

HOW DOES IMPLEMENTATION OF ENVIRONMENTAL MANAGEMENT SYSTEM CONTRIBUTE TO CORPORATE SUSTAINABILITY MANAGEMENT

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Abstract

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Corporate sustainability management (CSM) appears to be an important issue for current management. The aim of the paper is to identify what determinants of sustainability management are examined in the literature and discuss the contribution of environmental management system (EMS) to CSM based on experiences of selected Czech organizations with implemented EMS according to ISO 14001. The data for the survey was gathered from 222 organizations (N = 1265) who have already implemented EMS. The results show there is a basic knowledge of sustainability concept in the surveyed Czech organizations. Perceived improvements of EMS implementation in Czech organizations are mainly in the area of environmental performance, economic performance, relationship with involved parties and social issues. Based on the implementation of EMS, the organizations take care about corporate sustainability (about the areas of environmental aspects and impacts of the organization). Improved environmental performance has been linked with process and product cost improvements and lower risk factors.

Keywords: Sustainable development, corporate sustainability, corporate sustainability management, environmental management system

INTRODUCTION

Corporate sustainability management (CSM) and its implementation appears to be crucial theme in post-crisis society. The main idea of CSM is to harmonize organizations and their actions with the natural environment (including minimization of resource usage, recycling, reuse, regeneration, recover, remanufacturing, minimum or zero waste, purification and symbiosis) and social aspects and impacts. The importance of this topic has stimulated research into the problems of CSM concept and classifying terms used in the sustainable field. Authors mainly mention

following factors influencing CSM concept: the amount of commitments of shareholder, the humanism paradigm, the corporate culture, the management ability to establish good relationship with all stakeholders, and the internal conditions that are in accordance with the demands of the concept of CSM.

The aim of the paper is to identify what determinants of sustainability management are examined in the literature and discuss the contribution of environmental management system (EMS) to CSM based on experiences of selected Czech organizations with implemented EMS according to ISO 14001.

Theoretical Background

CSM appears to be an important issue for current management. Hahn, Kühnen (2013) define corporate sustainability as meeting the needs of organizational direct and indirect stakeholders without compromising today and in the future. CSM is widely conceptualized as “Triple bottom line” (TBL). It means organizations have to consider the economic, environmental and social impacts (positive and negative) of their actions (Asif *et al.*, 2011; Hahn, Kühnen, 2013). CSM states that to survive in the long term, the management should have a balance between financial (economic), environmental and social performance (Rahardjo *et al.*, 2013). Hahn, Kühnen (2013) add that not only creating of high quality data about TBL matters (corporate sustainability accounting), but the concept won't be whole without reporting related to sustainability. The main idea of CSM is to harmonize organizations and their actions with the natural environment and social aspects and impacts. Glavič, Lukman (2007) highlight, that symbiosis in industrial environment is being documented and developed. They call that “industrial mutualism”, where the involved subjects (enterprises, employees and community) live together and all of them enjoy benefits of this symbiosis. Such relationship presents an obligation for all involved parties, allowing better utilization of resources and energy and quality of life. Therefore the probability of survival increases.

To gain the benefits of CSM, the approaches and principles must be used as a complex system within economic, environmental and societal dimensions. They are connected to each other and together create sustainable development. The benefits of CSM are, other than environmental, increase of the productivity of materials, improve energy efficiency, improve material flow management, apply preventive environmental protection, and strive for sustainable use of natural capital and legal compliance. Application of approaches in accordance with sustainable development prevents possible problems in relation to state authorities, self-government bodies, and other representatives of civil society. Acceptance of sustainability principles increases positive relation of the employees to the company, and, through this, significant economic effects may be achieved. Attractiveness for employees, possible investors, and for international cooperation, is increasing.

According to the literature reviews, there are five factors that should be taken into account for the practice of CSM, namely:

- 1) the principal-agent relationship (the amount of commitments of shareholder to encourage the management engaged in solving social and environment issue),
- 2) the humanism paradigm adopted by the management,

- 3) the corporate culture,
- 4) the management ability to establish good relationship with all stakeholders, and
- 5) the internal conditions that are in accordance with the demands of the implementation of the concept of CSM.

Many research findings indicate that CSM is a concept that is easily understood, but it is difficult to implement (Ameer, Othman, 2012; Kiron *et al.*, 2012; Robinson, Boulle, 2012). Perceptions of top management state that social and environmental issues are important issues, but addressing the problem is not the prime motivation for the management because these issues are not clear (Robins, 2008). An essential feature is to design business processes in a way that yields value for the stakeholders and balances it with the organizational vision, goals, strategies, and resources (Asif *et al.*, 2011).

Organization, according to CSM, has a certain level of requirements that are identical to the hierarchy of human needs according to Maslow. The lowest requirement is to improve financial performance and employee engagement (survival). Next is the need to build quality relationships between customers, suppliers and employees (relationship), to build better business practices (self-esteem), continuous product development (transformation), build unity and awareness of interdependence within the company (internal cohesion), strengthening relationships and engagement among employees (inclusion) and the highest requirement is the need to build a strong relationship of mutual dependence between internal and external stakeholders (unity) and the need to be “good citizens” (Falck, Heblich, 2007).

