

Minimizing redundancies and ways to deal with trade-offs in decision making within integrated management systems

Joost PLATJE

Wroclaw School of Banking, Poland

Abstract: Integrated Management Systems (IMS) are supposed to contribute to sustainable development. However, the moment a company only uses short term win-win situation to comply, the real contribution to sustainable development may be questionable. As trade-offs between sustainability aims and the company's goals appear, companies may behave opportunistically, and externalize the elements which are difficult to fulfil in an IMS, e.g. by way of outsourcing. At such a moment, the IMS may function on paper, while the whole industry or logistic chain does not improve its contribution to sustainability. As a consequence, it may be necessary to assess the whole industry or logistic chain (logistic chain integration for IMS) regarding the impact of an IMS on sustainable development. After presenting the aims of the IMS and "the business case" for reducing redundancies and dealing with trade-offs, the issue of "externalizing" problems to parties outside the IMS is discussed. After a presentation of different solutions for dealing with this problem, some conclusions will be drawn.

Keywords: Integrated Management Systems, sustainable development, opportunistic behaviour, ISO 9001, ISO 14001, ISO 18001

JEL: D01, M10, O44, Q01

1. Introduction

The most important arguments presented in this article are:

1. Due to the nature of the company, win-win situations tend to be a popular way in order to reduce redundancies and prevent conflicts. There are many opportunities for business to

find profit increasing or cost reducing solutions for environmental and social issues included in Integrated Management Systems (IMS) (“IMS as a business opportunity”).

2. A method in contradiction with the intention of an IMS in order to fulfill IMS standards and prevent conflicts within the company is “externalizing” costs, risks, etc. to economic actors outside the IMS. While the supply chain is not of crucial relevance for the functioning of an IMS itself, this chain needs to be considered in analysis as otherwise by way of outsourcing, subcontracting, and other contractual arrangements, the positive effect within the company with the IMS may be smaller than the negative effect in the rest of the logistic chain.
3. Possible solutions for such problems are: the inclusion of sustainability aspects in strategic planning and stakeholder management (“beyond the business case”).

First, the aims of an IMS will be presented. Then, “the business case” for reducing redundancies and dealing with trade-offs is discussed. Afterwards, “externalizing” problems to parties outside the IMS will be elaborated. Then, different solutions for dealing with this problem will be presented. Finally, some conclusions will be drawn.

2. Goals of the IMS

As Jørgensen et al. (2004) argue, ISO does not have a specific standard for IMS. However, there is some progress in integrating, for example, ISO 9001:2000 (quality management), ISO 14001 (environmental management) and OHSAS 18001 (occupational health and safety management). The aim of continuous improvement, which is elementary for ISO 9001:2000, is also an important element of the other management systems. Also, it is tried to increase the coherence between ISO 9001 and 14001. The authors argue that “a basic condition for an integrated management system is a common understanding of organizations and how they operate (2004: 8).” As is shown in Figure 1, and IMS should be based on a common basic standard. Management principles would still be based in core issues such as planning, implementation, review, etc. Innovativeness remains essential for the aim of continuous improvement. The common standard should be supplemented with the specific requirements of the quality, environment, occupational health and safety, and other management systems

(Jørgensen and Simonsen, 2002). However, in such a case trade-offs between the specific requirements concerning the standards of the individual management systems may appear.

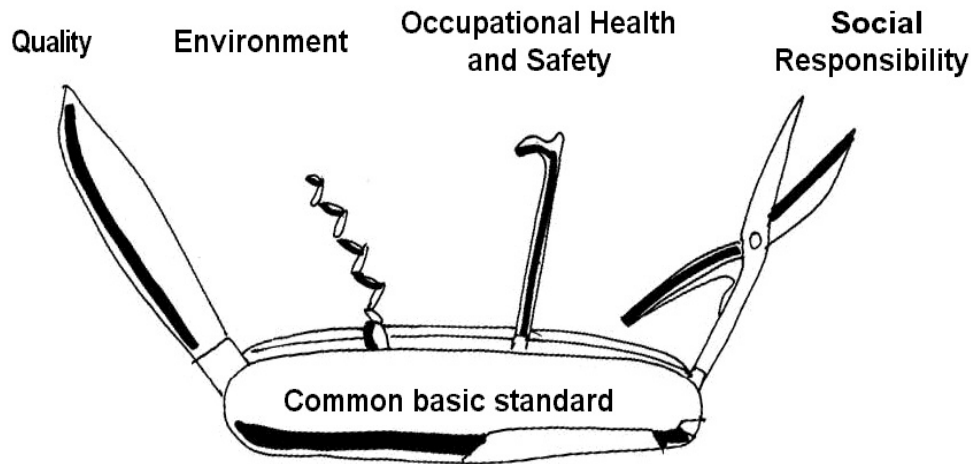


Figure 1. Integrated management system based on a common standard with supplements

Source: Jørgensen, 2001: 8; Figure drawn from Jørgensen et al, 2004.

