The cost of poor working conditions

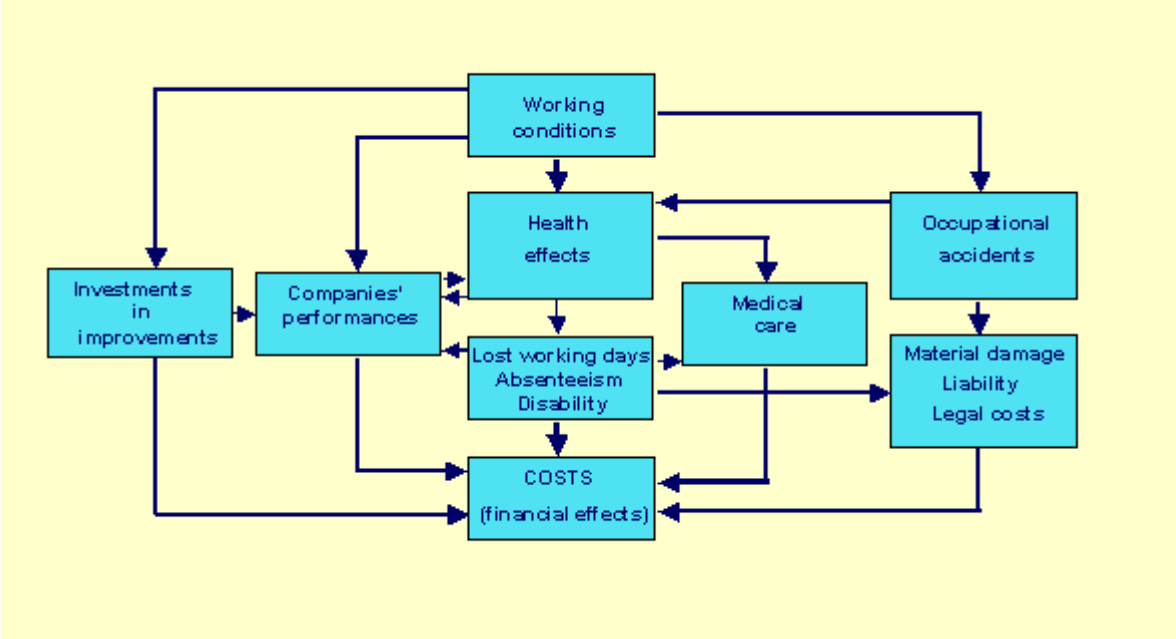
E.A.P. Koningsveld and I.L.D. Houtman, TNO Work and Employment, December 2004

http://www.eurofound.eu.int/ewco/2004/12/NL0412NU01.htm

An estimate of the multiple costs incurred by workplace accidents, illnesses and long-term absence in the Netherlands puts the amount at 3% of total GNP. Musculoskeletal disorders and psychosocial diseases are responsible for 83% of the cost of work-related health issues.

The Ministry of Social Affairs and Employment in the Netherlands recently updated a financial model of the societal costs of poor working conditions. Factors considered were absenteeism, occupational disability, work-related accidents, costs of risk prevention, safety at work and its enforcement, and health care. On the basis of this model, it is clear that most costs are due to work-related absence and disability, mainly resulting from psychological and musculoskeletal disorders. These costs are estimated to add up to €6 billion.

The model used is shown in the figure below. Costs incurred include sick pay, lost working days, and wages for replacement staff. Illnesses and injuries are included in the estimates when they are fully or mostly work-related. Where they require medical treatment, this adds further to the cost.



Poor working conditions can also be the cause of occupational accidents (NL0407NU05). These may additionally incur the cost of material damage, liability, legal fees and penalties.

Investment in improvements should also be considered, such as: legislation, enforcement, occupational health and safety services, and the cost of improving working conditions.

Categories of illness and their cost

Accidents, blood diseases and respiratory disorders result in a larger proportion of absenteeism than of disability, while the opposite is the case with heart and vascular disease, the nervous system and for cancers. A cost calculation was done on the basis of information collected from different sources. The health effects are analysed for each of the ICD-diagnostic categories (International Codes of Diagnoses), using the distribution of injuries over diagnoses as a basis.
As the focus is on injuries and illnesses originating in the workplace, work-related factors have to be identified for each diagnosis, based on the most recent research. The causal connection to work is estimated at from 45% for musculoskeletal disorders to only 3% for blood diseases. Some diagnoses show relatively high work-related causes, such as skin disease.
For medical care, a similar approach is used, focusing on people of working age. A 'healthy worker' correction is then applied, as workers generally enjoy better health than non-working people.
Since compensation in the Netherlands does not discriminate between work-related and other accidents, there are no reliable data on the number of occupational accidents. Neither are there reliable data nor estimates on the average cost of a work-related accident.
The same problem pertains when calculating the effects on company performance. In some companies, however, these are well defined and the cost calculated or at least estimated. To assess the total work force, one needs to have average values for the effect on productivity and the resulting cost.
The cost for preventive measures is clear, based on statistics from the occupational health and safety services, and government figures.

Total cost

The estimated total cost per worker is given in the table below (data from 2001).

Estimated total costs per worker		
	All sectors and services	
	€s per worker	**% of total**
Costs as a result of work-related illness:	**1,368**	**77.3%**
Cost of resulting absenteeism	527	29.8%
Cost of occupational disability	609	34.4%
Cost of reintegration grants	103	5.8%
Cost of curative health care	129	7.3%
Cost of prevention:	**400**	**22.7%**
Preventive occupational health and safety (OHS) measures	120	6.8%
Company investment and expenses for prevention	157	8.9%
OHS research and development	10	0.6%

Judicial cost	2	0.1%
Administration by companies	102	5.8%
Legislation and inspection	6	0.3%
Subventions and grants for improvement	3	0.2%
Total costs per worker per year	**1,768**	**100%**

The total cost for the Netherlands is equivalent to 2.96% of gross national product (GNP).
Two particular diagnoses are responsible for 83% of the cost of work-related ill health: musculoskeletal disorders (43%) and psychosocial disease (40%). Other diagnoses resulting in relatively high cost are: heart and vascular disease (5%), nervous system including the eyes and ears (4%), and occupational accidents (4%).
Calculations are made using Excel, which allows analysis of different scenarios. For instance, the effects of changes in the rate of absenteeism can be calculated.
Due to variation in social legislation between countries, the programme is not interchangeable but the model can be of value for studies elsewhere.
Further EU level research on health in the workplace is available on the Foundation's website.

Reference

Koningsveld, E.A.P., Zwinkels, W., Mossink, J.C.M., Thie, X. and Abspoel, M., *National costs of working conditions for workers in the Netherlands 2001* (in Dutch *Maatschappelijke kosten van arbeidsomstandigheden van werknemers in 2001*), Werkdocument 203, Ministry of Social Affairs and Employment, The Hague, The Netherlands, 2003.