Chapter 1

Corporate Social Responsibility in Supply Chains

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Additional information is available at the end of the chapter

1. Introduction

In today's business world, growing attention is being paid on the business concept; "Corporate Social Responsibility" (hereafter, CSR), mostly because of environmental concerns, regulatory impacts, commercial benefits and reputation in front of the society. Increasing number of companies initiates and implements practices considered as CSR activities.

Concept of Corporate Social Responsibility (CSR) has been first introduced by Bowen (1952) and states that while implementing strategies and making their decisions, organizations should act taking into consideration society's values [1]. At the end of 1970s, after development and inclusion of Stakeholder Theory into the management literature, CSR has been defined as covering all the relevant stakeholders. In this respect, Carroll (1979) defined CSR as sensitivity of an organization about the stakeholders' expectations on the management of social, environmental, economic, ethic and legal issues [2].

Towards the end of 1980s, concept of sustainable development has been introduced and has focused on economic, social and environmental factors that organizations should consider. Sustainable development emphasizes how today organizations can fulfill their needs without jeopardizing the needs of the future generations [3]. Concepts of social responsibility and sustainable development have been developed separately and social responsibility mainly focuses on social issues as human rights while sustainable development mainly focuses on environmental issues [4]. Nevertheless, in the recent management literature, those two concepts are being used together.

Even though the term "CSR" includes the word "corporate", CSR covers the issues related to both social and environmental matters. On the other hand, CSR practices cannot be considered distinct and even should be integrated to other organizational strategies or activities. Another important issue is that CSR practices are mainly based on the principle of volunteering. That is why those practices should be carried out by participation of relevant stakeholders.

During recent years, there have been several factors that force or stimulate organizations concentrate on CSR and especially environmental applications [5]. Among those, laws and regulations turning CSR applications into mandatory implementations are considered the most important factors. Another important factor is possible negative financial consequences that might be faced by the organizations ignoring or not complying with social or environmental responsibilities.

Companies have realized the crucial importance of environment, started to adapt several strategies and changed their ways of doing business. From the environmental perspective, those companies involve the environmental issues as an important part of social responsibility. Especially when it comes to manage supply chains, it becomes also important to consider whether all suppliers and other companies in the chain implement CSR activities and practices. All companies including suppliers take responsibility to do no harm to the environment, to reduce waste and pollution, to control gas emissions, and to comply with governmental regulations whilst at the same time to reduce their cost and to increase their profit.

Increasing concerns about the environment stimulates governments and international organizations, such as European Union, European Commission, to promulgate new laws and regulations. Thus all actors, including suppliers and manufacturers, in the product life cycle take their own responsibilities on environmental issues. Furthermore, companies are obliged to meet the standards and criteria in force to stay competitive in the market and to keep their sustainable growth.

In addition to the environmental issues and regulatory concerns, social issues keep its crucial importance. Although CSR activities require a great amount of investment, companies need to integrate CSR concept to their processes for higher customer satisfaction and loyalty, better corporate image and reputation, higher productivity, lower costs and thus higher business profitability.

Changes in the behaviors of consumers whose awareness and sensitivity on social and environmental issues increase constitute another reason to implement CSR applications. Research has yielded that consumers prefer the products of companies that attach more importance to protecting environment and put emphasis on activities related to social responsibility [6]. Research has also revealed that reputation and positive image of companies that initiate CSR activities increase in front of society and enhanced reputation provides advantage to those companies.

As a result, no matter in which field companies operate, in order to stay in the competition, they should determine their CSR strategies and plan their relevant activities. Next section will explain the different CSR areas which are considered important for supply chains.

2. Areas of social responsibility in supply chains

Supply Chain Management is a process comprised of several distinct but interconnected functions and activities. Internal and external transportation management, warehousing,

inventory management, acquisition management, logistics service providers management, resource management, packaging and assembly, customer services are among the most important ones. It is also possible to break down the supply chain management process into two main flows; i.e. forward flow and reverse flow. Taking into consideration those processes, main areas of social responsibility in supply chains are [7, 8]:

- Organizational practices
- Ethical practices
- Environmental practices
- Practices of human rights and working conditions
- Practices of occupational health and safety
- Practices to establish relationship with society

Table 1 summarizes activities and practices considered good examples for the CSR areas listed above.