Jørgensen et al. (2004) argue that the general advantages of an IMS compared to separate management systems are: less documentation, less bureaucracy, less confusion between standards, costs savings through reducing the time and resources needed for managing the individual systems, and simplification of internal and external audits. Also, goal conflicts between different standards, although impossible to eliminate, may be solved more easily as a result of common management, which may facilitate the communication and interaction with different stakeholders. In other words, redundancies appearing due to the existing of different independent management systems are reduced by integrating them, which makes the IMS stronger. The process of integration related to increased transparency of documentation, procedures, etc. and a common strategy for innovation for continuous improvement in all the areas of the IMS may also strengthen in the whole supply chain, which reduces problems related to the “externalization” of problems to organizations outside the IMS, discussed later.

Integration can be defined as “a process of linking different standardized [Management Systems] into a unique [Management System] with common resources aiming to improve stakeholders’ satisfaction (Bernardo et al., 2009, 743).” Ideally, all parts of the organization as

well as its suppliers and subcontractors should fully integrate their goals, resources and processes. Three levels of integration have been distinguished in literature (Bernardo et al., 2009:

1. No integration
2. Partial integration (Karapetrovic, 2003); Integration of selected parts without linkages (Wilkinson and Dale, 1999)
3. Full integration (Karapetrovic, 2003); Integration of systems certified and uncertified (Wilkinson and Dale, 1999)

Empirical research on the level of integration show that a relatively high level of integration can exist. Douglas und Glen investigated 28 companies: “71% of the 28 companies in the sample had integrated some aspects of their QMS and EMS. Of these organizations, 45% had developed a single manual and procedures incorporating both systems (Douglas and Glen, 2000, quoted in Bernardo et al., 2009, 745).”

Bernardo et al. (2009) investigated 1615 companies with ISO 14001:2004 and ISO 9001:2000 certificates in Spain in the years 2006-2007. About 27% (435 companies) responded. The question addressed was whether the companies have an IMS. About 79% of the sample reported to have a fully integrated management system, 14% no integration and 7% a partially integrated management system. Regarding different elements of the management system, results differed: Integration of human resources – 39-44%; Integration of procedures – 62-90%; Policy – 78%; Objectives – 73%; Manual – 82%; Procedures – 63%; Instructions – 56%; Records – 54%. The authors argue that companies tend to start with integration the most general issues (strategic goals, documentation and procedures)

3. IMS as a business opportunity

As was mentioned, the integration of different management systems may reduce bureaucracy, improve management itself, and create a competitive advantage for the company on the market. When we interpret a management system as a process (Figure 2), this can create opportunities for business to improve its economic functioning. While this is most visible with quality management (e.g., improved quality may via increased consumer satisfaction lead to increased profits), it also creates opportunities for business to take advantage of environmental

management, occupational health and safety management, etc. (Schaltegger and Lüdeke-Freund, 2012).

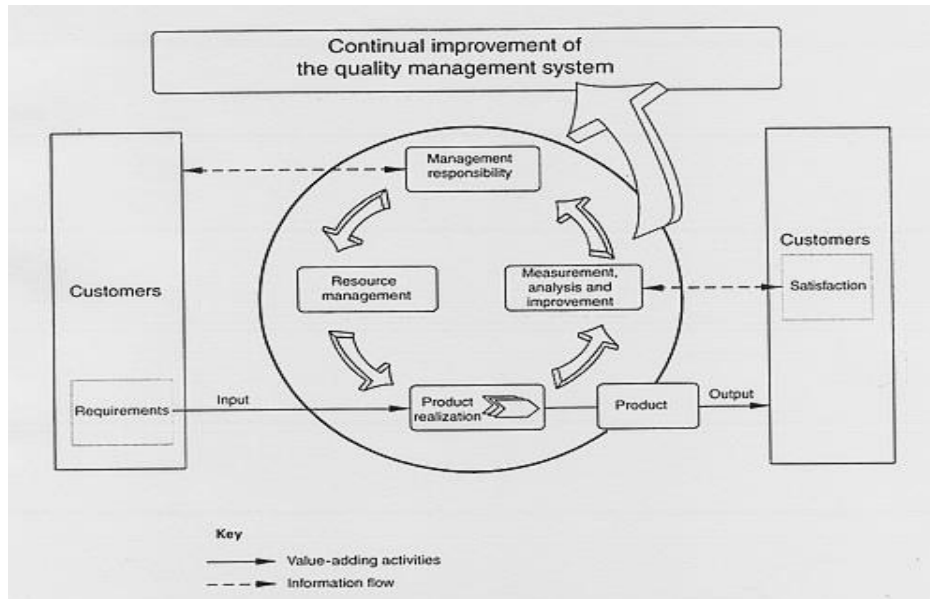


Figure 2. Model of process-based quality management system

Source: Dansk Standard, 2000. Drawn from Jørgensen et al., 2004: 7.

