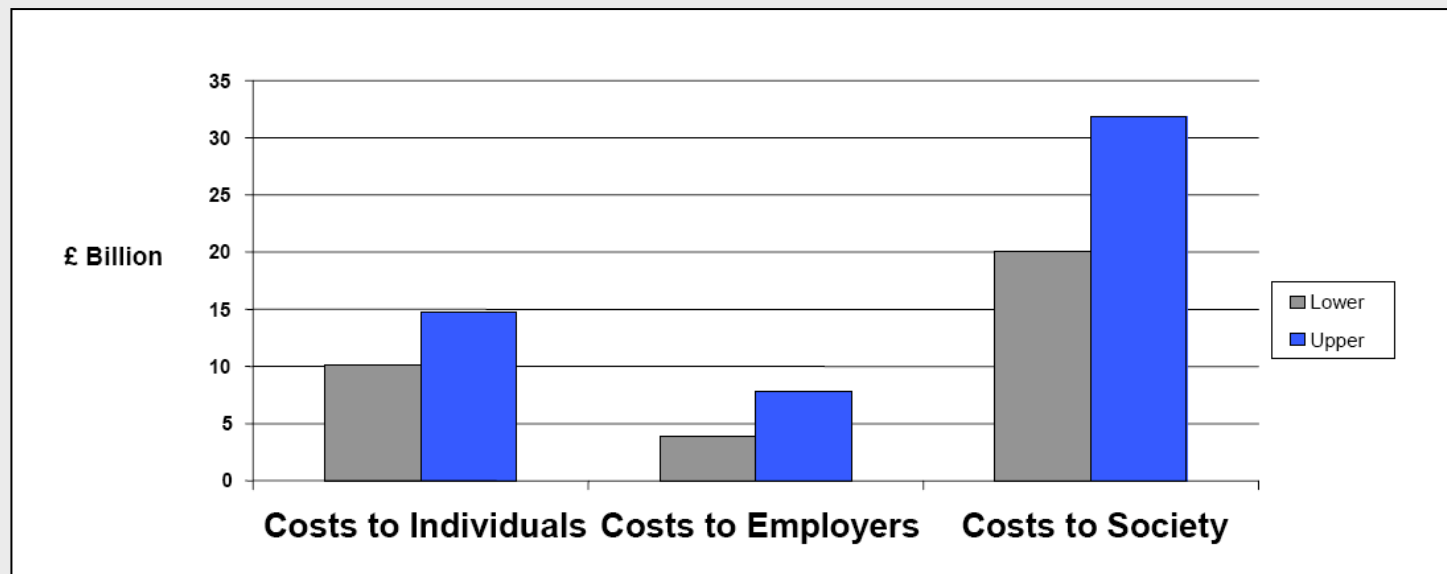
Consequences go beyond the workplace

- none of these groups perceives the full extent of the social and economic consequences of accidents at work or work-related ill-health
- Each group has an other perspective on costs
- The 'total' costs \neq the sum of the costs for each of the groups

Costs are shifted to individuals/society

- Individuals suffer serious consequences and their quality of life
- societal level: health-care expenditures, foregone earnings etc.
- Unevenly distribution: studies point to the fact that society bears the largest part of the costs followed by individuals. Employers bear the smallest part

Costs are shifted to individuals/society



Costs to Britain of workplace accidents and work-related ill-health (2001/02), Pathak (2008)

Costs are shifted to individuals/society

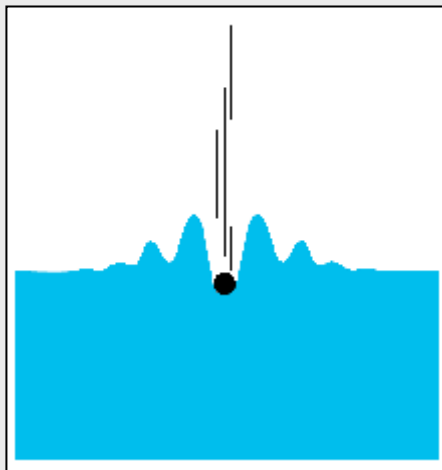
- Influence of the Workers' Compensation System
- Cost-shifting mechanisms: bringing costs back to the companies (incentives)