Relevant CSR Areas	Sample Practices
Organizational Practices	• Determining CSR goals for purchasing function • Determining and defining roles and responsibilities of human resources related to CSR in logistics • Providing relevant training in CSR to the suppliers • Sharing of CSR activities and practices with all relevant stakeholders • Implementing a mechanism to receive feedback from stakeholders regarding CSR practices
Ethical Practices	• Not accepting gifts, free services, etc. from suppliers (especially during supplier selection process) • Not creating illegitimate pressures on suppliers • Not sharing price and service information about suppliers with other irrelevant stakeholders • Not favoring any particular supplier just because of managers' preferences and assuring a fair selection process • Assuring all departments meet ethical standards in independent purchasing process • Not creating illegitimate advantage in competition by using contract items • Not giving out wrong information on purpose • Not using specific items pointing out specific suppliers in contracts
Environmental Practices	• Purchasing and using recycled materials for packaging • Supporting and encouraging suppliers on reducing waste (especially hazardous waste) • Putting special emphasis on producing recyclable and reversible materials in production and design

Relevant CSR Areas	Sample Practices
	• Meeting standards for protecting environment in the processes of lifecycle management, production, packaging and storing • Supporting suppliers to implement processes that are appropriate for sustainable environmental protection
Practices of human rights and working conditions	• Not keeping some suppliers out of cycle, just because they have managers from different backgrounds • Having procedures and also having mechanisms to monitor providing equal opportunity for each employee working in all supplier companies • Having appropriate procedures in place to assure that all employees can benefit from all their legal rights, are working in accordance with rules, regulations and national/ international standards • Assuring that physical and psychological working conditions comply with all rules and regulations in place
Practices of occupational health and safety	• Having appropriate procedures in place to assure that working conditions do not jeopardize human health and safety • Assuring that all safety, security and protection measures are in place for all activities • Having procedures in place to assure that sensitive and delicate products are stored under appropriate conditions
Practices to establish relationship with society	• Developing and carrying out programs for training and development of local suppliers • Actively participating into and organizing non-for-profit social activities, such as volunteer work, charities, public auctions, etc. • Supporting sport activities and public education

Table 1. Examples of CSR Applications in Supply Chain Management (Adapted from [8])

Among those aforementioned activities, ensuring that all activities and functions comply with national / international rules, regulations and standards and working with suppliers that fulfill same requirements constitute the most important factors for CSR in supply chains. This issue is also important to stay competitive in market and to have a sustainable growth in terms of strategic perspective.

3. Green supply chain management

In general terms, Green Supply Chain Management (GSCM) can be defined as reflecting a company's consideration and sensitivity about environmental issues to all other supply chain processes. GSCM also assures that companies consider not jeopardizing the environment in all supply chain functions.

Companies usually perceive the GSCM practices as factors that increase the cost in general. However, research has yielded that GSCM practices help companies to reduce general costs,

increase productivity, foster innovation, save resources and increase competitive advantage [9]. Besides those tangible benefits, GSCM practices also play important roles in increasing employees' job satisfaction and commitment, promoting customer loyalty and pleasure, enhancing their reputation in the eyes of the society.

Main goal of GSCM is to assure that environmental practices are applied in the all phases of the process from procurement of raw material to the delivery to the consumer; such as purchasing, production, packaging, warehousing, distribution, assembly. Long-term goal of GSCM is to keep under control all the processes, reduce the chemical waste, lessen the gas emissions and eliminate all the activities that may be hazardous to the nature.