As Schaltegger and Lüdeke-Freund (2012: 6) write: “The core question for the management of business cases for sustainability is thus how profit increasing social and environmental activities, rather than cost increasing measures, can be identified and realized.” However, as the authors argue, professionals within the company should be aware of such opportunities. This is not always the case, as social and environmental issues are often seen as a cost or burden. A reason for this is that traditional economics and management studies, as well as traditional accounting and management information systems do not consider these issues. Also, it is difficult to change established strategies and business models. The incentive to change may strengthen the moment the aim of continuous improvement of the IMS is really implemented. Some ways to improve the use of economic opportunities created by the IMS are, which in turn may reduce potential trade-offs (as they are no longer perceived as trade-offs anymore):

1. Educate corporate professionals to understand IMS as a competitive advantage, and an opportunity to reduce costs within the company.
2. Introduce a different accounting system, and use sustainability accounting and measurement.

3. Set strategic goals – social and environmental issues as a driver of long-term economic sustainability (strategic sustainability management).
4. Innovation strategy focused on creating synergy effects between economic, social and environmental aims.

Schaltegger and Lüdeke-Freund (2012: 6) identify the following core business case drivers: (1) cost and cost reduction, (2) risk and risk reduction, (3) sales and profit margin, (4) reputation and brand value, (5) attractiveness as employer, (6) innovative capacities. The functioning of an IMS is strongly related to improving information flows and processing. The improvement of the quality of information not only reduces redundancy in this field (less paperwork, easier access to information, etc.), but also has a positive effect on all six drivers of core business. Furthermore, improved information flows support management responsibility (liability) and reduce opportunities for activities in different parts of a company which are in contradiction with the principles and standard of an IMS. Below, some examples of reducing redundancies and reducing goal conflicts (trade-offs) are given:

(1) Costs and cost reduction. An IMS enables the company by way of better management to identify opportunities and challenges for the company in the short and long term. Extending accounting procedures with social and environmental issues enables the identification of different cost-reducing opportunities. These opportunities are related to risk reduction, reputation, attractiveness as employer and innovative capabilities. As discussed below, energy saving and improved material flows may lead to significant environmental and economic benefits.

(2) Risk and risk reduction. Management of environmental hazard, occupational risk, etc. may reduce business risk (e.g., lower probability of problems with continuity of production; integrated risk management may reduce managerial costs (bureaucracy, shorter information lines, better assessment of total risk in the company) and risk reduction may also reduce insurance costs. Improved information flows may also reduce technical risks. Furthermore, an IMS may reduce potential conflicts with social and environmental stakeholders, which in turn reduces social and political risk (e.g., strikes, protest actions hampering production and distribution processes) (see also point 4).

(3) Sales and profit margin. This is related to point 4 – improved reputation and brand value may stabilize sales, or increase in case of, for example, large consumer consciousness

regarding quality, social and environmental issues. Quality management is likely to have the strongest impact on sales.

(4) Reputation and brand value. An IMS as a part of corporate social responsibility strategy of a company may improve its image, in turn reducing expenditure on marketing and public relations. ISO series are used as a marketing instrument, in order to increase customer loyalty and improve the company's image. This also may reduce potential conflicts with social and environmental stakeholders, in particular in countries with strong NGOs criticizing social and environmental policies of large companies. In this case, consumers and other stakeholders are a driver to invest in IMS, and to see social and environmental issues as an asset for the company

(5) Attractiveness as employer. The need for human resources provides incentives for health and safety management, etc. An attractive employer faces lower costs of finding well-educated employees. Furthermore, well-paid employees facing proper labour conditions may not only be more effective, but also face lower incentives to lie and cheat (Akerlof and Shiller, 2009).

(6) Innovative capabilities. The integration of different aspects in the production and distribution process, as well as the involvement of different stakeholders, may lead to new and original ideas and solutions.

IMS's are characterized by multiple aims (e.g., environment, quality, hygiene, risk, IT-security, product safety, labour safety) which cannot be achieved at the same time. A way to reduce potential conflicts is prioritizing or ranking goals. Goals should be valued and common standards are needed in order to be able to rank these goals. As Jørgensen et al. (2004) argue, integration of different management systems into one IMS may have as a consequence that, for example, quality may be ranked higher than environmental issues (trade-off). On the other hand, environmental, health and safety issues may become more important on the management agenda of companies where ISO 9000 series is the basis, as the environment may be included in quality procedures (reducing the existence of trade-off). In the car industry, where quality aspects are of great significance, it pays off for the producers to have a separate quality management system.