According to Marrewijk, Werre (2003), there are different levels of the practice of CSM: the Pre-corporate sustainability (CS) (lowest), Compliance-driven CS, Profit-driven CS, Caring-synergistic CS and Holistic CS (highest). Marrewijk, Werre (2003) divided the classification based on the amount of (1) the attitude of management to meet the interests of stakeholders and its self, (2) management orientation period, (3) the balance of attention to the importance of financial performance, environmental and social, and (4) management capabilities to build a harmonious and balanced relationship with all stakeholders. Pre-CS is the lowest level where management does not consider the interests of stakeholders, be short-term, exploitative and just financial profit oriented. Holistic CS is a CS level where management has had a stable financial performance over the long term, have a strong attitude creates a harmonious relationship with all stakeholders to support each other and always try to keep the maximum quality of the environment. The greater power of management creates economic sustainability, the more powerful management capabilities reached the stage of Holistic CS. Usually, higher organizational ability to meet its

I: Research results on the relationship of CSM and corporate financial performance

Result	Author(s)
CSM activities enhance the corporate financial performance	Clemens, Bakstran, 2010; Falck, Heblich, 2007; Menguc <i>et al.</i> , 2010; Rahim <i>et al.</i> , 2011; Verschoor, 2008
CSM activities do not influence the financial performance because CSM does not contribute stronger competitive advantage position for management	Carter, 2005; Lanoizelee, 2011; Lee <i>et al.</i> , 2009; Mittal <i>et al.</i> , 2008
CSM activities only enhance a part of financial performances	Andersen, Larsen, 2009; Cordasco, 2012; Gupta, 2012; Laan <i>et al.</i> , 2008; Maloni, Brown, 2006; Osthus, 2011

Source: author's processing

economic needs, organization will increasingly be more sensitive and proactive to environmental and social issues (Lee, Ball, 2003). Nowadays, CSM concept is on increase due to the more frequent global economic crisis caused by business attitudes that not paying attention to the ethics, the balance of economic motivation, the protection of the interests of society and the environment quality (Rahardjo *et al.*, 2013).

The CSM theory states organizations that implement the CSM will be able to protect the long term financial performance. But Tab. I shows different results of the studies on the relationship of CSM and financial performance.

Despite the wide-ranging measures and tools available for organizations and their stakeholders to understand, implement and maintain elements of sustainability, the question remains on how to integrate sustainability into the day-to-day operations of organizations through their integration with mainstream business management systems (MSs) (Asif *et al.*, 2011).

To institutionalize CSM in organization, strong corporate governance and accountability of infrastructure is necessary (Huff *et al.*, 2009 and Solomon, 2010 in Asif *et al.*, 2011). To have a strong sustainability culture so as to create a strong corporate sustainability, management must have the ability to build the following (Robinson, Boule, 2012; Caprar, Neville, 2012; Jorge *et al.*, 2011; Linnenluecke, Griffiths, 2010; Szekely, Knirsch, 2005):

- The ability to integrate the organization's vision and strategy into the implementation of CSM concept.
- The ability to ensure that every person in organization have embraced the vision.
- The ability to ensure that this vision has been realized in every decision, action and daily activities throughout the organizational personnel.
- Ability to create a learning organization that allows for continuous improvement. Sustainability issues should be the trigger to find new and better ways and more ethical to strengthen competitiveness.
- The ability to monitor the vision, mission, values, strategies and plans are well executed.
- The ability to build an inspiring attitude and proactive leadership to become a source

of inspiration and encouragement for all members of the organization.

