Costs of poor OSH – Towards an EU-28 estimate

Expert meeting on the costs of accidents and ill-health at work

EU-OSHA Report – review of methodologies
Bilbao, 19 June 2014

Xabier Irastorza
Project Manager, PRU
Background: diversity of estimates

- ILO: 4% of the world’s annual GDP is lost as a consequence of occupational diseases and accidents = € 490 billion for EU27
- EU-OSHA (1997): range from 2.6% to 3.8% of GDP – variety of cost factors included.

<table>
<thead>
<tr>
<th>Country</th>
<th>Estimate % share GDP</th>
<th>Year</th>
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<tbody>
<tr>
<td>Netherlands</td>
<td>3.0</td>
<td>2004</td>
</tr>
<tr>
<td>Finland</td>
<td>2.0</td>
<td>2000</td>
</tr>
<tr>
<td>Spain</td>
<td>1.7</td>
<td>2004</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1.0</td>
<td>2010</td>
</tr>
<tr>
<td>Slovenia</td>
<td>3.5</td>
<td>2000</td>
</tr>
<tr>
<td>Australia</td>
<td>4.8</td>
<td>2009</td>
</tr>
<tr>
<td>New Zealand</td>
<td>3.4</td>
<td>2006</td>
</tr>
<tr>
<td>Germany</td>
<td>3.1</td>
<td>2011</td>
</tr>
<tr>
<td>Austria</td>
<td>2.7</td>
<td>2008</td>
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Estimating the costs of accidents and ill-health at work – a review of methodologies

**Aim:**

- Provide policy makers with relevant information on the economic impact of poor or non-OSH at macro level.
- Highlight contribution of OSH to improving productivity and competitiveness.
- Raise awareness about the costs of non-OSH among policy makers outside the field of OSH.

**Content:**

- Report – policy-oriented review of methodologies that quantify the economic impact of work-related accidents and ill-health
- Executive summary for policy makers: translated into eight languages.
- **Expert meeting:** consolidate report and steps ahead
Estimating the costs of accidents and ill-health at work – a review of methodologies

- Contractor: TNO and Matrix / published on 12 May 2014

- Selection criteria of models for full review (two of three):
  - cover several industries / one of the main industries when it comes to OSH (e.g. construction);
  - not focused on a specific type of injury/illness;
  - relating to one of the EU Member States.

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<th>Studies</th>
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<tr>
<td>Ayres et al. (2011)</td>
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<td>Béjean and Sultan-Taïeb (2005)</td>
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<td>Biddle (2004)</td>
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<td>Boonen et al. (2002)</td>
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<td>HSE (2011)</td>
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<td>Koningsveld et al. (2003)</td>
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<td>Leigh et al. (2001)</td>
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<td>Rikhardsson (2004)</td>
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<td>Romero (2010)</td>
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<td>Safe Work Australia (2012)</td>
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Two key steps required to provide a quantitative estimate of the cost of occupational injuries and illnesses:

1. the identification of the number of cases and
2. the application of monetary values to the identified cases.
1. Identification of the number of cases

- Most studies drew on existing literature, surveys and statistics – typically labour force surveys, compensation statistics:
  - In some studies, **survey data** was directly used to establish the number of cases.
  - ‘**Population Attributable Risk**’ method.
  - Incidence vs. prevalence:
    - Incidence: estimating new cases in a given year (and then calculating all future costs for those cases);
    - Prevalence: estimating all cases in a given year.

- **Significant potential for underestimation**
  - Long-latency disease - cause may be difficult to establish.
  - Small-scale incidents/cases that do not result in a long absence from work (or may not be reported at all).
  - Further research on narrowing down the extent of underestimation and statistically accounting for it is recommended.
2. Application of monetary values – Estimation of costs

Costs were categorized into five main types:

- **Productivity costs**: costs related to loss of output or production.
- **Health care costs**: medical costs, including both direct (e.g. pharmaceuticals) or indirect (e.g. caregiver time).
- **Quality of life losses**: monetary valuation of the loss of quality of life, such as physical pain and suffering.
- **Administration costs**: costs of administration, for example, applying for social security payments or reporting on a workplace accident.
- **Insurance costs**: costs regarding insurance, such as compensation payments and insurance premiums.
2. Application of monetary values – Estimation of costs

Costs to four stakeholders:

- **Workers and family**: the affected individual and close family or friends who are impacted by the injury or illness.
- **Employers**: the company or organisation that the affected individual works for.
- **Government**: the relevant public authority regarding, for example, social security payments.
- **Society**: all stakeholders – the effect on society is the overall impact of an injury or illness, excluding transfers between stakeholders (which cancel out).
Conclusions

- The best approach for an EU-wide calculation of costs would probably be an aggregation of national studies, with relevant structural differences highlighted.
- Use of standardised method, e.g. following HSE or Safe Work Australia.
- Include all stakeholders and as many cost categories as possible – quality of life often not included.
- Underreporting – try and assess it in sensitivity analysis (expert opinion).
Next steps

- **Today** - Expert meeting to discuss overview report and possible way forward for an EU-28 estimate.
- September 2014 - Workshop on cost and benefits of OSH with Dutch FOP – main focus on the business level.
- 2015-2016 - OSH overview project and costs and benefits of OSH
Aims of the expert meeting

- Discuss report
- Estimating the costs of accidents and ill-health at EU-28 level
  - Factors for EU-OSHA to take into account: limitations, challenges, opportunities,..
- Methodological approach
- Next
Thank you!