Regarding valuation, the question is whether the goal directly appears in the stakeholders cost and profit/benefit function, and whether these cost-benefit functions can be influenced. Following the idea that what cannot be measured cannot be managed, it can be expected environmental issues receive less priority than labour safety and quality. While environmental issues are of importance for long-term survival of the company when depending on natural

resources for production, it can be expected that short term and more easily to measure issues like profits and costs (which are shown in the company's accounts and are of importance for the income and wealth of owners or shareholders) receive priority. The ranking of goals implies the problem of goal conflicts of trade-offs. It is unlikely that profit and costs, which are of high importance for the company, are voluntarily sacrificed for the sake of environmental protection, which has rather long-term and more difficult to measure effects (see Platje, 2011). As a consequence, the company may be willing to achieve environmental and other goals when this does not lead to a decline in profit and an increase in costs. The moment that environmental issues, safety issues, labour issues, etc. are important for customers, the threat of losing these customers may provide incentives for dealing with these problems.

One of the trade-offs that may appear is that the company's (shareholders, owners) aim for profit may conflict with the consumers' aim for quality at a low price, income, job security and labour safety for workers as well as environment (indirectly represented by NGOs, the state). However, also synergy effects may appear, which is a way to reduce potential trade-offs. For example, a higher wage may increase workers' motivation and loyalty, which in combination with health and safety management and the resulting improvement in human capital can lead to long-term improvement of productivity as well as the company's reputation. Similarly, reduced resource intensity is another example of preventing trade-offs, as it reduces the pressure on the environment, reducing at the same time the production costs.

An interesting example of a business strategy for achieving the goals of IMS is DB Schenker (in 2009 worldwide about 60000 employees and 14 Mrd. Euro turnover). Its core business is land transport, air-, und sea-transport as well as Contract Logistic / Supply Chain Management (Ingale and Levén, 2012). DB Schenker possesses an Integrated Management System for quality (ISO 9001:2000), the environment (ISO 14001:2004), labour safety OHSAS 18001: 2007) and information safety (ISO 27001:2005).¹ Their policy is driven by customer expectations and stakeholder involvement in order to achieve the different standards in the IMS. Schenker tries to achieve its environmental goals by creating environmental and economic win-win effects: (1) Changed driver behaviour, Eco-driving, Reduced speed, (2) Better fuels, (3) New vehicles, New vehicle technology, (4) Optimized vehicle sizes, Longer vehicles, (5) Increased finning level/fewer kilometer drives, Smarter city logistics (Schenker AB 2010)

¹ <http://www.logistics.dbschenker.pl/log-pl-pl/start/o-firmie/Doskonalenie-channel/quality.html> (19.05.2013)

However, a problem is that most of the client does not want to pay a higher price for corporate social responsibility. Due to competition on the markets, cheap services have to be offered. Furthermore, investments in more environmental friendly engines are not always economically viable. This is an argument for the need for legal regulation for the whole sector. Furthermore, parts of the environmental and occupational health and safety standards are “outsourced” to small companies, which have become subcontractors for Schenker in order to reduce the need for, among other things, capital assets of possessing own trucks, reduce the risk related with changing demand (expressed by the need of having spare capacity in means of transport). While the IMS should include the subcontractors, the costs of control of fulfilling the requirements may increase. When, for example, the subcontractors have to deliver just-in-time (economic pressure), environmental aims may be neglected.

However, these problems may be reduced when long-term relations between Schenker and the subcontractors exist, where the level of services and image is important for both parties. Furthermore, trade-offs can be managed by finding ways to create synergy effects and include different goals into strategic planning. When economic goals often receive priority, including environmental and social issues in strategic planning may create understanding of and policy for their management aiming at achieving long-term economic sustainability. Problems related to such “externalization” of costs are discussed in the next section.

4. „Externalization“ as a strategy to prevent goal conflicts (trade-offs) within the IMS

Besides the discussed tools, “externalization” is a way to reduce redundancies and goals conflicts (trade-offs) within an IMS by putting the burden on economic units outside the system (e.g., by way of subcontracting, outsourcing, relocation of production, contractual arrangements, etc.). While the company may fulfill all standards of the IMS, the negative effects on environment, health, labour safety, etc., for stakeholders of companies outside the IMS may exceed these gains. For example, when CO₂ emissions or resource intensity are reduced within the IMS, the total emission and use may increase.

A company will have a tendency to focus on economic aims (profit, cost reduction, market share) as this is important for the owners and management. As a consequence, they are

most likely to use win-win solutions where, for example, reduction on use of energy not only reduces environmental problems, but also leads to reduced costs of production, which can increase profit or create a competitive advantage. However, when a goal is difficult to achieve, another solution may be sought.