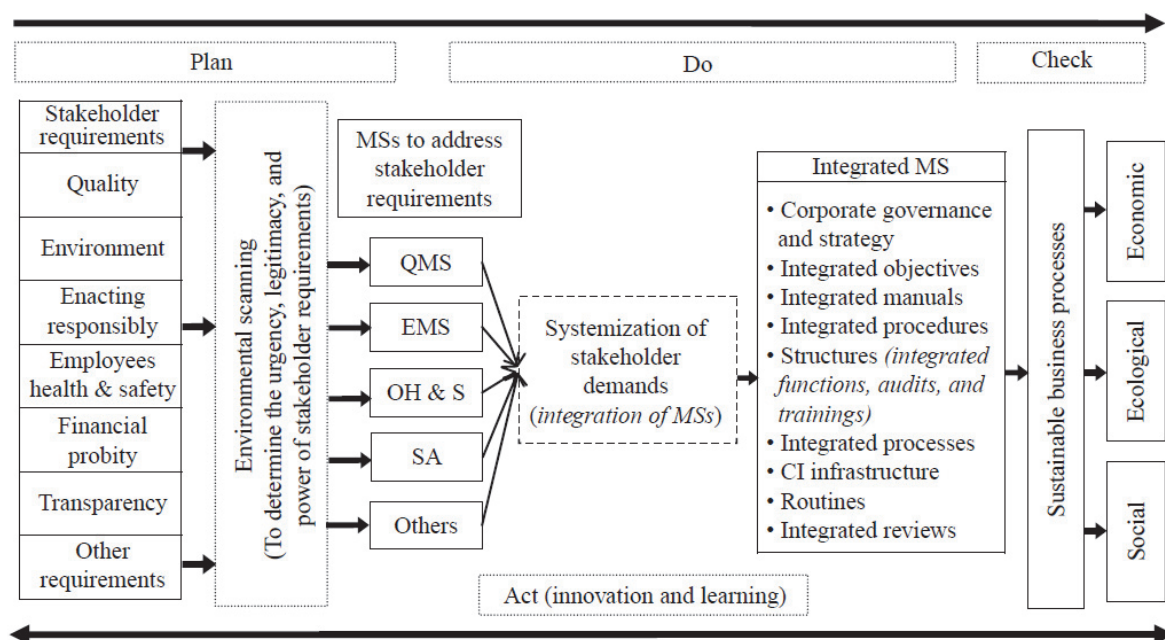
- The ability to narrow differences in personal values and organization values.
- The ability to build a performance appraisal system and information management system that can provide accurate information about the balance of financial/economic, environmental and social performance.

Implementation and internalization of the process is crucial activity. It is necessary to pay attention to management of stakeholders to make sure reached stage won't be lost and organization will not return to previous management system. In this area the practices of change management are necessary to be used according to Porter (1996) and Kotter (1996).

Bellow the Fig. 1 and Tab. II describe the essentials of integrating sustainability into business processes and relationship between corporate sustainability and MSs (quality management system, EMS, health and safety management system). However, theory and also practical implementation of this area is in its early stages and additional research is required. There is a need to extend the existing research and to develop a framework to support the integration of sustainability throughout the entire organization.

CSM according to Asif *et al.* (2011) transforms the organization through a number of fundamental changes at the strategic, tactical, and operational levels. For instance, at the strategic level, it provides a mechanism for increased interaction with stakeholders and, thus, a pathway to address their demands through channelling organizational resources. At the tactical level, it focuses on the design of an integrated management manual, procedures, and processes, and on developing the criteria and norms by which integration could be evaluated. At the operational level, the work instructions and work activities are integrated. Supporting activities such as auditing and general administration are also designed accordingly in order to promote efficiency, save resources, and reduce confusion amongst employees at the operational level.

New knowledge needs to be integrated with both the explicit and tacit knowledge of the organization. Integration with explicit knowledge will focus



1: CSM approach

Notes: MS – management system(s); QMS – quality MS; EMS – environmental MS; OH & S – occupational health and safety; SA – social accountability; CI – continuous improvement

Source: Asif *et al.* (2011)

II: Implementation of CSM and MSs

Approach	Author(s)
Integration of sustainable development needs to be considered from both a micro and macro perspective in order to ensure its effectiveness. MSs and processes must be integrated.	Rocha <i>et al.</i> (2007)
Integration of MSs could pave the way for sustainable development. Organizations need to carry out integration at three levels – correspondence, generic, and integration.	Jørgensen (2008)
Integration of MSs provides a necessary roadmap for sustainable development.	Oskarsson, Malmberg (2005)
Corporate sustainability could be achieved in a stepwise approach consisting of cleaner production followed by integration of MSs and sustainable product service design.	Fresner, Engelhardt (2004)

Source: author's processing

on manuals, procedures, databases, work instructions, and other key documents. Integration with tacit knowledge will focus on employees' experiences and skills.

In conclusion it is possible to summarize that current literature still do not sufficiently support truly complete suggestions for CSM. There are still plenty of opportunities for future research.

MATERIALS AND METHODS

The research paper is supported by analysis of secondary and primary data sources. To find significant outcomes, deduction, induction, and synthesis were applied. The aim of the paper is to identify what determinants of sustainability management are examined in the literature and discuss the contribution of EMS to CSM based on experiences of selected Czech organizations with implemented EMS according to ISO 14001.

The survey is descriptive and empirical in nature because the primary data were collected using the survey method through fact finding techniques such as questionnaire and interview. The data has been collected in primary quantitative survey by means of questionnaire investigation; the data were collected in Czech organizations in 2005. Organizations were selected for the survey if they had already implemented EMS according to ISO 14001 and listed in database of organisations with implemented EMS managed by Czech environmental managerial centre (Czech environmental managerial centre is voluntary association supporting positive attitudes of industry and business towards environment). The data for the survey was gathered from 222 organizations (N = 1265). The survey focused on approach to the sustainable development and corporate sustainability, implementation of EMS and perceived benefits of EMS. Primary data of the survey were obtained by quantitative survey

using a questionnaire technique of data collection which has respected the ethical aspects of survey (Act No. 101/2000 Coll., on Personal Data Protection). Answers of respondents were categorised according to identification questions that formed the first part of the questionnaire (i.e. size of an organization, business sector, and turnover). In the survey, the measurement was based primarily on closed questions with one or several possible answer(s) that had been selected based on the study of literature, documents and other related surveys. The survey should identify perception of the sustainable development concept in the surveyed organizations and recognize importance of EMS for promoting the concept of CSM into the organizational praxis. The data and information presented in this paper are the first approach to the theme in the Czech Republic. Deeper analyses and more specific research will follow.