In the scope of GSCM, companies generally use three basic approaches [10]:

- Reactive approach
- Proactive approach
- Value seeking approach

Companies adapting reactive approach, usually apply procedures compliant with rules and regulations in force, such as practices of human rights, minimum resource usage, supply recycled products. Hence, reactive companies have a low level of GSCM.

On the other hand, companies adapting proactive approach, apply procedures to prevent possible problems that may arise in the future, instead of struggling with past problems. Thus, proactive companies develop programs and policies on how to implement and control green supply chain applications.

Companies adapting value seeking approach systematically integrate their environmental policies into their long-term business strategies, reflect those policies to their decisions and share this with all their stakeholders. Besides, they establish a close communication with their suppliers and stakeholders, and encourage them to integrate environmental policies to their own business processes.

From the systems management approach, GSCM constitutes of a series of interconnected, not independent, activities through a long process from the suppliers to the customers. Hence, GSCM should be applied on the whole process in a holistic manner. Thus, to achieve a successful GSCM, all activities and practices through the process should consider GSCM principles.

During the last decade, research on GSCM has focused on the stages of the product life cycle and emphasized the importance of greening approach in material selection and purchasing, company's supplier selection, waste management, packaging, manufacturing and production, regulatory compliance [11].

In addition, some other important issues in GSCM include selection of environmental performance criteria and indicators, relationship between environmental and economic performance. To measure achievement of GSCM, companies define success factors in accordance with their areas of activity [5]. Determining and measuring those success factors help companies to

understand the effectiveness of environmental policies and indicate how well those policies are integrated into the business processes. In this framework, some success factors that can be used to measure the effectiveness of environmental policies are as follows:

- Amount of energy and raw material spent
- Amount of waste produced and exposed to the nature
- Amount of hazardous material used in the production process of goods and products
- Amount of fuel usage and gas emission in the production, storage and transportation
- Amount of recycled material through the processes
- Number of partnerships with suppliers on the area of environmental awareness
- Level of reputation of the company in terms of environmental sensitivity in front of the public eye

Companies adapting GSCM practices may evaluate the effectiveness of their activities and processes in terms of environmental issues and may alter their plans and strategies if necessary.

4. Applications of social responsibility in the process of supply chains

As aforementioned in detail, socially responsible applications and practices should be placed in all the phases and steps throughout the supply chain process from procurement of the raw materials to the delivery of products to the customer. In this respect, this section will give specific examples of socially responsible applications in each phase and function.

4.1. Social and environmental practices in procurement and purchasing

Social responsibility in procurement and purchasing can be defined as performing all purchasing activities in accordance with the CSR principles and taking into consideration CSR principles in the decision-making process [6]. If a company complies with the relevant standards on environmental issues and involves its applications in the processes, procurement and purchasing processes can be important activities to spread the CSR concept to the suppliers.

One of the first CSR practices that can be integrated into the procurement and purchasing is to prefer recycled and/or recyclable materials [12]. In addition to the purchasing of recyclable raw materials, giving precedence to the procurement of technologies that consume less energy and produce less waste is another important practice [13].

Besides, from a holistic perspective, choosing right suppliers that also apply CSR concepts in their own processes and also comply with relevant rules and regulations plays an important role in procurement process. In this respect, before initiating the procurement processes with suppliers, it should be verified that the suppliers also adapt CSR applications in their own processes as required.

4.2. Social and environmental practices in production

Social responsibility in production process take place both in forward and reverse supply chain management activities. In general terms, CSR in production includes the design of the product taking into consideration CSR principles and the production without giving any damage or hazard to the environment [13].

Among the most important long-term goals in the environment-friendly production process, to implement the systematic mechanism reducing the amount of waste and to dispose the waste without giving any hazard to the nature are considered the key practices.

Another important goal of CSR in production is to assess each phases of the product life-cycle in order to determine the possibilities of re-production, re-usage and re-cycling of the materials used in the production process. If any possibility is determined, this should be integrated into the production processes for the benefit of society [5].

4.3. Social and environmental practices in distribution and transportation

Social responsibility in distribution and transportation means developing required transportation and distribution capability while maintaining and enhancing environmental, economic and social sustainability [8].