Consequences are not always noticed

- Pond model: When a stone is thrown in the water, it causes ripples in the water surface. However, the farther away from the point where the stone fell in the water, the less obvious it will be that a ripple is caused by the falling stone
- = the consequences of accidents at work and work-related ill-health; consequences are not always noticeable since they might occur in another time or another place

Consequences are not always noticed

- the more important the case, the more important the ripple effect
- smaller companies can be more affected by a case than bigger companies (small pond)



Increase costs/decrease revenues

- costs of accidents at work and work-related ill-health should be considered as the effects on the costs and the revenue of an organisation (company) that would not have emerged if the accident/case of work-related ill-health would not have taken place

Cost calculation = awareness raising

- Companies are in business to maximise profit; achieving loss minimisation contributes to profit maximization and the bottom line
- Demonstrating the financial impact of health and safety failures forms a lever for change
- E.g. When a courier of a delivery company has an accident and can't make the delivery, the client has to be compensated, analysis and calculation is interesting simply as an eye-opener (not so much the exact amount is important but the fact that more consequences can be revealed)

Considerable costs

- Cost calculation (case studies)
- cost-items clustered in
 - Human, Equipment, Environment, Product, Organisation
 - Services, Goods, Personnel, Depreciation

Considerable costs

- Back pain - social services
- moving a patient, resulting in a back injury
- Consequences
 - work incapacity of 68 days (388.57 h)
 - Assessment of causes and circumstances (0.5 h)
 - colleagues work extra hours to compensate for the absence of their colleague (233.14h)
 - Reporting to the insurer (1,5 h)
 - Discussion at the Committee for Prevention and Protection at Work (0.5 h)