The data were collected in organisations in the Czech Republic. A total of 1265 organizations were contacted. The overall questionnaire return was 17.5%, i. e. 222 organizations took part. 91% of respondents had EMS certificate according to ISO 14001, 6% were certified by ISO 14001 as well as registered in programme EMAS, 3% of respondents had the system implemented and were certified during the time when the survey was done. The importance of MSs is supported also by the fact that 97% of organizations had certified quality management system according to ISO 9001.

The data were obtained through a paper questionnaire. The questionnaire was completed by managers on the middle and top management level. Questions used special terms generally known by middle and top managers. The terms which may be possibly misunderstood were explicitly defined. The survey contained closed and open questions. The initial questions focused on the overall perception of sustainable development concept and corporate sustainability. Those questions were followed by questions which were focused on EMS benefits and their importance for corporate sustainability. Questions with more possible answers were used. The statistical tools used for the data analysis was chosen based on the type of the question (descriptive statistic, graphs, contingency tables, absolute and relative frequency).

To evaluate the data, the SPSS statistical programme and MS Excel 2007 were used.

The sample consisted mainly of medium and large organizations with turnover over 100 million CZK/year. Mostly the respondent organizations were from manufacturing (52% of organizations) or construction industry (25% of organizations).

RESULTS AND DISCUSSION

Business practice defines sustainable development mainly as development which fulfils needs of current generation without threatening the ability to fulfil the needs of future generations (definition A) – 58% respondents (see Tab. III). This definition is known mainly between members of manufacturing industry. The definition is perceived as characterizing sustainable development in the best way. This definition focus on friendly approach towards environment. In the context of this perception of sustainable development, 65% of respondents assume that current business fulfils the conditions of sustainability. It fulfils both current and future needs.

40% of respondents also know the definition of sustainable development based on the balance of three pillars (definition B). 33% of respondents stated that this definition characterizes sustainable development in the best manner. With growing size of a company also grows percentage of respondents who knows and supports the three pillars balance definition of sustainable development. 78% of them confirmed that according to their opinion their organization currently positively fulfils economic, environmental and social goals.

Only 13% of respondents is acquainted with understanding of sustainable development as a capability of mankind to ensure such development of knowledge and ethical potential to be able to overcome global challenges, or threats (definition C). This definition is known mainly to the members of top management. 4% of respondents consider this definition as the best characteristic of sustainable development (members of top management; manufacturing industry). 89% of them think, that current business is a product and source of knowledge potential.

III: Definition of sustainable development (SD) and sustainable business

Definition	% of respondents know SD definition	% of respondents fits the best to SD
A: SD = development which fulfils needs of current generation without threatening the ability to fulfil the needs of future generations	62	58
B: SD = TBL balance	40	33
C: SD = capability of mankind to ensure such development of knowledge and ethical potential to be able to overcome global challenges & threats	13	4
D: SD = development which fulfils commercial success	9	0

Source: author's survey

IV: *Benefits of EMS*

Benefit (%)	Total (n = 222)	Micro org.	Small org.	Middle-size org.	Large org.
Environmental performance	74	45	62	72	88
Economic performance	59	27	55	58	68
Relationship with stakeholders	54	73	55	49	52
Social area	51	55	51	57	45
Knowledge potential	41	73	36	40	38
Environmental communication	27	55	26	30	19

Source: author's survey

Only 9% of respondents add to the statement, that sustainable development is, on the level of the organization, filled up by commercial success – gaining profit (definition D). This opinion was supported mainly by members of small organizations. Only delegate from 1 organization considers this characterization of sustainable development as the best one (delegate from large organization; manufacturing industry).

Summary, it is possible to state that business practice perceive sustainable development and sustainable business mainly in the context of friendly approach towards environment; almost half of the surveyed organizations characterize sustainable business as the need of balance between three basic pillars: economic, environmental and social. 67% of the total number of respondents think, that current business is realized in accordance with the principles of sustainable development (as the organizations perceive it). 91% of respondents stated, that activities of their organization supports sustainable development of the organization and its surroundings. Positive contribution to sustainable development confirm mainly members of microbusinesses (100% of them confirmed, that their business fulfils the criteria of sustainability) and small and large enterprises.

