Safety Science 68 (2014) 294–308

Contents lists available at ScienceDirect

Safety Science

journal homepage: www.elsevier.com/locate/ssci

Occupational health and safety in corporate social responsibility reports

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ARTICLE INFO

Article history:
Received 19 July 2013
Received in revised form 18 March 2014
Accepted 14 April 2014

Keywords:
Occupational safety
Occupational health
Sustainability report
Corporate social responsibility
Case study
Content analysis

ABSTRACT

There is a current lack of research on occupational health and safety (OH&S) reporting as a part of corporate social responsibility (CSR) reports. The aim of this paper is to analyse the OH&S reporting in (CSR) reports. Five years of CSR reports from three companies representing different business sectors are here used as research material. The results show the OH&S reporting to consist of reporting on occupational health, occupational safety and well-being at work. The companies report mainly about occupational safety with a variety of subareas, whereas the reporting of well-being at work is more seldom and with less variation of subareas. In each theme, the companies report both the results that their OH&S work has yielded and the processes behind these results. As the results show more similarities in OH&S reporting than differences between the companies, more research on OH&S reporting is encouraged.

1. Introduction

1.1. Corporate social responsibility and occupational health and safety

Societies place ever-increasing demands on companies. A company's actions to meet these demands are part of their corporate social responsibility (CSR) work. The aim of CSR is to promote sustainable development (ISO, 2010). However, there is no clear consensus of what is consistently included in this concept (e.g. Gray et al., 1995a; Hopkins, 2004; Wilenius, 2005). Quite often CSR is understood as a company's responsibility for its economic, environmental and social impacts (e.g. Cagnin et al., 2005; Elkington, 1999; ISO, 2010; Wilenius, 2005), and usually entails voluntary actions taken by a company beyond their legal requirement to do so (e.g. Cagnin et al., 2005; Carroll, 1995; Commission of the European Communities, 2002). CSR also pertains to a company's responsibility to its stakeholders (Commission of the European Communities, 2002; Hopkins, 2004; ISO, 2010; Zwetsloot and Starren, 2004). This paper uses the threefold definition of CSR (which divides it to economic, environmental and social responsibility) as a background to discuss the social impacts of companies, and more specifically, the occupational health and safety issues related to these social impacts.

Social responsibility focuses on a company's impacts on human beings (Elkington, 1999) from two perspectives: the internal and the external. Internal and external social responsibility can also be understood as direct and indirect social responsibility respectively. Niskala et al. (2009) define direct social responsibility as a company's efforts of occupational safety in regards to their internal employees, and indirect as related to workers in the company's supply chain. The internal perspective focuses on a company's internal actions with its employees. Internal actions consist of personnel policy and occupational safety. In regards to personal policy, employee training (Confederation of Finnish Industries, 2001; Wilenius, 2005), lack of discrimination (Confederation of Finnish Industries, 2001; Välimaa, 2004) and trade union freedom (Juholin, 2004; Välimaa, 2004) are key issues. Occupational safety, on the other hand, includes actions to promote a safe and healthy workplace (Confederation of Finnish Industries, 2001; Välimaa, 2004; Wilenius, 2005).

The second aspect of social responsibility pertains to the external actions of companies. Depending on the company, these actions can span from the local to the global (Zwetsloot and Starren, 2004). Local and global social responsibility consists of three aspects: actions in a company's own supply chain network, actions in the local community, and actions to maintain product safety. The first relates to a company's responsibility in regards to relationships between different actors in the supply chain (Confederation of Finnish Industries, 2001; Wilenius, 2005;

Abbreviations: CSR, corporate social responsibility; OH&S, occupational health and safety; GRI, Global Reporting Initiative; OH, occupational health; OS, occupational safety; WB, well-being at work; unit, unit of analysis (i.e. paragraph, table, and graph); theme, occupational health, occupational safety and well-being at work; subarea, themes consist of subareas.

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http://dx.doi.org/10.1016/j.ssci.2014.04.011
0925-7535/

Zwetsloot and Starren, 2004). This responsibility demands the same level of attention given to internal operations. The second aspect, actions in the local community, can be understood as the traditional focus of a CSR, where a company's responsibility predominately relates to its local surroundings. Included here are philanthropic actions taken for local schools, health care institutions and sporting events (Confederation of Finnish Industries, 2001). The third aspect consists of actions to guarantee product safety. Knowledge of a product's health and safety aspects, minimisation of the use of harmful substances, proper product packaging and labelling, as well as the protection of consumers are important subareas here (Confederation of Finnish Industries, 2001).

An important component of CSR is occupational health and safety (OH&S). OH&S consists of the "conditions and factors that affect, or could affect, the health and safety of employees or other workers (including temporary workers and contractor personnel), visitors, or any other person in the workplace " (BSI, 2007, p. 19). Alli (2008, vii) sees OH&S as "the anticipation, recognition, evaluation and control of the hazards" that could affect the health or well-being of employees. According to ISO 26000 (ISO, 2010), integral to OH&S is the prevention of health hazards and other protections for employees, as well as adapting a workplace to its workers' capabilities and not vice versa. OH&S concerns the social, mental and physical well-being of workers (Montero et al., 2009). Montero et al. (2009) emphasise that the aim of OH&S work should go beyond mere legal requirements.

OH&S work is therefore an important aspect of a company's CSR work. As Zanko and Dawson (2012) point out in their analysis of the current OH&S research practises, there is a lack of research on the connection between CSR and OH&S. This article seeks to bridge this research gap.

1.2. The aim and the structure of the paper

The aim of this paper is to analyse how companies from different industries report on occupational safety and health (OH&S) issues. This research seeks to find answers for the following research questions:

(1) How and what is reported of the occupational safety and health issues in general?
(2) What do the case companies report in regards to occupational safety and health?
(3) What are the similarities and differences between the case companies in OH&S reporting?

This research looks at the corporate social responsibility (CSR) reports of three case companies from 2007–2011. In each report, the sections devoted to occupational health and safety (OH&S) information are analysed. Each of the companies represents different areas of business, namely, aviation, energy and the financial sector.

This research contributes to literature on the content analysis of CSR reporting, a popular research area, as will be shown in the Chapter 3. The chapter also shows, however, that there is a lack of specific research on the analysis of OH&S reporting. The research of this paper attempts to fill this gap by providing a deeper analysis of OH&S reporting. In this research, OH&S reporting refers to the process of gathering and processing OH&S data in order to publish the OH&S information in a CSR report. This research does not offer merely a snapshot of reporting from a certain year, but describes the reporting trends over five years in three companies. The results will show that the case companies' OH&S reporting consists of altogether 35 different subareas categorised by occupational health, occupational safety and well-being at work. A surprising amount of similarity and only minor differences are found in the respective OH&S reporting of the three case companies.

This paper is structured as follows: The next chapter explains the history of CSR reports, companies' motivations for publishing the reports, and briefly the GRI reporting framework. The third chapter reviews previous literature on the content analysis of CSR reporting, focusing on the analysis of OH&S reporting. In the fourth chapter, the case companies, the method used (content analysis) and the material used (three companies' CSR reports of 2007–2011) is presented. The results section then reports the findings of this research, including the content of OH&S reporting in the case companies and a comparison of OH&S reporting between companies. This paper ends with discussion and conclusions evaluating the success of this research, while offering ideas for future research.

2. Corporate social responsibility reporting

2.1. Corporate social responsibility reports

> "Sustainability [i.e. CSR] reporting is the practice of measuring, disclosing, and being accountable to internal and external stakeholders for organizational performance towards the goal of sustainable development. 'Sustainability reporting' is a broad term... used to describe reporting on economic, environmental, and social impacts...A sustainability report should provide a balanced and reasonable representation of the sustainability performance of a reporting organization – including both positive and negative contributions." (Global Reporting Initiative, 2011, p. 3).

As the above citation from the Global Reporting Initiative (GRI) mentions, a CSR report can be used both internally and externally. The report helps managers to structure a company's CSR work (e.g. Niskala et al., 2009; Székely and Knirsch, 2005; Tregidga and Milne, 2006). Externally, the aim of the CSR report is to inform stakeholders about a company's CSR performance (Herzig and Schaltegger, 2006; Kolk, 2010; Niskala et al., 2009).