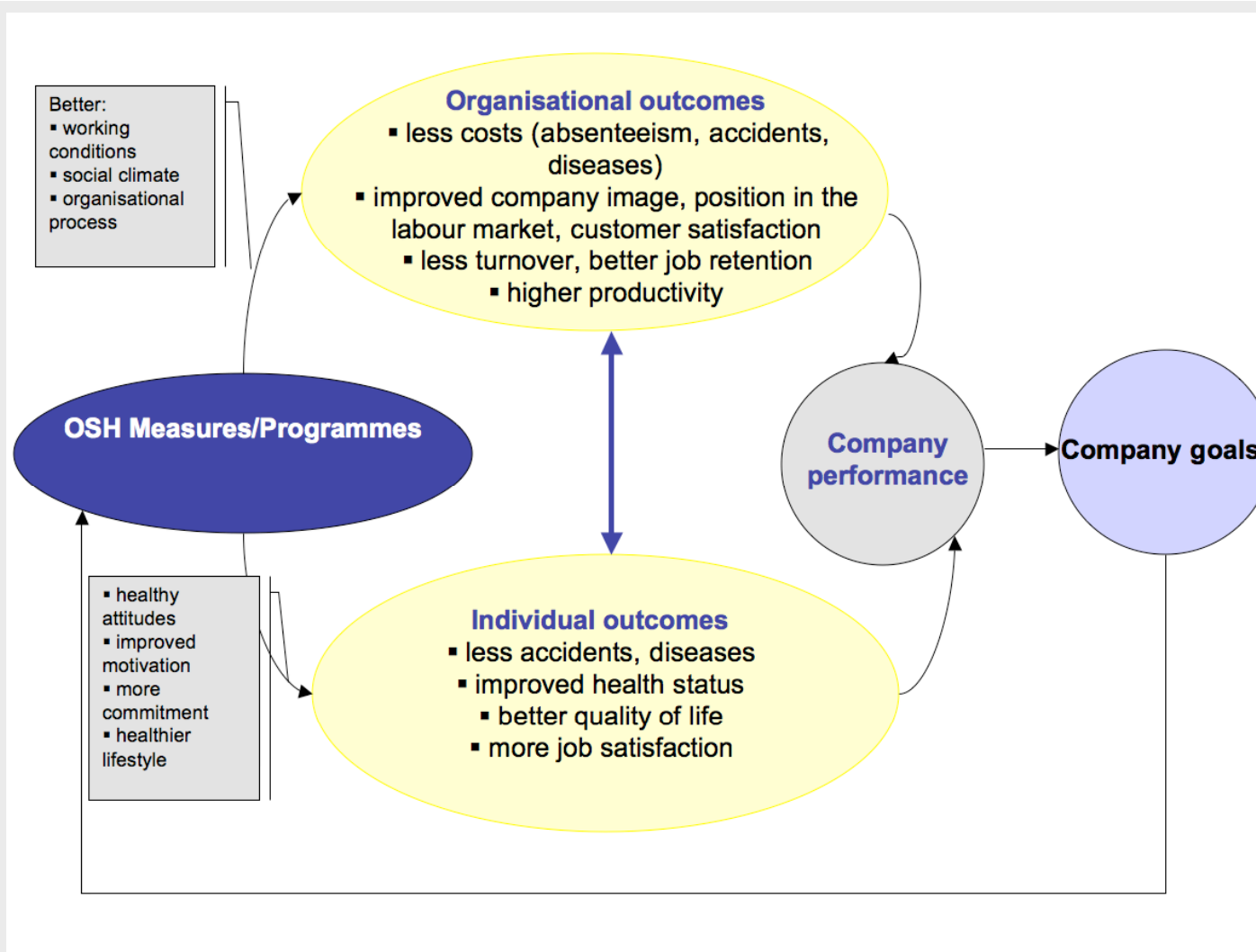
Considerable costs

<i>Human</i>	€
absence of the victim – time period during which the employer covers the salary	3680
absence of the victim – after the time period during which the employer covers the salary	228,57
Overtime of colleagues to compensate	5362,22
<i>Equipment</i>	
<i>Environment</i>	
<i>Product</i>	
<i>Organisation</i>	
accident investigation by management	12,5
accident investigation by OSH specialist (internal)	12,5
discussion of the accident in safety meeting/management	15
discussion of the accident in safety meeting/workers representatives (trade unions)	4,6
discussion of the accident in safety meeting/OSH specialist	25
administrative follow-up	60
reorganising the work	280
training of the replacement (time of the trainer)	7,5

Considerable costs

	Human	Equipment	Environment	Product	Organisation	TOTAL
Goods	187,68	0,00	0,00	0,00	14,80	202,48
Services	160,87	0,00	0,00	0,00	12,69	173,55
Personnel	9.247,77	0,00	0,00	0,00	433,42	9.681,19
Depreciation	53,62	0,00	0,00	0,00	4,23	57,85
	9.649,94	0,00	0,00	0,00	465,14	10.115,07

Investing in OSH: Tangible outcomes



Case studies

- Investing in OSH yields positive results
- Methodology: Cost-benefit analysis
- calculation of indicators such as
 - the Net Present Value
 - the Profitability Index
 - the Benefit Cost Ratio
- helpful in decision-making e.g. to make a choice whether or not to invest, or to choose between two alternative measures.

Case studies

Overview of the projects according to type of measure (main measure)
 – median values for minimum and maximum scenario

Measure	Code	#	%	Minimum scenario			Maximum scenario		
				Net Present Value	Profitability Index	Benefit-Cost Ratio	Net Present Value	Profitability Index	Benefit-Cost Ratio
substitution/avoidance	I	3	5,4	2207,52	2,56	1,60	13857,89	4,08	2,25
organisational measure	II	6	10,7	2310,96	1,74	1,04	21829,57	3,18	1,36
new equipment/auxiliaries	III	20	35,7	1713,35	1,41	1,40	8983,74	2,76	2,70
workplace adjustment	IV	6	10,7	2389,38	1,37	1,22	8984,01	2,15	1,66
training	V	16	28,6	605,02	0,95	1,12	8092,65	3,39	2,51
personal protective equipment	VI	5	8,9	154,38	1,05	1,18	11038,12	1,83	2,10
<i>all</i>		56	100	1434,875	1,29	1,205	9218,81	2,89	2,18