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# Organisational learning and continuous improvement of health and safety in certified manufacturers

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#### ABSTRACT

Certified management systems have increasingly been applied by firms in recent decades and now cover the management of health and safety, principally through the OHSAS 18001 standard. In order to become certified, firms must not only observe the relevant legislation, but also improve performance and raise goals within health and safety on a continuous basis. The article examines how certified occupational and health management systems influence this process to evaluate how far they hinder or support learning. It presents a model with which it is possible to identify and analyse improvement processes. The model is applied to five cases from a qualitative study of Danish manufacturers with certified health and safety management systems. The cases illustrate the wide variation in health and safety management among certified firms.

Certification is found to support lower levels of continuous improvement performance in handling health and safety issues. However, more advanced improvement practices are shown to be connected to the integration of health and safety in other managerial areas, as well as to the employment of similar advanced improvement processes within firms. The article argues that certified health and safety management does not obstruct learning, and can support advanced learning. Improvement practices with regard to health and safety are mainly dependent upon the firm's overall organisational processes and do not automatically arise from the standard alone.

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#### 1. Introduction

Certified management systems are increasingly used by enterprises to document and develop conformance in a variety of different areas. Within the past decade, the application of certification has spread from documenting quality standards to additional areas, including the management of occupational health and safety (OHS). The certification of occupational health and safety management systems (OHSMS) is a form of soft regulation requiring the company to fulfil certain legal obligations as well as engage in organisational processes to promote the continuous improvement of health and safety conditions. Specific to OHSMS certification is that it liberates companies from direct public control and can thus be regarded as a self-regulatory regime. However, OHSMS certification is a conformance specification that demonstrates that the organization's OHSMS is potentially capable, it is not a performance specification. In Denmark, the certification of OHSMS has been available since 2001, and the Occupational Health and Safety Assessment System (OHSAS) 18000 series is becoming the dominant international

standard for assessing health and safety management processes in the country. The 2007 version is increasingly aligned to the ISO quality and environment standards, strengthening the integration of different management systems (BS, 2007).

OHSMS has been criticized for a proclivity to increase the bureaucratisation of health and safety issues and hence discourage genuine worker involvement (Nielsen, 2000). OHSMS is understood to shift the focus from health and safety problems towards bureaucratic control. This implies that in terms of health and safety it is potentially worthless or even regressive (Else and Beaumont, 2000; Kamp and Blansch, 2000; Quinlan and Mayhew, 2000). Kamp and Blansch (2000) argue that the requirements of these systems are unlikely to support learning because they do not promote creativity and experimentation. Organizations may also adopt health and safety management systems in order to manage external pressures, and at the same time maintain the same internal structures. In these cases, internal processes are decoupled from external image and prevent learning processes from occurring. Several examples can be found in the literature dealing with management systems. Kostova and Roth (2002) showed that decoupling occurred in the context of quality management. Kimerling (2001) suggests that decoupling is likely to occur in the adoption of ethics codes when external pressures for adoption are high.

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These cases would imply that OHSMS may hinder learning for three main reasons: they are based on management models not supportive of learning; they increase organisational bureaucracy and shift the focus away from health and safety problems; and decoupling is a substantial risk.

Other researchers argued that OHSMS may trigger a learning process which results in improvements to health and safety (Rocha, 2010; Zwetsloot, 2000). Hudson (2000) argues that safety control has changed from an unsystematic though well-intentioned collection of processes and standards to a systematic means to achieve improvements. However, precisely how improvement practices are facilitated and whether certification of health and safety management advances a firm's improvement practices is still not evident (King et al., 2005; Robson et al., 2007; Rocha, 2010).

An important characteristic of the OHSAS standard is the requirement for improvement processes on a continual basis. To analyse improvement practices at the firm level with regards to health and safety, we apply the management perspective continuous improvement (CI) (Bessant, 2000; Boer et al., 2000). Firms' improvement practices can be rudimentary or advanced, reflecting less or more advanced organisational learning or even counterproductive learning (Argyris and Schön, 1996; Bessant, 2000; Elkjaer, 1999; Ellström, 2001). Lower levels of CI are characterised by measurement and feedback structures. Advanced CI demands structures that encourage the generation and sharing of ideas and reflections, as well as a strong culture to drive improvements in production and managerial processes and company-wide participation (Anand et al., 2009; Bessant and Caffyn, 1997; Bessant, 2000; Boer et al., 2000). In spite of their importance, CI perspectives have mostly been applied with reference to quality management (e.g. Bessant et al., 1994; Oliver, 2009; Terziovski and Power, 2007).