Companies have multiple motives for publishing a CSR report (Kolk, 2004). Reporting can help to monitor progress against set targets and it can raise awareness of the CSR issues inside the company (Sustainability/UNEP, 1998). Reporting also improves the credibility and transparency of the operations (Sustainability/UNEP, 1998). A reason for CSR reporting is also to maintain (Elijido-Ten et al., 2010; Dixon et al., 2005), increase (Hunter and Bansal, 2007) or to repair the company's legitimacy (Milne and Patten, 2002). For many companies, the reason for publishing a CSR report is increased stakeholder pressure (Dixon et al., 2005 Elijido-Ten et al., 2010). Stakeholders that can be regarded as the target groups of CSR reports are e.g. academia, business partners, employees, (environmental) NGOs, a financial community, a local community and regulators and policy makers (Azzone et al., 1997).

Companies' CSR reporting has covered different topics at different times: Companies started with the reporting of social aspects, then they reported about their environmental performance, and lately companies have reported about the whole CSR area. In the 1970s, academic research focused on companies' employee and social reporting, (Buhr, 2007) while company reporting addressed company activities, products, services and social impacts (Herzig and Schaltegger, 2006). In the 1980s, corporate reporting of non-financial aspects ceased (Buhr, 2007), though reactivated near the end of the decade and continued into the beginning of 1990s with a focus on environmental reporting (Adams, 2004; Buhr, 2007; Milne and Gray, 2007; Sinclair and Walton, 2003). Many

companies today publish environmental issues together with economic and social issues in a single report. Such reports are often thought of in terms of sustainability or sustainable development, and corporate (social) responsibility or corporate citizenship reports (Kolk, 2010).

Generally, the reporting of CSR issues is done voluntarily by a company. In the beginning of 2000s only Sweden, France, Germany, Norway, Belgium and Italy had legal requirements of CSR reporting (van Wensen et al., 2011). Only recently, most of the Western European governments have placed mandatory or voluntary requirements on CSR reporting (van Wensen et al., 2011). The voluntary nature of reporting has resulted in multiple guidelines or frameworks to guide the reporting. The best known and widely applied reporting framework currently in existence is the Global Reporting Initiative (GRI) (Brown et al., 2009). However, as such frameworks are undertaken on voluntary basis, companies may choose whether to apply them and to what degree.

2.2. Global Reporting Initiative

As mentioned above, there are many frameworks for companies to base their CSR reporting on. Currently, the most widely used is the Global Reporting Initiative (GRI) (Brown et al., 2009). In May of 2013, a new GRI framework (G4 Sustainability Reporting Guidelines) was launched (Global Reporting Initiative, 2013). However, this chapter focuses on the previous version of the GRI framework (RG Sustainability Reporting Guidelines 3.1), as companies are only starting to apply the new version.

The GRI framework guides companies in reporting the economic, environmental and social aspects of their operations (Global Reporting Initiative, 2011). A company's adopting the GRI is a voluntary endeavour and can be applied at three different levels (C, B, A). At the C level, requirements are the lowest (e.g. reporting a minimum of 10 performance indicators), whereas at the A level, requirements are the highest (e.g. reporting of each "core" performance indicators). Companies adopting the GRI framework in their reporting state this together with the application level in the report. Additionally, companies can show in the report with a '+' sign that the report has been externally assured. (Global Reporting Initiative, 2011).

The GRI framework directs both the process of the reporting and the content of a report. The content of a report is divided into three areas: strategy and profile, management approach, and performance indicators. The indicators are divided into core and additional indicators. Core indicators are relevant aspects that should be reported by the majority of companies, such as 'direct economic value generated and distributed' and 'materials used'. Additional indicators cover emerging themes that might be relevant to some companies, such as 'water sources significantly affected by withdrawal of water' and 'energy saved due conservation and efficiency improvements'. In total, the GRI recommends at the very most the use of 81 indicators. The GRI lists 9 economic indicators, 30 environmental indicators, and 42 social indicators overall. Out of the 42 social indicators, 4 focus on occupational health and safety aspects (see Table 1). (Global Reporting Initiative, 2011) In other words, the GRI suggests that approximately 5% of the information provided should address OH&S issues in a CSR report.

3. Previous research on content analysis of corporate social responsibility reporting

Research involving content analysis of corporate reports has been popular. Fifka (2012) conducted an extensive meta-analysis of such research, finding almost 200 studies on the topic, ranging from 1970 to 2011. In order not to duplicate Fifka's efforts, the aim of this chapter is to demonstrate the uniqueness of this paper's research. The following chapters summarise previous literature on the content analysis of OH&S reporting, as well as the content analysis of the aviation, energy and financial sectors.

3.1. Previous research on occupational health and safety reporting

Although there is an abundance of previous content analysis literature, content analysis of OH&S issues is limited. Previous literature on OH&S reporting can be categorised into four groups (see Table A.1).

In the first group, OH&S reporting has been researched as a part of CSR reporting. This means that OH&S issues are included in "human resources" (e.g. Abu-Baker, 2000; Alnajjar, 2000; Guthrie and Parker, 1989; Zéghal and Ahmed, 1990), "human capital" (Campbell and Rahman, 2010), "workforce" (Holcomb et al., 2007) or in "labour practice responsibility" (Li et al., 2011; Toppinen et al., 2011), but no results of OH&S reporting are provided in these studies.

In the second group, the level of OH&S reporting has been researched as a part of CSR reporting. Previous research has found mixed results on the level of OH&S reporting. Many studies (Belal, 2000; Brockhoff, 1979; Gray et al., 1995a; Kuasirikun and Sherer, 2004; Newson and Deegan, 2002; Roberts, 1991; Walker and Parent, 2010) have found OH&S reporting to be at rather low level: E.g. Belal (2000) found 3 companies of a studied 30 to report on OH&S: One reports about a construction accident, another about the application of a safety awareness programme and the third one about safety awards or certifications received. Similarly, Kuasirikun and Sherer (2004) found one company report on OH&S in 1993, with one sentence about the willingness to provide personnel protective equipment for the employees, and two companies in 1999, both reporting about their willingness to obtain an ISO 18 000 certification. In addition, although Newson and Deegan's (2002) research found OH&S to be the top reported issue in reports among global expectations, it still accounts for an average of 0.2 pages in the reports.

Two studies (Jones, 2011; Xiao et al., 2005), show OH&S reporting results "at average level", meaning not low or not high. Jones (2011) showed the frequency of the use of the OH&S graphs: lost time and illness (6th most often), accidents (9th most often), and health and safety (22nd most often). Xiao et al. (2005) showed that

Table 1
OH&S indicators in the GRI framework (text directly cited from Global Reporting Initiative, 2011, 31).

Indicator	Description of the indicator	Additional/ core
LA6	"Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advice on occupational health and safety programs."	ADD
LA7	"Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities by region."	CORE
LA8	"Education, training, counselling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases."	CORE
LA9	"Health and safety topics covered in formal agreements with trade unions. Health and safety topics covered."	ADD

UK companies disclosed more in regards to health and safety than HK companies.

A few studies (Islam and Deegan, 2008; Sotorrío and Sánchez, 2010; Veleva et al., 2003; Vidal and Kozak, 2008; Williams and Ho Wern Pei, 1999) have found OH&S issues to be among the top reported issues. Here, for example, Islam and Deegan (2008) showed an increase in OH&S reporting with OH&S reporting representing the top area of reporting among human resources in the recent reports of studied companies. In comparison to all CSR reporting, OH&S issues represented approximately one quarter of the reports. In addition, Sotorrío and Sánchez's (2010) results showed that "the health and safety situation at workplace" were among the 10 most commonly reported items (by over 80% of the companies). In addition, they analysed the reporting of injuries or accidents, but these figures were reported only by about half of the companies. Vidal and Kozak (2008) found OH&S information to be the eighth most disclosed topic.