Relation of EMS and Corporate Sustainability

The CSM theory states organizations that implement the CSM will be able to protect the long term corporate performance. Some of the analysed studies focused mainly on financial performance and have shown differences in the results of the researches on the relationship of CSM. The survey made in the Czech Republic was focused on perception of EMS implementation benefits and their contribution to corporate sustainability.

More than 59% of respondents consider sustainability business as integral part of strategic management (business strategy). The corporate sustainability concept is being used in all sizes of organizations.

91% of the respondents state that implementation of EMS helped with sustainable development of the organization and society. The 9% of remaining organizations who denied this statement were mainly small and microbusinesses. The survey confirmed that EMS does not bring benefits only in the area of improving environmental

performance of the company but also brings other benefits. Respondents consider as the most important benefits of EMS:

- Improvement of the environmental performance (74% of respondents).
- Improvement of economic performance (59% of respondents).
- Improvement of relationship with involved parties (mainly with public, business partners and state administration) – 54% of the respondents.
- Improvement in social issues (work environment, health and safety at work) – 51% of respondents.
- Growth of knowledge potential (41% of respondents).
- Provides information for environmental communication with involved parties (27% of respondents).

Organizations from each size category (see Tab. IV) perceive benefits of EMS differently. Respondents from large organizations unequivocally confirm the benefits of EMS into the management of the environmental performance of the organization and also point at the economic benefits of the system. Small organizations and micro organizations also point at the importance of the EMS for managing of the environmental performance, but not as unequivocally as respondents from large and middle-sized organizations. Micro organizations take EMS mainly as a tool for improving relations with the public, business partners and state administration.

Survey confirmed that implementation and maintenance of EMS contribute according to the perception of respondents to organization sustainability. Surveyed organizations unequivocally confirm positive impact on improving of environmental performance. Especially large and middle-sized organizations perceive economic benefits of EMS. Half of the respondents point also at the benefits in the area of work safety and improvements in work environment. Small organizations which implemented EMS do not perceive stated benefits so unequivocally; on the other hand they point at the improvements of relationships with public, business partners and state administration and also growth of knowledge potential.

The Level of CSM Implementation

Based on the Fig. 1 and Tab. II listed in the theoretical background, the survey focused on the level of implementation of MSs in Czech organizations. The results are described below.

Companies with ISO 14001 certification, or implementing ISO 14001, evaluate in context of the MSs as well as indirect environmental aspects and report about impact of the organization on the environment. Indirect environmental aspects evaluate 54% of respondents; organizations in manufacturing and building industry. Environmental communication is used via reports about organizational influence on the environment only in 36% of organizations – mainly members of large organizations, manufacturing industry. Together with growing size of the organization also grows the percentage of the respondents who realize environmental communication via voluntary reports about impact of the organization on the environment (reports are published by 56% of large organizations; only one by microbusiness). 92% of organizations confirmed that company management is engaged in environment protection issues. With growing size of organization again grows the percentage of the respondents who confirmed, that company management regularly and continuously pay attention to the environmental performance (environmental performance is monitored and analysed in regular periods). Analysis of environmental performance is used mostly by organizations from manufacturing industry (this fact was confirmed by 81% of respondents of this category).

Employees are involved in the process of improving environmental performance in organizations of all sizes (98% of respondents). Only 1 respondent stated that employees are not a part of improving the environmental performance in his company (respondent representing large organization; manufacturing industry).

The survey outputs confirmed that with growing size of the organization also grows the percentage of respondents who have implemented aspect of environmental responsibility to the processes of business partner choice. 43% of all of respondents stated that their organization choose business partners based on the information that the partner organization have implemented MSs. Regarding large organization the percentage is even higher, it reaches 56%. These results are in accordance with the survey realized in 2003 by University of Pardubice and EMAS Agency (N = 450, n = 254, organizations from all sectors). At that time 28% of respondents considered implementation of MSs as an important criterion for choice of business partner and 66% of respondents took implementation MSs in consideration as supporting criterion (Ritschelová *et al.*, 2006). The comparison shows that the organizational approach toward environment still remains an important criterion

in choosing of a business partner. Acceptance of the commitment to continual improvement of environmental performance of the organization can mean competitive advantage in current market conditions.

76% of organizations realized within EMS precautions which led to significant mitigation of impact of business activities, products and services on the environment. It means that organizations improve their environmental performance (one of the pillars of organization sustainability). The precautions implemented by surveyed organizations were associated also with benefits in other areas. 16% of respondents point at the social benefits of these precautions (mainly benefits in the area of improvement of the work environment). Almost 14% of the respondents confirmed economic benefits of realized precautions to environment protection. 13% of respondents perceive positive response from public, business partners or state administration.

Use of Another CSM Tools

In order to manage environmental performance and economic performance, organizations use also other CSM tools.