The objective of this article is to examine how certification influences the management of health and safety improvement practices and whether certification hinders or promotes learning. It analyses these issues on the basis of both the requirements of the certification process and firms' actual practices. To achieve this, continuous improvement and organisational learning perspectives are integrated in a single analytical model.

#### 2. Certified OHSMS

OHSMS is a systematic means for employers to handle challenges and reduce haphazard attitudes to risk and problems in the work environment. OHSMS certification makes it possible for firms to document a certain pattern of working conditions to demonstrate to both the public at large and its own customers that they are living up to established standards in the way production is carried out. At the same time, views of what health and safety problems consist of change with the norms of the surrounding society, legislation, and worker demands and power (Rocha, 2010; Zwetsloot et al., 2007).

The OHSAS 18001 standard from 1999 and the revised 2007 version both oblige the firm to commit to fulfilling legal requirements, formulate targets for health and safety protection and appropriate work environment conditions, and design management systems to improve performance and practices, while reducing risks. The standard requires a health and safety policy, planning procedures for the identification of hazards and risks, and control measures concerning accidents and incidents connected to health and safety. Knowledge generated from feedback mechanisms creates the basis for corrective action, while regular management review of the application of the standard, together with employee input, form the basis for upgrading health and safety practices (BSI, 1999; BS, 2007).

An OHSMS-certified company should specify its health and safety goals and specify in plans how these goals will be reached. When the goals are attained, new goals and new plans should be formulated, resulting in an endless spiral of on-going improvements in the health and safety arena. When new problems arise, the system is expected to be able to deal with them. Ongoing and continuous improvement<sup>2</sup> strongly characterises the requirements. The extent to which a firm is living up to the standard is regularly evaluated by an auditing bureau, which certifies it. Danish legislation imposes minimal requirements regarding the physical work environment and health conditions. Improving health and safety practices beyond the level required by legislation depends upon additional initiatives taken by the company.

The requirements of the 18001 standard mainly refer to structures for the identification of hazards and preventive measures in the physical work environment, as well as consultation with and training of employees. This enhances their ability to participate in safety organisation and supports dialogue on health and safety issues between employers and employees (Gallagher, 2000). However, the latest 2007 version of the standard places more emphasis on health improvements as opposed to safety in comparison to the 1999 standard (BSI, 1999; BS, 2007). Thus, the health and safety standard builds on two types of feedback system, namely measurement and control, and voluntary mechanisms such as employee consultation and employee participation in identifying risks and in implementing solutions. The quality of measurement and control depends on formal procedures, whereas the quality of employee participation depends in addition upon informal mechanisms, such as personal relationships, mutual commitment and trust. The organisational aspects of health and safety systems thus depend on formal and informal features. The later are inherently difficult to specify and incorporate within the framework of standards.

Improving health and safety performance and management in a progressive way is a requirement connected to obtaining certification. However, precisely how to do this is not specified further, but left to the discretion of the firm. The following sections outline a theoretical understanding of organisational learning and continuous improvement to generate a framework for the analyses of health and safety management.

#### 3. Organisational learning

Managing continuous improvement requires an organisational context that enables incremental development through organisational learning (Anand et al., 2009). Organisational learning encompasses the development of new knowledge, skills and behaviours; the rectification of errors and improvement of current practices; and the development of new routines (Daft and Weick, 1984; Easterby-Smith, 1997; Levitt and March, 1988; Nelson and Winter, 1982). Learning occurs when ideas, techniques and experiences, whether generated within a firm or brought from the outside, are shared and applied to improve the firm's performance, procedures and methods (Elkjaer, 1999). Organisational learning can take place in connection with activities in terms of formalised training, problem-solving and experiences where knowledge is shared. Organisational learning indeed requires both 'knowledge' and 'sharing', a degree of collective reflection and the involvement of smaller or larger numbers of employees: it cannot result solely from management decisions (Ellström, 2001; Granerud, 2006). 'Sharing' arises from formal as well as informal activities and

<sup>&</sup>lt;sup>2</sup> The standard has requirements of continual improvement and continuous improvement as the underlying theme, as well as creation of a framework for improving the system.

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