In the third group, previous research that offers a detailed description of the content of OH&S reporting is categorised here. Mikkilä and Toppinen (2008), Roca and Searcy (2012), and Székely and Knirsch (2005) studied the use of OH&S indicators (among other CSR indicators). About the OH&S indicators, Mikkilä and Toppinen (2008) found forest industry companies commonly reporting of accidents, inspections and certification. Besides, they found that the companies use 13 different OH&S indicators. The most often used indicators were penalties, awards, occupational health care, and amount of lost time. Roca and Searcy (2012) found companies to use approximately 50 OH&S indicators. The topics of the indicators included "accidents, exposure to hazards, lost time and medical treatment due to incidents and management of H&S in the corporation". Roca and Searcy (2012) also reviewed the use of GRI indicators and found 31 of 94 companies to report on OH&S GRI indicators. All of the OH&S GRI indicators were reported, but the popularity of certain indicators varied. Most often (25/31) companies reported about injury rates (GRI LA7 indicator, see Table 1). The least often (9/31) reported issues were trade union health and safety agreements (GRI LA9 indicators, see Table 1). Of 20 companies, Székely and Knirsch (2005) found that 13 reported OH&S indicators using 12 different indicators. The majority of indicators used were related to occupational accidents. However, the number of accidents and the accident rate were reported in nine different ways. Other OH&S indicators used were sickness rates, health rates and frequency of EHS training. Székely's and Knirsch's (2005) concluded that companies' social performance could not be compared to the indicators.

Dierkes (1979), Perrini (2005) and Vuontisjärvi (2006) studied the content of OH&S reporting and the use of OH&S indicators. Dierkes (1979) found that 9 of 14 companies studied reported about OH&S: accident rate was given by six companies; causes of accidents were identified only by one company; safety competition was given by three companies; and improvements were given by four companies. Perrini (2005) found OH&S issue reporting to be the most commonly reported area of social responsibility. OH&S projects were reported in 80% of the reports, while indicators of the occurrence of accidents and diseases were reported in 72% of the reports. Vuontisjärvi's (2006) research also found interesting results of OH&S reporting (or in her terms "employee health and well-being"). OH&S issues were disclosed by 61% of the studied companies and were the fifth most commonly disclosed theme. The most commonly used indicators were working atmosphere or job satisfaction surveys, other internal surveys, support for sport and recreation, health and safety training, and support for rehabilitation. In total, the research lists companies mentioning the three principles (stress on preventive activities, retaining the personnel working capacity up to proper retirement age, and principle of zero accidents) in relation to OH&S and 25 OH&S indicators.

Lastly, Deegan et al. (2002) and Steurer and Konrad (2009) focused on the content of OH&S reporting. Deegan et al. (2002) compared the CSR reporting of one Australian company to the media coverage of the company. They found that human resource reporting, and especially employee health and safety within it, were the most popular topics in both the studied corporate reports and media. Interestingly, they also found that while the company reported highly positive aspects, and here again, in relation to human resources and especially employee health and safety, media coverage focused on negative aspects. Steurer and Konrad (2009, 29) summarise the OH&S reporting in the following manner: "The CEE companies try to raise awareness for the prevention of fires, injuries and fatalities through meetings, brochures, campaigns, safety trainings and labour safety risk assessments."

In the fourth group, the only research to focus exclusively on OH&S reporting has been Chan's (1979). Chan (1979) studied the OH&S reporting of US Fortune 500 companies. He found that 80% of the companies did not report on OH&S in their annual reports. He categorised the found reporting by "efforts to reduce occupational injuries and illnesses" and "results achieved". Twenty-nine per cent of the companies reporting OH&S reported of both of these groups; fifty-five per cent reported of the efforts only; and sixteen per cent of the results only. In examining the reported results, companies used 13 different definitions of accident rates. The most common efforts of these companies included integrating OH&S in operational decision making; creating or expanding OH&S positions, departments or programs; taking part in OH&S research; informing and training employees and giving medical examinations; and OH&S expenditures.

In summarising previous content analysis of OH&S reporting, one can highlight four aspects. First, only a limited amount of research has focused on OH&S reporting. Second, most of the previous research on OH&S reporting has focused on the level of reporting and not so much on the content. Third, previous results have been mixed, either finding very low levels of OH&S reporting, or OH&S reporting being one of the top CSR issues to be reported. Fourth, as the content of these analyses of OH&S reporting has differed so greatly between them, it is somewhat difficult to draw a conclusion in regards to a common reporting theme. The most common area of reporting has been occupational accidents. However, many studies have concluded that occupational accidents have been reported with multiple different indicators. Other common areas of OH&S reporting have been lost time, training, certification and awards.

3.2. Previous content analysis research on reports of companies from the aviation, energy and financial sectors

As Fifka (2012) has pointed out, the majority (3/4) of previous content analyses have used general samples (e.g. Fortune 500 companies or 100 largest companies in a country). The rest of these analyses have had a more specific focus (e.g. a specific industry sector or companies with high environmental impacts). The current research represents specific sectors differently than previous literature in regards to the content analysis of CSR and OH&S reporting, as will be shown in following.

Previous research has used three approaches of study in regards to aviation companies. First, airlines have been studied among other companies as representatives of transportation (e.g. Newson and Deegan, 2002; Székely and Knirsch, 2005). Second, aviation is occasionally classified as its own sector among other sectors (e.g. Prado-Lorenzo et al., 2009; Stanwick and Stanwick, 2000). Third, and very rarely, the research solely focuses on airlines. Four studies were found that focused on the aviation sector (see Table 2). Only one of these (Cowper-Smith and de Grosbois, 2011) also addressed OH&S reporting, while others covered

Table 2
Previous content analysis research of the case study company's sectors.

References	Sector	Topic	OH&S
Cowper-Smith and de Grosbois (2011)	Aviation	CSR reporting	x
Fenclova and Coles (2011)	Aviation	Social reporting	
Hooper and Greenall (2005)	Aviation	Environmental reporting	
Mak et al. (2007), also Mak and Chan (2007), Chan and Mak (2005) and Mak and Chan (2006)	Aviation	Environmental reporting	
Cormier and Gordon (2001)	Energy	CSR reporting	
Freedman and Stagliano (2008)	Energy	Environmental reporting	
Hughes (2000)	Energy	Environmental reporting	
van der Laan Smith et al. (2005)	Energy	CSR reporting	x
Barako and Brown (2008)	Financial	CSR reporting	
Branco and Rodrigues (2006), also Branco and Rodrigues (2008)	Financial	CSR reporting	x
Coupland (2006)	Financial	CSR reporting	x
Cuganesan (2006)	Financial	Social reporting	
Douglas et al. (2004)	Financial	Social reporting	
Herzig et al. (2012)	Financial	CSR reporting	x
Hinson et al. (2010)	Financial	CSR reporting	x
Khan et al. (2009)	Financial	CSR: reporting	x
Patten (2002)	Financial	CSR reporting	x
Sobhani et al. (2012)	Financial	CSR reporting	x
Tarna (1999)	Financial	Environmental reporting	
Williams and Adams (2013)	Financial	Social reporting	

environmental reporting or CSR reporting. Cowper-Smith and de Grosbois (2011) studied the CSR reporting of 41 airlines. Compared to other CSR reporting studies, they also meticulously analysed OH&S reporting. They found 12 different OH&S themes that companies reported or measured. The most common aspects included providing sport and health activities, ensuring good working conditions, and providing periodic inspections of working environments and employee health.

In regards to energy companies, two approaches of study have been used in the previous literature. First, energy company reports were mainly content analysed in general sample studies (e.g. Knox et al., 2005; Newson and Deegan, 2002; Prado-Lorenzo et al., 2009; Williams and Ho Wern Pei, 1999). Second, a small number of studies focused exclusively on the energy companies' reports. Only four studies of this nature were found, and of these, only one included OH&S reporting. Van der Laan Smith et al. (2005) studied 58 power generation companies from Norway, Denmark and the USA. Their focus was to study CSR reporting. OH&S issues were studied among human resources reporting which means that the results of OH&S reporting are not shown separately. Nevertheless, human resource reporting was among the top two most reported aspects.