One of the commonly used tool is environmental accounting. It integrates two pillars of sustainable development (economic performance and environmental performance). The system of environmental accounting focus on costs of materials, energy and water, costs of waste production and waste management. Those are the environmental costs. 67% of the respondents confirmed that environmental costs are monitored and analysed in their organization. Organizations mainly focus on costs originating in accordance with laws regarding environment protection (86% of respondents) and costs of voluntary investments into environmental protection (59% of the respondents). 22% of the respondents monitor and analyse even costs of material losses. Information gained from the monitoring and analyse of environmental costs are mainly used for decision support system in management of surveyed organizations (97% of the respondents). Information gained from the analyses are also used in context of external reporting (25% of the respondents); usage of those information confirmed mainly small organizations. Survey confirmed that information about environmental costs are (or would be) beneficial for organizational management (88% of the respondents). 73% of the respondents are aware of the necessity of these information for financial management of the organization and also for environmental management. Survey shows that in case of 82% of respondents the environmental aspects and impacts and it's economic consequences are crucial part of investment appraisal.

28% of the respondents stated, that they apply principles of cleaner production; 6%

of the respondents (mainly manufacturing organizations) use eco-labelling and 4% of the respondents (mainly large organizations) use life-cycle assessment (LCA).

CONCLUSIONS

The definition of sustainable development by surveyed organizations can be described as development which fulfils the needs of current generation without threatening the ability to fulfil the needs of next generations. Almost half of respondents also knows the definition of sustainable development as three pillar concept (economic, environmental and social); such definition of sustainable development is the most characteristic only by one third of respondents. 91% of respondents stated their organization support sustainable development of the whole society and the relevant support for corporate sustainability is implementation of EMS. The results revealed that organizations in the Czech Republic with implemented EMS use different management tools to fulfil sustainability concept and stakeholder requirements. The surveyed organizations focus on quality management, pay attention to occupational health and safety and social stability.

The determinants of organization sustainability and sustainability management was examined in the literature and in the selected Czech organizations. The results show there is a basic knowledge of sustainability concept in the surveyed Czech organizations. We may find organizations with a great effort, but also those, which just started with implementation of sustainability concept. Surveyed organizations are somewhere between Compliance-driven CS and Caring-synergistic CS. Perceived improvements of EMS implementation in Czech organizations are mainly in the area of environmental performance (74%), economic performance (59%), relationship with involved parties (54%) and social issues (51%). Most of the organizations, which use synergy of the EMS are large organizations.

According to the literature review the CSM concept consist of five basic factors that should be taken into account for the practice. Authors mainly mention following factors influencing CSM concept: the amount of commitments of shareholder, the humanism paradigm, corporate culture, management ability to establish good relationship with stakeholders, and internal conditions that are in accordance with the demands of the concept of CSM. The decision to implement EMS in organization comes from requirements of company owners who are aware of importance environmental performance for competitiveness of organization. Responsibility for implementation of EMS lies on top management. Based on the

implementation of EMS, the organizations take care about corporate sustainability (about the areas of environmental aspects and impacts of the organization). Activities, workflows, production and services are realized with regard to their environmental aspects and impacts. Due to the EMS implementation are areas of environmental protection and environmental aspects and impacts solved and managed by organizational management on regular basis. All employees are involved in the process of continuous improvement. Organizations implement measures to significant mitigation of impacts of organizational activities, products and services on the environment. Almost half of the surveyed organizations prefer partners or suppliers with certified EMS. Thus implementation of EMS positively allows organization to integrate environmental aspects into the management system and to improve environmental performance; nevertheless the benefits are also in the economic and social performance. A commitment to complying with applicable environmental regulations is required, as is a commitment to continuous improvement. ISO 14001 and EMAS provide a structured methodology for developing a comprehensive EMS. Organizations can use the process to systematize and standardize the organization's approach to developing and implementing an EMS, as it provides a common framework for managers. Just as managers realized that an effective quality strategy begins with suppliers, many organizations are using a similar rationale to compel their suppliers to adopt better sustainability management practices. With EMS implementation, the organization can decrease the cost and time requirement of the regulatory process. The standards help organizations to consider and evaluate the interaction of environmental factors with operational factors from process and product view. Improved environmental performance has been linked with process and product cost improvements and lower risk factors. Certification helps to satisfy investor and another stakeholder demands for organization accountability.

The future research in this field should focus on deeper analysis of the phenomenon. The basic analysis presented in this paper show general attitude towards CSM, but future analyses should focus on relationship between selected determinants of CSM and its causes and consequences. Additionally, future research should focus on return of investments in the CSM. As a general remark we noticed that there is a strong focus in the reviewed literature and surveys on large and multinational enterprises. Those concepts are not studied in the small or medium sized companies. Similarly, almost no data are related to the non-profit organizations and NGOs.