CSR in transportation has been conceptualized during 1990s and has focused on environmental and economic aspects of a sustainable transportation process [14]. Most important effects towards the environment include emission of greenhouse gas, emission of gas which is hazardous for the ozone layer, discharge of hazardous waste produced during transportation.

Socially responsible practices in transportation area include giving opportunities to local transportation companies, carefully monitoring that the traffic rules and regulations are followed all the time, implementing mechanisms increasing safety and security performance in transportation.

4.4. Social and environmental practices in packaging

For more than 20 years, there is already a pressure on the companies to lessen the negative effects of the packaging material on the environment. Laws and regulations that have been put in effect lately increase the importance of CSR in packaging function. Recently, influence of packaging process on the environment is considered in the framework of product life-cycle from a more holistic approach.

Under the CSR concept in packaging process, there are several activities to be considered, such as storage, warehousing, protection of the product against deterioration. Throughout those processes, CSR in packaging requires the usage of recycled and non-hazardous material, reduction of waste, reduction of energy consumption and design the process in such a way that does not harm the ecosystem [15].

In packaging, size of the package is a usually neglected but an important factor, since the size directly determines the amount of material used. By having well-designed packages, compa-

nies may increase the efficiency in resource usage. In addition, small size of a package helps companies to formulate their loadings in the most optimum way and reduce their transportation costs.

4.5. Social and environmental practices in warehousing

Social responsibility in warehousing is a relatively new concept. CSR in warehousing starts with choosing the location of warehouses by taking into consideration all relevant environmental and social issues.

In addition, providing a healthy and safe storage for products is another important activity. Even more importantly, warehouses used to store hazardous material without threatening the environment constitute a vitally important issue in CSR. Offering spare or extra materials for the benefit of the society is also an activity considered under the CSR concept. Finally, as in the other supply chain functions, taking all safety precautions and safety measures for the workers' health and safety in warehousing is also an important activity [8].

5. Reverse supply chain management

In general terms, Reverse Supply Chain Management is defined as the series of activities or the process used to retrieve a used product from a consumer and either dispose of it or reuse it [16]. This concept also emphasizes activities in functions of transportation, warehousing, inventory management and collaboration with partners [17].

From a business viewpoint, although implementation and controlling the reverse supply chains require an important amount of investment, it brings economic and competitive advantage, as well as strategic importance to the companies adapting them. First of all, companies implementing reverse supply chains can reduce their costs by reducing the amount of raw materials, and reselling products after being scrapped [18, 19, 20].

Reverse supply chain helps the company to generate its green image and enhance its reputation in front of the society. It also gives the company an opportunity to build stronger relationships with the customers.

Reverse supply chain management deals with all activities from the end-customer to the suppliers. According to Vogt et al. (2002), waste treatment activities include reverse distribution of products, return of unsold goods, product returns, product recalls and waste management [21]. Dyckhoff et al. (2004) prioritized the reverse supply chain activities as reuse of product, remanufacturing, recycling and disposal of goods [22].

A majority of reverse supply chains start with the activity of product acquisition from the customer [16]. During this phase, used products or materials are retrieved from the customer. Product commercial returns and recalls, acquisition of defective or damaged goods, waste stream are among the activities for product retrieval from the customer. Product acquisition is the most important phase for a profitable reverse supply chain [16].

Another important activity for reverse supply chains is inspection. Since customers return the sold products for several different reasons, inspection plays an important role before going further in the process. Inspection process include activities, such as disassembling, eye-inspection, testing, sorting and rating of the product [16, 20]. Finally, to increase the value obtained from the returned product, most appropriate disposition alternative should be selected.

Prahinski and Kocabaşoğlu (2006) proposed four different product recovery strategies which are direct reuse, product upgrade, materials recovery and waste management [17]. Reconditioning is conducted if it is decided to reuse or upgrade the product. As the returned product is reconditioned, then the next phases of the process are re-distribution and re-sale of the product. Anderson and Brodin (2005) also emphasized the role of the customer in this whole process. Since the customer is the actor who uses and returns the product, he/she determines the quality and the current state and condition of the product [23].