Several approaches to content analysis are found in literature regarding company reports from the financial sector. First, financial companies are typically excluded from general sample studies (e.g. Roberts, 1991; Schadewitz and Niskala, 2010). Second, there are general content analysis studies that have included the financial sector in the sample (such as Knox et al., 2005; Stanwick and Stanwick, 2000; Williams and Ho Wern Pei, 1999). Third, quite a few studies exist that address CSR reporting in the financing sector. It appears to be somewhat of a current trend, actually, to study the financial sector (see Table 2). The financial sector (i.e. banks and insurance companies) includes more companies than the aviation sector, which might explain the larger amount of interest in this area. Most of the research found also addresses OH&S reporting, however, often with very modest results. Patten (2002) analysed the CSR reporting of insurance companies with the result that only 1 of the 40 analysed companies provided information about OH&S. Khan et al. (2009) researched the CSR reporting of Bangladeshi banks and found that none of the analysed 20 banks reported about OH&S. Hinson et al. (2010) studied the CSR reporting of banks of Ghana and found that none of the 16 banks reported about OH&S. Coupland (2006), however, did find OH&S reporting in her study of five UK banks. Health and safety was mentioned under the title of "Being good", but this was not elaborated on any further. Branco and Rodrigues (2006, 2008) studied 15 and 12 Portuguese banks respectively. In 2006, their results showed that one bank reported via the Internet but not in the annual report of OH&S, and in a 2008 update, the Internet reporting remained the same while three companies disclosed of OH&S in their annual reports. Three very meticulous analyses of OH&S reporting in the financial sector were done by Sobhani et al. (2012), Herzig et al. (2012), and Cuganesan (2006). Sobhani et al. (2012) studied the CSR reporting of 29 banks in Bangladesh. They found that 2/5 of the banks reported general aspects of OH&S, and that 1/4 reported about healthcare. None of the studied banks reported about accidents. Herzig et al. (2012) studied the CSR reporting of 10 German banks and found OH&S issues to be the third most disclosed area of 25 studied areas. Cuganesan (2006) analysed four Australian banks' uses of human resource indicators. The results showed that three companies' reports included OH&S indicators. 'Lost time injury frequency rate' was an indicator used by each of the three reporting companies.

To summarise previous content analysis of reports from the aviation, energy and financial sectors, one can highlight three aspects: First, only a limited amount of research has focused on these sectors; Second, an even more limited amount of research has covered OH&S reporting in these sectors; Third, those studies that have covered OH&S mainly report of non-reporting. The best descriptions of OH&S reporting in the financial and aviation sectors have come from Sobhani et al. (2012) and Cowper-Smith and de Grosbois (2011) respectively.

4. Material and methods

4.1. Case companies

This research focuses on the OH&S reporting of three Finnish companies (Finnair, Fortum and Tapiola). The companies were selected for this analysis because they each represent a different business sector. Such a method of selection provides the opportunity to study what companies from different industries report on OH&S issues. Each of the three companies is a large company with thousands of employees, and all have long traditions of CSR work and CSR reporting.

Finnair, an aviation company, exemplifies a company that has multiple different work tasks ranging from shift work to normal office hours, and hard-manual labour to desktop jobs, each with different types of occupational safety problems. Previous

Table 3
Basic information of the case companies.

	Finnair	Fortum	Tapiola
Sector	Aviation	Energy	Financing
Established	1923	1998 (From a merger)	1982 (From a merger)
Turnover in 2011	2260 Million Euros	6200 Million Euros	1360 Million Euros
Amount of employees in 2011	7500	10 780	3000
Ownership	Private	Private	Cooperative

safety-related studies in aviation have focused quite naturally on the areas of accident analysis (e.g. Goode, 2003; Li, 2007; Plant and Stanton, 2012) and safety culture (e.g. Evans et al., 2007; O'Connor et al., 2011). Apart from pilots, the maintenance personnel in aviation have also been studied in regards to occupational safety (e.g. Chang and Wang, 2010; Hsiao et al., 2013).

Fortum is an energy company representing the so-called 'basic industry', an industry which typically has traditional occupational safety concerns such as occupational accidents. However, one should point out that Fortum has a rather good safety performance level. E.g. their lost workday injury frequency (LWIF[1]) was 1.5 in 2012 (Fortum, 2013b). The figures of the electricity, gas, steam and air conditioning supply industry in 2011 in Finland were: 12.3 (injury frequency from workplace injuries causing at least 4 days of incapacity for work) and 32.5 (injury frequency from all compensated injuries) (Federation of Accident Insurance Institutions, 2013).[2] One typical area of safety-related research in the energy sector is a focus on nuclear safety (e.g. Falk et al., 2012; Vaurio, 1998). Outside a nuclear safety context, the energy sector has been studied variously in regards to safety. For example, one occupational hazard of electricians is electric arcs (Mäkinen and Mustonen, 2003). Also, modifications in shift work roster have been studied in a power station (Mitchell and Williamson, 2000).

Tapiola is a firm from the financial sector that embodies yet another type of operations, in this case those mainly related to office-type environments. Therefore, Tapiola has completely different OH&S concerns than the prior two mentioned companies. The financial sector can be said to be under-represented in safety-related studies. Only one study was found where Monnery (1999) calculated the costs of accidents and work-related ill-health in a financial organisation.

The basic information of the case companies is summarised in the Table 3. Finnair is the oldest of the companies, although both Fortum's and Tapiola's predecessors have been operating for decades before their respective mergers. In regards to the amount of turnover and employees, Fortum is the biggest of the three companies and Tapiola the smallest. Finnair and Fortum are both private companies and Tapiola is a cooperative owned by its customers. Both Finnair's and Fortum's biggest shareholder is the State of Finland (56% and 51% of the shares, respectively), with other shareholders being insurance companies, other companies and private persons. In Finnair's case, about 5% of shares are owned by foreigners. In Fortum's, this figure is approximately 28%.

4.2. Corporate social responsibility reports

The corporate social responsibility (CSR) reports of these three case companies from 2007–2011 were used as research material in this study. From each year and from each company the main CSR report was selected for analysis because it was thought that the CSR report would contain the widest description of the OH&S work within a company's reports. However, a report with the title of a CSR report was not available for each company and each year. All of the reports were downloaded from the companies' webpages. The reports were, with the exception of Tapiola's 2011 report, publically available from the webpages in a PDF format. The PDF format of the report is the very same as the hard copy. Tapiola's 2011 report was published as a webpage. In this case, the pages were printed out in PDF and analysed in the same way as the ready-made PDF documents. In the case of Finnair, the company started to publish CSR reports from the year 2008 onwards, so for the year 2007 the environmental report was selected for analysis. In the case of Fortum, the company started to publish CSR reports from the year 2010 onwards. So for the years 2007–2009, the annual report was selected for analysis. In the case of Tapiola, the company stopped publishing CSR reports in 2009. Therefore, for the years 2010–2011, the annual report was selected for analysis.

Fifteen reports were analysed in total. Described below and summarised in Table 4 are the report types, the lengths of the reports, and the reports' application level of GRI guidelines. The type, length and GRI application of the analysed reports varied. In the case Finnair, the first report analysed was an environmental report, as they only began to publish CSR reports from the year 2008 onwards. The length of the reports varied from 14 to 84 pages. Only Finnair's first report was not a GRI report, while in the other reports the application level was either a C or an A. In the case of Fortum, the reports were called either annual reports or CSR reports and ranged from 64 to 196 pages in length. The annual reports were not GRI reports, but the CRS reports applied GRI guidelines with a B+ level. Tapiola's reports were titled CSR, annual or web-based annual report, and ranged from 33 to 60 pages in length. All of Tapiola's reports were GRI-based, with application levels from A to A+.

4.3. Content analysis

The method applied in this research was content analysis. Content analysis refers to the process of making replicable and valid conclusions from the analysis of a given text (Krippendorff, 2004). Neuendorf (2002) defines content analysis as a systematic and objective quantitative summary of a given text, while the SAGE Encyclopedia (Julien, 2008, p. 120) describes it as a "process of categorising qualitative textual data into clusters of similar entities, or conceptual categories, to identify consistent patterns and relationships between variables or themes."

Previous content analyses of corporate reports have used various units of analysis, including word count (e.g. Douglas et al., 2004; Islam and Deegan, 2008; van der Laan Smith et al., 2005), sentence count (e.g. Deegan et al., 2002; Sobhani et al., 2012; van der Laan Smith et al., 2005; Williams and Ho Wern Pei, 1999) and page count (e.g. Gray et al., 1995b; Newson and Deegan, 2002). Each type of unit has its methodological pros and cons when used in analysis (Campbell and Rahman, 2010). Word-level coding is easy to use with the help of software, but as Unerman (2000) has

[1] Fortum defines the "lost workday injury frequency" (LWIF) as "the number of injuries resulting in an absence of more than one day or work shift per million working hours." (Fortum, 2013a).