SUMMARY

Corporate sustainability management (CSM) and its implementation appears to be crucial theme in post-crisis society. The main idea of CSM is to harmonize organizations and their actions with the natural environment (including minimization of resource usage, recycling, reuse, regeneration, recover, remanufacturing, minimum or zero waste, purification and symbiosis) and social aspects and impacts. The importance of this topic has stimulated research into the problems of CSM concept and classifying terms used in the sustainable field. Authors mainly mention following factors influencing CSM concept: the amount of commitments of shareholder, the humanism paradigm, the corporate culture, the management ability to establish good relationship with all stakeholders, and the internal conditions that are in accordance with the demands of the concept of CSM. The paper provides results of the literature survey and based on primary survey. The aim of the paper is to identify what determinants of sustainability management are examined in the literature and discuss the contribution of environmental management system (EMS) to CSM based on experiences of selected Czech organizations with implemented EMS according to ISO 14001. The research paper is supported by analysis of secondary and primary data sources. To find significant outcomes, deduction, induction, and synthesis were applied. The data for the survey was gathered from 222 organizations (N = 1265) who have already implemented EMS. The survey focused on approach to the sustainable development and corporate sustainability, implementation of EMS and perceived benefits of EMS. The results show there is a basic knowledge of sustainability concept in the surveyed Czech organizations. Perceived improvements of EMS implementation in Czech organizations are mainly in the area of environmental performance (74%), economic performance (59%), relationship with involved parties (54%) and social issues (51%). Based on the implementation of EMS, the organizations take care about corporate sustainability (about the areas of environmental aspects and impacts of the organization). Activities, workflows, production and services are realized with regard to their environmental aspects and impacts. Due to the implementation of EMS are areas of environmental protection and environmental aspects and impacts solved and managed by organizational management on regular basis. All employees are involved in the process of continuous improvement. Thus implementation of EMS positively allows organization to integrate environmental aspects into the management system and to improve environmental performance. Improved environmental performance has been linked with process and product cost improvements and lower risk factors. Certification helps to satisfy investor and another stakeholder demands for organization accountability.

REFERENCES

- AMEER, R., OTHMAN, R. 2012. Sustainability Practices and Corporate Financial Performance; A Study Based on the Top Global Corporations. *Journal of Business Ethics*, 108: 61–79. <http://dx.doi.org/10.1007/s10951-011-1063-y>.
- ANDERSEN, M., LARSEN, T. S. 2009. Corporate Social Responsibility in Global Supply Chains. *Supply Chain Management: An International Journal*, 14(2): 75–86.
- ASIF, M. et al. 2011. An Integrated Management Systems Approach to Corporate Sustainability. *European Business Review*, 23: 4.
- CAPRAR, D. V., NEVILLE, B. A. 2012. "Norming" and "Conforming": Integrating Cultural and Institutional Explanations for Sustainability Adoption in Business. *Journal of Business Ethics*, 110: 231–245. <http://dx.doi.org/10.1007/s10551-012-1424-1>.
- CARTER, C. R. 2005. Purchasing Social Responsibility and Tim Performance. The Key Mediating Roles of Organizational Learning and Supplier Performance. *International Journal of Physical Distribution & Logistics Management*, 35(3): 177–194.
- CLEMENS, B., BAKSTRAN, L. 2010. A Framework of Theoretical Lenses and Strategic Purposes to Describe Relationship among Firm Environmental Strategy, Financial Performance and Environmental Performance. *Management Research Review*, 33(4): 393–405. <http://dx.doi.org/10.1108/01409171011030480>.
- CORDASCO, P. 2012. Consumers Continue to Prioritize Social Responsibility Across Business Sectors, Despite Recession. [Online]. Available: [http://www.burson-marsteller.com/newsroom/lists/Press Releases](http://www.burson-marsteller.com/newsroom/lists/Press%20Releases).
- FALCK, O., HEBLICH, S. 2007. Corporate Social Responsibility Doing Well by Doing Good. *Business Horizons*, 50: 247–254. <http://dx.doi.org/10.1016/j.bushor.2006.12.002>.
- FRESNER, J., ENGELHARDT, G. 2004. Experiences with Integrated Management Systems for Two Small Companies in Austria. *Journal of Cleaner Production*, 12(6): 623–631.
- HAHN, R., KÜHNEN, M. 2013. Determinants of Sustainability Reporting: a Review of Results, Trends, Theory, and Opportunities in an Expanding Field of Research. *Journal of Cleaner Production*, 59: 5–21.
- HUFF, A. S. et al. 2009. *Strategic Management: Logic and Action*. Wiley, Hoboken, NJ.
- GLAVIČ, P., LUKMAN, R. 2007. Review of Sustainability Terms and their Definitions. *Journal of Cleaner Production*, 15: 1875–1885.