Outsourcing, subcontracting and relocation strategies are an instrument to reduce costs, redundancies in production processes, etc. However, it can also be used to deal with issues which may create difficulties in an IMS. By way of outsourcing or subcontracting, a company with an IMS is relieved from some problems, such as:

- A sudden increase in demand may normally require overtime work and higher work pressure, which requires health and safety measures. This is, in turn, related to higher costs of management.
- Dealing with strict environmental standards. Environmental management systems are based on complying with legal regulation. Thus, the cost advantage for the company is higher when economic activity is relocated to countries with weaker environmental legislation, poorer enforcement systems and a higher degree of corruption.
- Health and safety management may be more costly in labour intensive industries. This may be an additional argument to relocate production to low labour costs countries where laws and regulations are less strict and/or poorly enforced.

Reasons for „externalization“ are, among other things, competitive pressure, and high transaction costs, which provide incentives for opportunistic behaviour. In this context, opportunistic behaviour means that a company tries to increase its economic performance, and to improve the functioning of the IMS, by way of using methods which are questionable from the moral point of view as well as the intention of the IMS. When such a strategy is applied, it can be argued that the management of the company is not really committed to the IMS, which in the long-run may lead to a breakdown of the system, as they will also feel incentives for cheating on the standards of the IMS within the company. Taking the opportunities for “externalization” into consideration, a fourth category should be added to the levels of integration:

1. No integration
2. Partial integration (Karapetrovic 2003); Integration of selected parts without linkages (Wilkinson and Dale 1999)

3. Full integration (Karapetrovic 2003); Integration of systems certified and uncertified (Wilkinson and Dale 1999)
4. *Logistic chain integration – all participants have IMS and economic risk, health risks, costs, environmental damage, etc. can be externalized.*

In general, due to market competition and the existence of high transaction costs, it is very difficult to achieve level 4, in particular in the case of long, globalized logistic chains and networks. Possible solutions of such a problem which will be discussed later are:

- Quality image and stakeholders may be crucial for the industry (e.g., car industry) – firm with IMS wants only to deal with subcontractors with an IMS, and have a guarantee of quality assurance in the logistic chain.
- “Go beyond the business case” – include social and environmental sustainability issues in the company’s strategic planning.

Transaction costs are important in management theory for the discussion what organizational structure is optimal (Williamson 1985), which is related to the range of opportunities that exist for lying and cheating (Molho 1997). Transaction costs mainly consist of the costs of collecting, processing and using information, as well as negotiation and control (monitoring and enforcement) costs which are related to the conclusion and fulfillment of any type of contract. In the context of the achievement of the standards of the IMS, the question is how easy or difficult it is to achieve these standards. When, for example, the costs of monitoring a company with an IMS are high for external auditors, the company can manipulate data. For the company itself an important question is what is the risk and what are the consequences of being caught cheating. Even when the risk is low, but consequences may be significant (e.g., a significant reputation loss or loss of customers), the incentives for cheating will be weak. When there is one large player in the logistic chain with a specific interest in fulfilling the standards, as in the case of car producers, this company may introduce measures to prevent such cheating in its supply chain.

When assessing the opportunities for “externalization” of problems regarding the functioning of an IMS, an important question is which activities can be outsourced in order to reduce internal trade-offs (see Table 1). Following Williamson (1985), resources and services which are not specific for the company in question can be outsourced or bought through the market. As the company can replace the resources rather easily, they face an incentive to reduce

costs at the expense of social and environmental elements which appear in the company’s IMS standards. The logic is that the more a company relies on an input for, for example, the continuation of the production process or quality assurance, the stronger the incentive to include the production within the company structure (e.g., long-term contracts, production within the company) and the IMS.

Table 1. Transaction specific resources, outsourcing and opportunities for externalizing problems regarding the IMS

Transaction-specific sources	Production	Externalization
Yes	Within company	Weak opportunity for externalization
	Long-term contracts	Some opportunity for externalization
No	Market	Stronger opportunity for externalization

Source: Author’s own elaboration based on Williamson (1985).

Table 2. The loss of control over the logistic chain

Main producer (e.g., EU)	Subcontractors (e.g., China)	Subcontractors of the subcontractors
		No contractual inclusion in IMS.
IMS – controllable	Control mechanisms in logistic chain, contractual arrangements, marketing and PR control mechanisms	Subcontractor 1
		Subcontractor 2
		Subcontractor 3
		Subcontractor ...
		Subcontractor n

Source: Author’s own elaboration

As is shown in Table 2, the longer the logistic chain, the less control the company with the IMS has over the different requirements of the IMS which depend on the suppliers. Thus, even when the company does not consciously externalize costs, it becomes more and more difficult to obtain information on the activities of the subcontractors of the subcontractors. Suppose company A located in Germany outsources part of the production to China (translocation). There is an incentive to monitor this company as customers may be sensitive to the way of production (e.g., labour circumstances in China, environmental impact of the

production). However, it becomes almost impossible to control the suppliers from the subcontractor in China, which increases the opportunities for not complying with the requirements of the IMS. Of course, certified management systems are monitored and controlled. But when corruption is common, then companies may do as if they fulfill the requirements and their controllers may do as if they control. In other word, there may be a compliance problem due to corruption, as private and public structures are strongly interwoven in the Chinese economy.