[2] It is not possible to provide the exact comparison figure to Fortum as the official occupational accident statistics system publishes the figures of "all compensated injuries" and "injuries resulting in at least 4 days' incapacity for work". Therefore, Fortum's figures (i.e. injuries resulting in an absence of more than one-day absence) is somewhere in between. Also, at the moment, the official statistics cover a time period up until the year 2011.

Table 4
Description of the research data.

Year	Finnair				Fortum				Tapiola			
	Type	Pages	Pages of OH&S	GRI	Type	Pages	Pages of OH&S	GRI	Type	Pages	Pages of OH&S	GRI
2007	ENV	14	0	No GRI	AR	64	3	No GRI	CSR	60	2	A+
2008	CSR	62	5	C	AR	188	3	No GRI	CSR	40	1	A
2009	CSR	62	5	A	AR	196	3	No GRI	CSR	48	2	A
2010	CSR	58	5	A	CSR	74	4	B+	AR	60	3	A
2011	CSR	84	6	A	CSR	124	11	B+	Web AR	33	3	A

Note to table
Type:
ENV = environmental report.
CSR = corporate social responsibility report.
AR = annual report.
web AR = web-based annual report.
GRI:
No GRI = the report is not based on GRI framework.
A, B, C = refers to the level of GRI application: a being the highest, C the lowest.
+ = refers to the external verification of the report.

pointed out, isolated words lose their meanings. However, the use of sentences can often allow for analysis of a coherent whole. As Campbell and Rahman (2010) point out, the problem of ambiguity in word analysis does not exist in sentence analysis. Page-level analysis would appear easy to conduct, but as Gray et al. (1995b, 90) point out, comparing the amount of pages of different reports might be misleading due to the "different sizes of article, different margins and different typefaces". Despite these potential problems, page-level coding is typically used when the whole content of CSR reporting is analysed.

In this research, the selection of 'a paragraph' as the unit of analysis was adopted given the amount of detail that the unit could provide in results. If this research would have used 'a page' as the unit of analysis, results would have yielded only the three larger themes of occupational health, occupational safety and well-being at work. Coding at 'a sentence' level, on the other hand, would not have provided much extra information in comparison to 'a paragraph', as the majority of paragraphs addressed only one specific subarea. Also, to code the data on 'a sentence' level would have required much more time and effort compared to coding at 'a paragraph' level. In summary, coding at 'a paragraph' level provided the best description of the OS&H reporting for this research. 'Coding paragraph-level' enabled exact description of the variety of OH&S information presented in the reports. Coding at the level of the paragraph also made it possible to compare the amount of information disclosed by the three case companies more reliably than comparing them just by the amount of pages. In addition to paragraphs, accompanying tables and graphs that addressed OH&S issues were also coded.

In the current research, content analysis was applied in the following manner: First, the reports were scanned through in order to find pages of the reports that focused on OH&S issues. Table 4 includes the results of this calculation. Pages of OH&S information refers to those pages that had any kind of OH&S information. This definition includes a page even if it is not a full A4 page exclusively devoted to OH&S information. Second, these pages were coded with the help of Atlas.ti software in the following manner: The unit of analysis (i.e. a paragraph, table or graph, later referred to as 'a unit') was coded with a code that best described the content of the current section. No predetermined list of codes was used, rather the researcher created new codes while proceeding in the analysis. New codes typically emerged when a new company's reports where coded. The reason for not using a predetermined list of codes was that the aim of the analysis was to describe the content of OH&S reporting rather than analysing the use of a particular reporting framework. For example, the analysis of the application of a GRI framework would not have yielded very fair results as 4 of the analysed 15 reports did not apply this framework.

In order to assure consistency of the coding for each company, after finishing coding a company, the codes of the other two were checked. The coding consisted of several rounds of reading and coding the reports. Then the codes were grouped into subareas (e.g. in

Table 5
Examples of the used codes.

Examples of the codes	Examples of the subareas	Themes
Prevention of sicknesses affecting the ability to work	Ability to work	Occupational health
Promoting employees' ability to work		
Lengthening employees' careers		
Description of the tasks of occupational health care	Occupational health care	
Scale of occupational health care		
Organisation of occupational health care		
Graph of leave of absences	OH indicators	
Results of occupational health indicators		
Results of leave of absences due to illness		
Targets of OS work	OS principles and targets	Occupational safety
Certification target of OHSAS 18001		
Principles of OS work		
The amount of occupational accidents	OS indicators	
The results of OS indicators		
Table of incident rates		
Organisation of OS	OS organisation	
Industrial safety commission		
Table of expenditure on recreation and leisure activities	WB indicators	Well-being at work
Descriptions of different well-being at work projects	WB projects	
Descriptions of the well-being at work surveys	WB surveys	

the case of occupational health, 'ability to work', 'occupational health care' and 'OH indicators') and the subareas were then categorised into the three themes of occupational health, occupational safety and well-being at work. Examples of the process of the coding are shown in Table 5. Codes (e.g. 'prevention of sickness affecting the ability to work') were grouped into subareas (e.g. 'ability to work') which were later grouped into themes (e.g. 'occupational health').

5. Results

5.1. Occupational health and safety in corporate social responsibility reports

Overall, the amount of pages that covered OH&S information varied from 0 to 11 pages (see Table 4), making up 0–10% of the total length of the reports. In total, OH&S information was disclosed in 291 units. Of the three large themes covered, the majority of the units addressed occupational safety (44%). Approximately one third of the information concerned occupational health. Aspects referring to well-being at work were the most seldom (22%) covered. Most of the OH&S information was presented in the body text (90%). Very few tables (9%) were used. Graphs (1%) were used only three times.

The companies used a variety of subareas to describe their OH&S work (see Table 6). The subareas of occupational health included 13 different health aspects. Most often the companies mentioned aspects of occupational health reporting that covered 'ability to work', 'occupational health care' and 'indicator results'. Information on occupational safety was categorised into 15 subareas. Aspects reported regarding occupational safety most often reflected 'indicator results', 'safety promotion actions' and 'the aims and principles of safety work'. Lastly, 7 different areas of well-being at work were addressed in the reports. In the area of well-being at work, companies most often reported 'well-being at work projects' and 'surveys'. In total, the case companies' OH&S reporting consisted of 35 different subareas. Example quotes from the reports of the most commonly used subareas are provided in Table B1.

There was variation in how often the companies reported each subarea (see the last column in Table 6). In the area of occupational health, the three most often reported subareas were reported by each company. 'Occupational health projects' were reported by two companies, and the remaining subareas were reported only by one company. In regards to occupational safety, variation was greater. Most of the subareas were reported by one or two companies. 'Occupational safety indicators' as well as 'occupational safety principles and targets' were reported by each company. In the well-being at work subarea, however, only 'well-being at work survey' was reported by each company. 'Projects', 'development work' and 'indicators' were reported by two companies, and the rest of the well-being at work subareas by only one company.

5.2. Case companies' occupational health and safety reporting

This chapter describes the OH&S reporting of each case company. The OH&S reporting of these companies is summarised in Table 8. The reported OH&S indicators are compiled in Table 7.

Finnair's first report was an environmental report and therefore did not address OH&S issues at all. In the remaining reports, OH&S issues were addressed between 20 and 40 times. Of the three themes, Finnair reported most often about occupational health.

Table 6
Occurrence of the OH&S subareas in the case companies CSR reports.

Subarea of occupational health	Times mentioned in the reports	Companies reported (max. 3)
Ability to work	21	3
Occupational health care	19	3
OH indicators	15	3
Health studies	9	1
Healthy living	9	1
Health effects	5	1
OH projects	5	2
Physical examinations	5	1
Rescue and first aid preparedness	5	1
OH theme days	3	1
Insurance fund	2	1
OH organisation	1	1
Retirement	1	1
Subareas of occupational safety		
OS indicators	39	3
Development of OS	20	2
OS principles and targets	16	3
OS organisation	12	2
Compensations	6	1
OS campaigns	5	1
OS challenges	5	2
Promoting OS with external organisations	5	2
Responsibilities in OS	4	2
Subcontracts' OS	4	1
"Zero accidents" thinking	4	1
OS risks	2	2
OS training	2	1
Safety climate	2	2
Crises preparedness	1	1
Subareas of well-being at work		
WB projects	31	2
WB survey	15	3
Development of WB	8	2
WB indicators	5	2
WB e-learning course	3	1
Benefits of WB	1	1
Definition of WB	1	1

Table 7
OH&S indicators reported by the case companies.