- GUPTA, M. 2012. Corporate Social Responsibility in the Apparel Industry. An Exploration of Indian Consumer's Perceptions and Expectations. *Journal of Fashion Marketing and Management*, 16(2): 216–233.
- JORGE, A., CASTELLO, I., DE COLLE, S., LENSSSEN, G., NEUMAN, K., ZOLLO, M. 2011. Introduction to the Special Issue Integrating Sustainability in Business Models. *Journal of Management Development*, 30(10): 941–964.
- JØRGENSEN, T. H. 2008. Towards More Sustainable Management Systems: through Life-Cycle Management and Integration. *Journal of Cleaner Production*, 16(10): 1071–1080.
- KIRON, D., KRUSCHWIT, N., HAANAES, K., VELKEN, I. S. 2012. Sustainability Nears a Tipping Point. *MIT Sloan Management Review*, 53: 2.
- KOTTER, J. P. 1996. *Leading Change*. Harvard Business School Press.
- LAAN, G. V., VANEES, H., VANWIITTELOOSTUIJN, A. 2008. Corporate Social and Financial Performance: An Extended Stakeholder Theory, and Empirical Test with Accounting Measures. *Journal of Business Ethics*, 79: 299–310. <http://dx.doi.org/10.1007/s10551-007-9398-0>.
- LANOIZELEE, F. Q. 2011. Are Competition and Corporate Social Responsibility Compatible? *Society and Business Review*, 6: 1.
- LEE, K. H., BALL, R. 2003. *Achieving Sustainable Corporate Competitiveness: Strategic Link between Top Management's (Green) Commitment and Corporate Environmental Strategy*. [Online]. Available: <http://www.greenleaf-publishing.com/productdetail.kmd?productid=476>.
- LEE, D. D., FAFF, R. W., SMITH, K. L. 2009. Revisiting the Vexing Question: Does Superior Corporate Social Performance Lead to Improve Financial Performance? *Australian Journal of Management*, 34: 1–49. <http://dx.doi.org/10.1177/031289620903400103>.
- LINNENLUECKE, M. K., GRIFFITHS, A. 2010. Corporate Sustainability and Organizational Culture. *Journal of World Business*, 45: 357–366. <http://dx.doi.org/10.1016/j.jwb.2009.08.006>.
- MALONI, M. J., BROWN, M. E. 2006. Corporate Social Responsibility in the Supply Chain: An Application in the Food Industry. *Journal of Business Ethics*, 68: 35–52. <http://dx.doi.org/10.1007/s10551-006-9038-0>.
- MARREWIJK, M., WERRE, M. 2003. Multiple Levels of Corporate Sustainability. *Journal of Business Ethics*, 44: 107–119.
- MENGUC, B., AUH, S., OZANNE, L. 2010. The Interactive Effect of Internal and External Factors on a Proactive Environmental Strategy and its Influence on a Firm's Performance. *Journal of Business Ethics*, 94: 279–298. <http://dx.doi.org/10.1007/s10551-009-0264-0>.
- MITTAL, R. K., SINHA, N., SINGH, A. 2008. An Analysis of Linkage between Economic Value Added and Corporate Social Responsibility. *Management Decisions*, 46(9): 1437–1443. <http://dx.doi.org/10.1108/00251740810912037>.
- OSKARSSON, K., MALMBORG, F. V. 2005. Integrated Management Systems as a Corporate Response to Sustainable Development. *Corporate Social Responsibility and Environmental Management*, 12(3): 121–128.
- OSTHUS, J. 2011. *Corporate Social Responsibility and Customer Loyalty*. [Online]. Available: <http://www.reputationforward.com/2011/05/corporate-social-responsibility>.
- PORTER, M. E. 1996. What is Strategy? *Harvard Business Review*, November–December, 61–78.
- RAHARDJO, H. et al. 2013. Factors that Determines the Success of Corporate Sustainability Management. *Journal of Management Research*, 5: 2.
- RAHIM, R. A., JALALUDIN, F. W., TAJUDDIN, K. 2011. Consumers Behavior towards CSR in Malaysia. *Asian Academy of Management Journal*, 16(1): 119–139.
- RITSCHELOVÁ, I., FARSKÝ, M., HÁJEK, M., HYRŠLOVÁ, J., PULKRAB, K., TOŠOVSKÁ, E., VÁVRA, J. 2006. *Politika životního prostředí. Vybrané kapitoly*. Ústí nad Labem: UJEP v Ústí nad Labem.
- ROBINS, F. 2008. Why Corporate Social Responsibility Should Be Popularized but not Imposed. *Corporate Governance*, 8(3): 330–341.
- ROBINSON, D., BOULLE, M. 2012. Overcoming Organizational Impediments to Strong Sustainability Management. *The Business Review*, Cambridge, 20: 1.
- ROCHA, M., SEARCY, C., KARAPETROVIC, S. 2007. Integrating Sustainable Development into Existing Management Systems. *Total Quality Management and Business Excellence*, 18(1–2): 83–92.
- SOLOMON, J. 2010. *Corporate Governance and Accountability*. Wiley, Chichester.
- SZEKELY, F., KNIRSCH, M. 2005. Responsible Leadership and Corporate Social Responsibility: Metrics for Sustainable Performance. *European Management Journal*, 23(6): 628–647.
- VERSCHOOR, C. C. 2008. Citizenship Survey Shows Gaps between Rhetoric and Reality. *Strategic Finance*, 89: 3–14.

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