Furthermore, there is the mentioned problem of translocation. When no life cycle assessment is made, the company in Germany may, for example, reduce CO₂ emissions from its own production, but when inputs are produced in China the total amount of CO₂ may even be higher when the production of these inputs is based on the use of Chinese steel or the use of coal as a source of energy (so called carbon-leakage). Furthermore, it should not be forgotten that Chinese coalmining is featured by high risk of death for its workers compared to other countries, while the labour conditions are often poor (Tu Jianjun 2007).

5. Beyond the business case – a solution for externalizing costs, risks, etc.

As the business opportunity argument for IMS shows, there exist a wide range of economic benefits of developing such a system, which go beyond simple short-term win-win solutions. A company can achieve economic benefits by supporting eco-efficiency (e.g., improve driving style, use more environmentally-friendly trucks) and socio-efficiency (constructing human capital by education, health and safety management, anti-mobbing policies). Social corporate responsibility may in this context be expressed by (1) an acceptable price, (2) satisfying human needs and (3) reducing resource intensity throughout the life cycle (De Simone and Popuff 1997: 47). This win-win approach is often about water, resource and energy efficiency as well as dealing with waste and pollution (Von Weizsaecker et al. 1997). However, as long as the carrying capacity is exceeded, environmental capital can disappear when the production increases faster than the resource intensity is reduced. This may require policy to deal with goal conflicts as well as the problem of externalization of costs (which appears, among other things, because it is often thought that social and environmental sustainability can be achieved when they directly support economic sustainability) (see Dyllick and Hockerts 2002).

In order to deal with this problem related to the „business case“, we should go „beyond the business case“ (Dyllick and Hockerts 2002). Of course, eco-efficiency may reduce resource intensity and create environmental-economic win-win situations. However, when the environmental resources deteriorate, long-term supply of materials and resources may be threatened, in turn threatening the long-term economic viability of the own company and the whole industry (trade-off between present and future economic outcomes). The following principles of sustainability should be fulfilled:

- The company should use renewable resources below their regeneration rate.
- Non-renewable resources should be used in such a way that their availability is replaced by renewable substitutes, for which technological development is needed.
 - If steel would run out sometime in the far future, car producers would need a new source for constructing the car body, as well as for all other elements of the vehicle as a change in the material needed for the car body creates need for change of technology and materials needed for other elements.
 - While eco-innovation may decrease the reliance of the individual consumer on fossil fuels for driving, the total use of fuel may increase due to increased car purchase and car use. Thus, not only a renewable substitute such as solar power for, e.g., electric cars is needed, but there appears also a stronger need for substitutes for the depleting materials used for constructing of cars in case of increased demand.
- Social capital can also deplete, threatening long-term economic sustainability. This concerns:
 - Societal capital – quality of public services, education, infrastructure, culture of entrepreneurship.
 - Human capital – skills and capabilities of the workforce.

Industry can collapse when there is, for example, a lack of access to energy, a lack of access to natural resources / materials, a lack of consumer purchasing power (social welfare), a lack of healthy and educated workforce (human capital).

As Dyllick and Hockerts (2002: 134) argue, trade-offs will always exist, while not all expectations of all stakeholders can be met: internalize social costs; maintain and grow capital stocks; foster democracy; enlarge the range of people’s choices; distribute resources and property

rights fairly. In this context, we should go “beyond the business case” in order to find a solution for goal conflicts. One way is to create a social sustainable corporation, where “its stakeholders understand and can broadly agree with why a company is doing something, and not so much whether they think a particular act is a good thing (Dyllick and Hockerts 2002: 134).” For example, good communication can create understanding for unpopular changes (e.g., closing down the factory, introducing environmental measures).

In particular in the case of big industry (e.g., the automotive industry), there may be the awareness that short-term economic goals may threaten long-term sustainability of the company. This is different with many small enterprises, when having less influence of the supply chain (however, this may be different for local production systems), and companies which are less dependent on a strongly integrated supply chain.

The car industry may be an example of a strongly integrated supply chain where incentives for externalizing problems in order to reduce redundancy and achieve the goals of an IMS are very weak (Stepan 2013). For example, due to problems with image and marketing (news about “bad practice” damages image), they cannot allow for situations as in 2013 in Bangladesh where many people died in a clothing factory due to poor safety arrangements. This could bring a car producer in serious trouble due to the relatively low profit margins.