Indicator theme	Finnair	Fortum	Tapiola
Occupational health	Sickness absences Occupational diseases	Sickness absences Occupational diseases Health care expenses	Sickness absences
Occupational safety	Occupational accidents Occupational accident rates Lost workdays	Occupational accidents (employees, subcontractors) Occupational accident rates (employees, subcontractors) Lost workdays Number of safety observations Number of safety proposals	Occupational accidents Lost workdays Accident compensations
Well-being at work	N/A	Expenditure on recreation and leisure activities	Well-being at work survey

Finnair reported least often about well-being at work, with the exception of 2009, when occupational safety was least reported. Finnair addressed a variety of subareas in reporting. In regards to occupational health, Finnair addressed ten different subareas over five years' of reporting. Most often Finnair reported about 'health studies', 'healthy living', and 'ability to work'. They reported 'sickness absences' and 'occupational diseases' as OH indicators. In regards to occupational safety, 13 different subareas were reported on with great variation over the years. 'Organisation of OS issues' was the most often mentioned area. Finnair reports three OS indicators, namely 'the amount' and 'the rate of occupational accidents', and 'the amount of lost workdays'. The number of subareas covered in regards to the theme of well-being at work was four. Two of the most commonly reported subareas were 'WB projects' and 'WB surveys'. Finnair does not report any WB indicators.

In the first reports (which are annual reports), Fortum reported somewhat less about OH&S, with around 10 mentions per year. When Fortum's report changed to a CSR report, the amount of mentions raised to over 40 per year. Occupational safety was the main theme of OH&S reporting in each year. In the early reports, the least information was provided about occupational health, whereas well-being at work was least mentioned in the later reports. In regards to occupational health, Fortum reported seven subareas, and of these, most often about the results of 'OH indicators' and about 'occupational health care'. Three OH indicators were reported: 'sickness absences', 'occupational diseases' and 'health care expenses'. Fortum used eight subareas to describe their occupational safety actions in the reports. The results of the 'OS indicators' were among the issues most often reported in every report. Other common OS subareas were 'development of OS work' and 'OS principles and targets'. Fortum reports a variety of OS indicators. Typically reported are 'the amount' and 'the rate of occupational accidents' (separate figures are provided from employees and subcontractors), 'lost workdays', 'number of safety observations' and 'safety proposals'. Fortum reported about well-being at work with five subareas. In the area of well-being at work, two of the most commonly reported areas were 'WB surveys' and the results of 'WB indicators'. The WB indicator that Fortum reports is 'the expenditures on recreation and leisure activities'.

Tapiola's reporting was the lowest of these companies, ranging from 4 to just over 10 units per year. In regards to the popularity of reported themes, there was great variation in this case: Occupational safety was the most popularly discussed theme in two reports. Also, well-being at work was the most popular theme in other two reports. In one report, occupational health and occupational safety were equally the most popular theme. In Tapiola, the same variation was visible also when looking at the least popular themes: In three reports, the least information was provided of occupational health. Well-being at work and occupational safety were both once the least reported theme. In the area of occupational health, Tapiola's reporting was limited to three subareas. Tapiola reported most often about the results of 'OH indicators' and about 'ability to work'. The OH indicator that Tapiola reported was 'sickness absences'. Tapiola used five subareas to describe their occupational safety actions in the reports. Most of the subareas were mentioned just once per report, with the only exception being the results of 'OS indicators'. OS indicators reported included 'occupational accidents', 'lost workdays' and 'accident compensations'. Tapiola's reporting of well-being at work covered three subareas. In the area of well-being at work, two of the most commonly reported areas were 'development of WB' and 'WB surveys'. Tapiola reported 'the results of the WB surveys' as a WB indicator.

5.3. Summary of the results: similarities and differences in the OH&S reporting

There were many similarities in the OH&S reporting of the case companies. First, the content of the OH&S reporting was quite similar among the case companies. For example, all of the case companies reported of all of the themes, namely occupational health, occupational safety and well-being at work. Also, all of the case companies reported of the results of OH&S work. In each theme, 'the indicators' were among the subareas commonly reported: 'Sickness absence', 'lost workdays' and 'the amount of occupational accidents' were reported by each company. Interesting in the OH&S indicator reporting is that a few monetary-based OH&S indicators were also reported: 'Health care expenses' by Fortum, 'accident compensations' by Tapiola and 'expenditure on recreation and leisure activities' by Fortum. Reporting of the theme of well-being at work was especially uniform across all three companies. 'Well-being at work surveys', 'projects' and 'indicators' were reported most often by each company. Lastly, similar aspects in the content of the reports related to the fact that the companies not only reported on the numeric results of their work, but also on the processes and different projects organised in order to receive such results.

The second main similarity of OH&S reporting pertains to the process of reporting. Each of the companies varied their OH&S reporting during the analysed timeframe. Thus, the broadness of the OH&S reporting varied. The subareas that the case companies used also varied during the timeframe. The title of published reports also varied in each company over the analysed timeframe.

Although there were many similarities in the OH&S reporting of the case companies, a few differences also emerged. In comparison to the other two companies, Finnair reported more themes in occupational health and occupational safety. Tapiola's OH&S reporting in comparison to the other two companies comprised the lowest amount of units. Differences also emerged when looking at the least commonly reported subareas. The least commonly reported subareas were reported only by one or two of the companies. For example, half of the subareas were reported by one company only. Some differences also emerged when comparing the reported indicators: In the areas of OH and OS indicators, Fortum reported more indicators than the other two companies. WB indicators were reported differently: Finnair did not report any WB indicators. Fortum reported expenses and Tapiola reported WB survey results.

Table 8
OH&S reporting in Finnair, Fortum and Tapiola in 2007–2011.

Years	Finnair		Fortum		Tapiola	
	Themes (units)	Examples of subareas (units)	Themes (units)	Examples of subareas (units)	Themes (units)	Examples of subareas (units)
2007	–	–	OH (1)	• OH indicators (1)	OH (2)	• OH indicators (1) • Occupational health care (1)
			OS (8)	• OS indicators (6) • Others (2)	OS (6)	• OS indicators (3) • Promoting OS with external organisations (1) • OS principles and targets (1) • OS organisation (1)
			WB (3)	• WB survey (2) • WB indicators (1)	WB (4)	• Development of WB (2) • WB survey (2)
2008	OH (18)	• Rescue and first air preparedness (4) • Health effects (4) • Healthy living (3) • Health studies (3) • Others (4)	OH (1)	• OH indicators (1)	OH (0)	
	OS (17)	• OS campaigns (5) • Zero accidents thinking (4) • OS challenges (2) • Others (6)	OS (7)	• OS indicators (4) • Others (3)	OS (3)	• OS indicators (1) • OS organisation (1) • OS risks (1)
	WB (4)	• E-learning courses (3) • Defining WB (1)	WB (2)	• WB indicators (1) • WB survey (1)	WB (1)	• Development of WB (1)
2009	OH (11)	• Health studies (3) • OH indicators (3) • Ability to work (2) • Others (3)	OH (1)	• OH indicators (1)	OH (2)	• OH indicators (1) • Ability to work (1)
	OS (2)	• OS indicators (2)	OS (6)	• OS indicators (4) • Others (2)	OS (2)	• OS indicators (1) • OS organisation (1)
	WB (12)	• WB projects (12)	WB (2)	• WB indicators (1) • WB survey (1)	WB (1)	• Development of WB (1)
2010	OH (14)	• Healthy living (4) • Ability to work (4) • Occupational health care (2) • Others (4)	OH (10)	• Occupational health care (5) • Others (5)	OH (4)	• Ability to work (3) • OH indicators (1)
	OS (8)	• OS organisation (2) • Responsibilities in OS (2) • Others (4)	OS (25)	• Development of OS (9) • OS principles and targets (6) • OS indicator (5) • Others (5)	OS (3)	• OS indicators (1) • OS principles and targets (1) • OS organisation (1)
	WB (7)	• WB projects (5) • WB survey (2)	WB (8)	• WB projects (6) • Development of WB (1) • Benefits of WB (1)	WB (5)	• Development of WB (2) • WB survey (2) • WB indicators (1)
2011	OH (25)	• Ability to work (7) • Occupational health care (4) • Physical examinations (4) • Health studies (3) • Others (7)	OH (10)	• Occupational health care (5) • OH indicators (2) • Others (3)	OH (1)	• OH indicators (1)
	OS (12)	• OS organisation (4) • Promoting OS with external organisations (2) • Others (6)	OS (26)	• OS indicators (8) • Development of OS (7) • OS principles and targets (6) • Others (5)	OS (2)	• OS indicators (1) • OS organisation (1)
	WB (3)	• WB survey (3)	WB (9)	• WB projects (8) • WB survey (1)	WB (3)	• Development of WB (1) • WB survey (1) • WB indicators (1)

6. Discussion and conclusions

6.1. Review of the results

This paper analysed the OH&S reporting of three companies from three different industry sectors. The case companies represented the aviation, energy and financial sectors. The results showed that the case companies' OH&S reporting consisted of the reporting of occupational health, occupational safety and well-being at work with 35 subareas. At its most, OH&S reporting made up nearly 10% of the reports. The companies reported in majority about occupational safety with a variety of subareas, whereas reporting of well-being at work was the most seldom and with less variation of subareas. In each theme, the companies reported both the results that their OH&S work had yielded and the processes behind these results.

Previous research has shown mixed results of OH&S reporting, recognising either a very low level of reporting or an integral top area of reporting. Although the aim of this research was not to assess the level of OH&S reporting, one can say that this paper's results are somewhere in between. The OH&S reporting of these companies certainly does not represent a top area of reporting, but the level of reporting cannot be said to be very low either.

As said, the previous OH&S reporting research has focused on the content of the OH&S reporting only to a limited extent. In the previous research, OH&S reporting has often been equated with reporting of occupational accidents. Other somewhat commonly reported OH&S areas have been lost time, training, certification and awards. The case companies of this study also reported about their occupational accidents, lost time, training and certification targets. In this sense, this research is therefore in line with previous research.

6.2. Contributions of the results

This research contributed not only to the study of OH&S reporting, but also in the content analysis of reporting from aviation, energy and financial companies. The amount of content analysis research being done on the aviation and energy sector is rather low. In regards to the financial sector, the current results align with previous literature: Here Tapiola, the financial company, reported the least about OH&S, and accordingly, previous literature has shown no (Hinson et al., 2010; Khan et al., 2009) or very limited (Branco and Rodrigues, 2006, 2008; Patten, 2002) OH&S reporting in the financial sector.

A few OH&S reporting trends emerged from the analysis. First, the reporting of well-being at work was on a significantly lower level in comparison to reporting of occupational health and occupational safety. Second, based on this analysis, the importance of occupational safety and occupational health for these companies is clearly visible. Third, the companies reported both the results and the processes behind the results. Fourth, the companies reported multiple themes, especially about occupational health and about occupational safety. In the following, the possible reasons behind these trends are discussed. However, as the aim of this paper was to analyse the content of OH&S reporting in the CSR reports and not to evaluate the reasons for the reporting or not reporting in a certain way, the following is just a discussion of the possible reasons behind the before mentioned trends. The actual reasons should be studied in the future as is highlighted in the section 6.3 Limitations and future research.

First, the reporting of well-being at work was on a significantly lower level in comparison to reporting of occupational health and occupational safety. One reason behind the low level of reporting well-being at work could be that it has not yet received a high status in the case companies. Or, in other words, the status of the well-being at work in these companies reflects the rather low status of well-being at work in general in companies. Traditionally the focus of occupational safety work has been on accident prevention, which has been broadened firstly with ergonomics and epidemiological aspects (Swuste et al., 2014). Only recently has the safety legislation also acknowledged the importance of mental OH&S work. Based on the results, there seems to be a definitive trend of relative lack of reporting of issues of well-being at work. The small role of well-being at work in the analysed companies could also be explained by the low number of indicators used to measure this area: Finnair did not report any. Fortum reported recreational expenditures. Tapiola published the results of the WB survey. Surely, the low amount of the well-being at work indicators in these companies also demonstrates the difficulty of measuring well-being at work. But as is well understood: you manage only those issues that you measure!

Second, based on this analysis, the importance of occupational safety and occupational health for these companies is clearly visible. The importance of occupational safety is easily understood in a company that has physical hazards in the workplace. Also, the emphasis on the OH&S legislation has been present in traditional occupational safety. The (at least) supportive role of occupational health functions in cooperation with occupational safety is understood in most companies as well.

Third, the companies reported both the results and the processes behind the results. In the case of occupational health and occupational safety, this can really be seen as a signal of the importance of these areas for the case companies. The companies actively measure the progress in these areas. In addition, the companies have various processes and projects which target improvement in these areas.

Fourth, the companies reported multiple themes, especially about occupational health and about occupational safety. As mentioned just above, the large amount of reporting of occupational health and safety can be a sign of taking an active role in the improvement of OH&S work in these companies. On the other hand, as many of the themes were reported only by one company and sometimes only once during the five-year analysing period, it raises yet another question. Is the variation in the reporting an aspect of the (underdeveloped) reporting or does it represent changes also in the management of these areas in these companies? So are these companies just trying out new ways to improve the OH&S? These questions remain open with the current data.

A few aspects of the results are quite interesting. First, the researcher's understanding of the corporate definition of OH&S developed during the analysis. Analysis of well-being at work reporting was included in the analysis as the case companies tightly connected this aspect to their OH&S work in the reports. Also, the broadness of OH&S reporting (altogether 35 subareas of OH&S work) is interesting in these results. Previous literature has suggested that companies might not report very much on OH&S, or that what they typically report relates more to occupational accidents. These presuppositions were proven wrong during the analysis. For sure, the companies did report about the amount of accidents and accident prevention work, but, as mentioned before, they reported about many other OH&S topics also. The third interesting aspect of the results was their similarity across case companies. While the companies represent different industries with different OH&S issues, their reporting and its subareas were surprisingly similar. As discussed below, the similarity of the reporting by these companies requires further research.

6.3. Limitations and future research

This research has a few limitations. First, the counting of the pages devoted to OH&S issues does not give a complete picture

of the level of OH&S reporting, as these pages also included photos that were not necessarily related to OH&S work– or at least no written connections to the photos existed. However, companies did use illustrative photos throughout the reports, so using the amount of pages, as approximate to the level of OH&S reporting, was considered to be good enough.

A second limitation of this study was that the evaluated OH&S reporting was likely not representative of the total OH&S reporting of these companies. The researcher noticed that some of the case companies had isolated sentences about OH&S issues outside of analysed sections titled occupational health and safety in the reports. However, as the unit of the analysis in this research was at the paragraph level, these isolated sentences were disregarded. If the isolated sentences were to be included in the analysis, then the analysis unit would need to be "a sentence" instead of "a paragraph".

A third limitation of the study was that, of course, these results cannot be generalised as representative of all OH&S reporting. This research serves as a starting point for further analysis of OH&S reporting in different sectors and different countries. The need for further OH&S reporting is discussed in the following.

Further research in the area of OH&S reporting is evidently welcome. As mentioned prior, previous research of OH&S reporting is very limited as it mainly had focused on the level of reporting instead of the content of OH&S reporting. Therefore, more research on the actual content of OH&S reporting is required. In other words, more qualitative analysis of OH&S reporting is required. On the other hand, also more quantitative analysis of OH&S reporting would be welcomed. A specific area for research in OH&S reporting would be the reporting of well-being at work. In this research, this was the area of the lowest reporting. It would be interesting to find out if this is the case in other companies and other countries as well. In the area of CSR reporting research, a few indicator reporting analyses have emerged (Mikkilä and Toppinen, 2008; Roca and Searcy, 2012; Székely and Knirsch, 2005). This would be an interesting area to research here as well: Which OH&S indicators do companies report? How long time series are provided? Which units of measurement are used? Can the companies' safety performance be compared with the data? And most importantly, is the OH&S indicator reporting constant between years in one company? In other words, do companies concentrate on reporting their development in the OH&S work year after year, or do they just select those indicators which provide the best OH&S results per year?