Furthermore, quality management is crucial for the car industry. Firms with an IMS rather want only to deal with subcontractors with an IMS, and to have a guarantee of quality assurance in the logistic chain. The issue is that when one thing goes wrong somewhere, this can have huge consequences for the final product. This is exemplified by the more than two million cars Toyota had to call back and repair a few years ago in the United States due to problems with brakes (Mail Online 2010). Thus, even when a subcontractor of a subcontractor would not have an IMS, they have a strong incentive to comply with quality standards. However, for environmental standards this may be more problematic, in particular for suppliers from countries where corruption may lead to compliance with IMS standards on paper, while the reality may be quite different.

Following Dyllick and Hockerts (2002), financial and management accounting do not give the firm’s whole economic picture. It should include the importance of sustainable supply (access to resources or technology needed to find substitutes crucial for production in the long run). This creates the need for long-term investments, not only in resources and technology, but

also in relations with reliable suppliers who can fulfill the requirements of IMS and the human capital which is needed for this subcontractors (when the resources, knowledge, technology are specific for the company).

6. Concluding remarks

For an IMS to develop and function properly, the following issues are important:

1. IMS can create a business opportunity, integrating environmental and social goals into the business strategy, in this way reducing potential trade-offs.
2. “Externalizing” problems with an IMS to parties outside the system may lead the company to fulfill formally its standards, and to reduce internal trade-offs. However:
 - This is in contradiction with sustainability principles inherent in IMS.
 - It is questionable whether such a strategy is feasible in the long term, as customers may become aware of the fact, while there also will be incentives for the company to start to cheat on the IMS within the company, which may come out with an audit.
3. A next step added to the stage of full integration is Logistic Chain Integration – all participants have IMS and economic risk, health risks, costs, environmental damage, etc. can be externalized.
4. Some ideas for going into the direction of Logistic Chain Integration related to going beyond the business case:
 - A start is using win-win solutions and other business opportunities to create direct interest in sustainability issues.
 - Savings through improved environmental management (e.g., energy savings, recycling) should be invested in further environmental measures (Schaltegger und Hasenmüller 2005; 2012: 6 ff.).
 - Include sustainability issues in strategic planning – social and environmental capital should be considered as crucial for long-term economic survival.
 - As ISO 9001, ISO 14001 and other standards for management systems can be introduced in the private sector, stakeholder pressure on companies, but also

sustainable banking, can support the introduction of such standards in low cost countries.

- Stakeholders can put pressure of companies to become more sustainable.
- Good communication with stakeholders can lead to understanding of the necessity to face trade-offs, e.g., sacrifice of short-term economic benefits for the sake of long-term environmental and social sustainability which in turn is the basis for economic sustainability.

Literature

- Akerlof G.A., Shiller R.J. (2009), *Animal Spirits – how human psychology drives the economy, and why it matters for global capitalism*, Princeton University Press, Princeton.
- Bernardo M., Casadesus M., Karapetovic S., Heras S. (2009), How Integrated are Environmental, Quality and other Standardized Management Systems? An empirical study, “Journal of Cleaner Production” vol. 17 no. 8, pp. 742-750.
- Dansk Standard (2000), *Quality Management Systems – requirements*. DS/EN ISO 9001. 3 edition.
- De Simone L., Popoff F. (1997), *Eco-Efficiency: the business link to sustainable development*, MIT Press, Cambridge.
- Douglas A., Glen D. (2000), Integrated Management Systems in Small and Medium Enterprises, “Total Quality Management” vol. 11 no. 4-6, pp. 686-690.
- Dyllick T., Hockerts K. (2002), Beyond the Business Case for Corporate Sustainability,” Business Strategy and the Environment” vol. 11 no. 2, pp. 130-141.
- Ingale D., Levén C. (2012), Corporate Social Responsibility: a comparative case study of Schenker and DHL, Jönköping International Business School, Jönköping University, Jönköping, Sweden.
- Jørgensen T. H. (2001), Miljøledelse – systemer, standarder og praksis [Environmental Management – Systems, Standards and Practice], “Skriftserie” 277, Aalborg University, Department of Development and Planning, Aalborg.
- Jørgensen T. H., Simonsen G. (2002), Prospects of a Unified Management System, “Corporate Social Responsibility and Environmental Management” vol. 9 no. 2, pp. 91-98.
- Jørgensen T.H., Mellado M.D., Remmen A. (2004), Integrated Management Systems, “Working paper” 7, Aalborg University, Department of Development and Planning, Aalborg, vbn.aau.dk/files/16063045/workingpaper7.pdf, accessed [20.05.2013].
- Molho I. (1997), *The Economics of Information – lying and cheating in markets and organizations*, Blackwell Publishers, Oxford.
- Karapetrovic S. (2003), Musings on Integrated Management Systems, “Measuring Business Excellence” vol. 7 no. 1, pp. 4-13.
- Mail Online (2010), There’s no Brakes... Hold on and Pray’: last words of man before he and his family died in Toyota Lexus crash, 3 February 2010, <http://www.dailymail.co.uk/news/article-1248177/Toyota-recall-Last-words-father-family-died-Lexus-crash.html> [19.05.2013].
- Platje J. (2004), Institutional Change and Poland’s Economic Performance since the 1970s – incentives and transaction costs. CL Consulting i Logistyka, Wrocław.
- Platje J. (2011), Institutional Capital – creating capacity and capabilities for sustainable development. Opole: Wydawnictwo Uniwersytetu Opolskiego.
- Schaltegger S., Hasenmüller P. (2005), Ergebnisrapport zum Fachdialog des Bundesumweltministeriums (BMU) am 17. November 2005, Centre for Sustainability Management (CSM), Lüneburg, http://www.bmu.de/fileadmin/bmu-import/files/wirtschaft_und_umwelt/unternehmensverantwortung_csr/nachhaltigkeitsmanagement/application/pdf/fachdialog_nachhaltiges_wirtschaften.pdf [20.05.2013].