Also, the similarities found in the OH&S reporting of the current study demand further research. Is the reason for these similarities that, despite their each applying an international reporting guideline, the studied companies were all Finnish companies? Or do companies from other countries report these same OH&S issues as well?

Third area of future research would be to combine the content analysis with company representative interviews. As was mentioned before, the high amount of different reporting themes raises the question why the content of OH&S reporting varies so much between the years. It would be interesting to talk with the company representatives in order to gain the understating how the themes of OH&S reporting are selected: does the company independently make the decision what to report and what not, or how much certain reporting frameworks are influencing the OH&S reporting.

Acknowledgements

The author wishes to thank the Tekes (the Finnish Funding Agency for Technology and Innovation) and the Finnish Work Environment Fund for funding the research. Also, the author wishes to thank Dr. Sanna Nenonen, Dr. Noora Nenonen and Dr. Päivi Hämäläinen for their valuable comments on earlier versions of this paper. In addition, the author wishes to thank the autonomous reviewers for their precise comments that helped to improve the quality of this paper.

Appendix A

See Table A1.

Appendix B

See Table B1.

Table A1
Previous OH&S reporting research (excluding aviation, energy and financial sectors that are covered in Table 2).

References	Analysed companies	Topic
Group 1 Research on CSR reporting – No OH&S results		
Abu-Baker (2000)	143 Companies from Jordan: financial, services and manufacturing	CSR reporting
Alnajjar (2000)	451 Companies from US: multiple sectors	CSR reporting
Campbell and Rahman (2010)	A company from UK: retailer sector	Intellectual capital reporting
Guthrie and Parker (1989)	1 Company from Australia: mining industry	CSR reporting
Holcomb et al. (2007)	10 Companies world-wide: travel industry	CSR reporting
Li et al. (2011), also Toppinen et al. (2011)	66 Companies world-wide: forest industry	CSR reporting
Zéghal and Ahmed (1990)	15 Companies from Canada: financial sector and oil industry	CSR reporting
Group 2 Research on CSR reporting – OH&S results briefly		
Belal (2000)	30 Companies from Bangladesh: sectors unspecified	CSR reporting
Brockhoff (1979)	205 Companies from Germany: multiple sectors	Social reporting
Gray et al. (1995a)	100+[a] Companies from UK: multiple sectors	CSR reporting
Islam and Deegan (2008)	1 Company from Bangladesh: textile industry	CSR reporting
Jones (2011)	63 Companies from UK: multiple sectors	CSR reporting
Kuasirikun and Sherer (2004)	63 + 84 Companies from Thailand: multiple sectors	CSR reporting
Newson and Deegan (2002)	148 Companies from: multiple sectors	CSR reporting
Roberts (1991)	110 Companies from France, Germany, the Netherlands, Sweden and Switzerland: unspecified sectors	CSR reporting
Sotorrío and Sánchez (2010)	26 Companies operating in Spain: multiple sectors	CSR reporting
Veleva et al. (2003)	6 Companies from USA, UK, Switzerland: pharmaceuticals	CSR reporting

(*continued on next page*)

Table A1 (*continued*)

References	Analysed companies	Topic
Vidal and Kozak (2008)	51 Companies from worldwide: forest industry	CSR reporting
Walker and Parent (2010)	97 Companies/organisations from worldwide: sports industry	CSR reporting
Williams and Ho Wern Pei (1999)	172 Companies from Australia, Singapore, Malaysia and Hong Kong: multiple sectors	CSR reporting
Xiao et al. (2005)	69 Companies from Hong Kong and UK: banking, property and utility	CSR reporting
Group 3 research on CSR reporting – OH&S results widely		
Deegan et al. (2002)	1 Company from Australia: mining industry	CSR reporting
Dierkes (1979)	14 Companies from Germany: multiple sectors	CSR reporting
Mikkilä and Toppinen (2008)	10 Companies world-wide: forest industry	CSR reporting
Perrini (2005)	90 Companies from Europe: multiple sectors	CSR reporting
Roca and Searcy (2012)	94 Companies from Canada: multiple sectors	CSR reporting
Steurer and Konrad (2009)	19 Companies from 8 European countries: multiple sectors	CSR reporting
Székely and Knirsch (2005)	20 Companies from Germany: multiple sectors	CSR reporting
Vuontisjärvi (2006)	160 Companies from Finland: multiple sectors	Human recourse reporting
Group 4 research on OH&S reporting – OH&S results widely		
Chan (1979)	102 Companies from USA: multiple sectors	OH&S reporting

[a] Gray et al. (1995a) used two samples for the data, the other one is 100 top UK companies and the other one is, as they call it, "a haphazard sample", so it remains unclear what kinds of companies make up the second sample (see also Gray et al., 1995b).

Table B1
Examples of the OH&S reporting of the case companies.

OH&S theme	Example of units
Occupational health	**Ability to work** Finnair' Occupational Health Care has focused in particular on developing screening and care practices for illnesses that threaten working capacity. It has been possible to influence positively the development of individuals' health with the aid of early treatment interventions in the case of those suffering from symptoms of depression and the prevention of adult-type diabetes. (Finnair, 2010) Tapiola uses an equal treatment model which ensures a fair handling of sickness absences and issues that threaten the ability to work. (Tapiola, 2010) **Occupational health care** Fortum covers all Swedish, Norwegian, Polish and German employees' occupational health care as required by law. In Russia, employees are within the sphere of a medical expenses insurance plan and can use private medical services. Also each production plant in Russia has a healthcare station with nursing-level first-aid services. (Fortum, 2011) The occupational health services of the Tapiola group are coordinated and produced mainly at the occupational health centre of the head office. Office locations use the services of a contracted medical centre. Comprehensive occupational healthcare includes preventive actions and medical treatment. In addition to medical treatment provided by general practitioners, the occupational health physician can also consult specialists. (Tapiola, 2007)
Occupational safety	**Development of OS** "Good order in the workplace is important in terms of both work safety and operational efficiency. Order and tidiness increase the functionality, pleasantness and safety of the working environment, while reducing accidents from slipping and falling as well as improving the company's fire safety. A tidy and orderly working environment also improves the overall corporate image," adds Melleri. (Finnair, 2008) For Grangemouth's customers, reliability and high availability are key. The close partnership with Ineos in near-miss reporting, effective use of risk assessment, continuous development of environment as well as health and safety processes and practices are behind the good performance. Risk assessments are usually made together with the client in order to maintain high availability at all times. (Fortum, 2011) **OS principles and targets** Fortum's target is to ensure a safe workplace for employees and service providers. Fortum continuously invests in the well-being and safety of its employees and contractors at its sites. (Fortum, 2011) Tapiola's aim is to ensure its personnel safe and healthy working conditions as well as support the maintenance and development of the ability to work. Special attention is paid to the mental working environment in addition to the physical working environment, as well as to occupational safety. (Tapiola, 2010)
Well-being at work	**WB projects** The background to the wellbeing project was the rapid restructuring of Technical Services as well as a competitiveness project aimed at improving operational efficiency and productivity. The primary target group of the TTT programme consisted of supervisors and management, a total of around 190 people. (Finnair, 2009) The Core concept will be used within the Heat divisiońs large combined heat and power (CHP) investment programme and parts of the concept will be used in the existing power plants. Under the umbrella of the Core project, there are also other initiatives that promote the wellbeing, motivation and performance of personnel working at power plants. (Fortum, 2011) **WB survey** Finnair measures daily wellbeing at work, job satisfaction and general satisfaction through the implementation of a revised 4D Pulse survey, which also relates directly to Finnair's Peace of Mind customer service philosophy. The average scores on the 4D Pulse survey can be seen as a general index of occupational wellbeing and job satisfaction in the working community. (Finnair, 2011) The opinions of the personnel are heard regularly once a year by using the "Tiimin tila" measurement tool, and every other year with a work atmosphere study. In the "Tiimin tila" measurement, the personnel evaluate their personal work well-being on a scale of 4–10. In 2007, the average value of work well-being was 8.2. Approximately 80% of Tapiola's personnel evaluated their work well-being as at least an 8. The "Tiimin tila" development plan was devised by 75% of the work communities in the business group. (Tapiola, 2007)

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