- Schaltegger S., Hasenmüller P. (2012), The “Business Case for Sustainability” Concept. A short introduction, Centre for Sustainability Management (CSM), Lüneburg, http://www2.leuphana.de/umanagement/csm/content/nama/downloads/download_publicationen/Schaltegger_Luedeke-Freund_Business%20Case%20for%20Sustainability.pdf [20.05.2013].
- Schenker AB (2010), Corporate Social Responsibility, Swedish Work Environment Authority Statistics, Göteborg.
- Stepan J. (2013), Logistics consultant, Interviews 17 and 20 May 2013.
- Tu Jianjun (2007), Coal Mining Safety: China’s chilles’ heel, “China Security” vol. 3 no. 2, pp. 36 – 53.
- Von Weizsaecker E.U., Lovins A., Lovins H. (1997), Factor Four – doubling wealth, halving resource use, Earthscan, London.
- Wilkinson G., Dale B. (1999), Integration of Quality, Environment and Health and Safety Systems: an examination of key issues, Proceedings of the Institution of Mechanical Engineers, Part B, “Journal of Engineering Manufactures” vol. 213 no. 3, pp. 275-283.
- Williamson O.E. (1985), The Economic Institutions of Capitalism, Free Press, New York.

Websites

<http://www.logistics.dbschenker.pl/log-pl-pl/start/biznes-odpowiedzialny-spolecznie/ekoschenkerchannel/>
(19.05.2013)

**MINIMALIZACJA NADMIARÓW ORAZ SPOSOBY PODEJŚCIA DO KOMPROMISÓW
W PODEJMOWANIU DECYZJI W RAMACH
ZINTEGROWANYCH SYSTEMÓW ZARZĄDZANIA**

Streszczenie

Zintegrowane systemy zarządzania (ang.: Integrated Management Systems, IMS) mają przyczynić się do zrównoważonego rozwoju. Jeśli jednak przedsiębiorstwo bazuje tylko na krótkoterminowych sytuacjach „win – win”, prawdziwy wkład w zrównoważony rozwój może być dyskusyjny. Ponieważ pomiędzy celami zrównoważonego rozwoju a celami przedsiębiorstwa zachodzą wzajemne relacje i kompromisy, przedsiębiorstwa mogą zachowywać się oportunistycznie i „wyprowadzać” na te zewnątrz elementy, które trudno wkomponować w IMS, np. za pomocą outourcingu. W takim momencie IMS może funkcjonować „na papierze”, podczas gdy cały sektor bądź łańcuch logistyczny wcale nie zwiększa wkładu w zrównoważony rozwój. W konsekwencji należałoby oceniać właśnie cały sektor albo łańcuch logistyczny (integrację łańcucha logistycznego w odniesieniu do IMS) pod względem oddziaływania IMS na zrównoważony rozwój. W artykule zaprezentowano cele IMS, a także „przypadek biznesowy” redukcji nadmiarów oraz sposoby radzenia sobie z kompromisami, a następnie omówiono kwestię „wyprowadzania” problemów do stron spoza IMS. Po przedstawieniu różnych rozwiązań tak zarysowanych problemów, skonstruowano podstawowe wnioski.

Słowa kluczowe: Zintegrowane Systemy Zarządzania, IMS, zrównoważony rozwój, zachowanie oportunistyczne, ISO 9001, ISO 14001, ISO 18001

JEL: D01, M10, O44, Q01