Finally, reverse supply chain management is a holistic and integrated approach to managing waste and reduce the amount of hazardous material. In this respect, this process is very effective in CSR concept and is being adapted by a lot of companies.

6. Discussion and conclusion

Under the strong influence of increasing competition, globalization, communication and information technologies, companies trying to keep their positions in the market and to maintain a sustainable growth are increasingly inclined to apply corporate social responsibility activities and practices.

Corporate Social Responsibility (CSR) can be defined as companies' voluntary integration of social and environmental concerns in their business processes and in their relationships with other companies and stakeholders [8]. As companies successfully adapt social and environmental practices, they can achieve economic benefits by reducing costs, increasing productivity and profits, enhancing corporate image and reputation. However, for supply chains to be successful in terms of CSR, companies, including all suppliers and manufacturers in the chain, need to increase their own awareness and act in a socially and environmentally responsible manner. Moreover, they are obliged to comply with the environmental laws and regulations, to meet national and international standards and to integrate CSR practices in their business processes.

Supply chains are increasingly put under pressure mainly by customers and stakeholders to implement CSR management systems across the chain. All companies throughout the chain are obliged to implement practices and initiate activities on economic, environmental, and social aspects to maintain their sustainability. To transfer and share the CSR responsibility across the chain, companies adapt several practices, such as establishing written supplier requirements, monitoring supplier performance if they meet the requirements and contributing suppliers' awareness on social and environmental issues [8].

Since companies interact very closely and the success of the supply chain depends on the inter-company relationships throughout the chain, it becomes more and more important that all actors in the chain apply CSR principles in their own processes. Thus, collaboration on the CSR matters among the members of the chain is a crucial factor.

In their recent study, Seuring and Muller (2008) proposed four key factors to increase the success of CSR implementation across the supply chains, namely (1) Determining pressures and incentives for CSR applications across supply chains, (2) Identifying and measuring the impact of those applications, (3) Addressing and managing different issues at the supplier-buyer interface, and (4) Managing, implementing, and integrating CSR applications into all business processes of all actors, taking into consideration whole product life cycle [24].

In terms of forward supply chains, from the procurement of raw materials to the delivery of the product to the end-user, companies systematically integrate CSR principles to their business processes and functions, including purchasing, warehousing, storage, packaging, transportation and distribution. In addition, in terms of reverse supply chains, companies also integrate relevant practices from retrieving the product from the customer to the reusage, remanufacturing, recycling and disposal.

As a reflection of successful CSR applications across the supply chains, all companies enhance their reputations in front of the public. And thus, they should integrate social responsibility into their business strategies to assist their customer relationship management. Supply chain managers should adapt relevant CSR strategies to manage their supply chains in a more socially responsible manner to be able to foster their companies' relationship and interactions with the customers and all stakeholders. Adapting CSR focused management strategies will also help companies to develop future markets and customers. However, although the positive financial consequences of CSR applications are proposed in several studies, CSR introduces less quantifiable considerations relating to the natural environment and social issues.

As aforementioned in previous sections, trends towards integration of sustainability concepts into legislations and promulgation of relevant rules, regulations and standards by national and international organizations alter the nature of competition and the business environment in which supply chains operate. These changes force companies across the chains not only address and adapt new strategies, such as reverse supply chain practices, but also adapt their existing processes and procedures and generate new design, production, management and monitoring systems. These applications and modification will help companies to reduce the uncertainty in the business environment.

In this chapter, we try to summarize and present a framework in a holistic approach for addressing the issues, practices and activities for supply chains under the corporate social responsibility concept. We believe that the information presented here will help supply chain managers to better comprehend the importance of CSR applications and how they can implement those in their own areas of responsibility.

However, there is still a certain limitation about the practical uncertainty on the success of CSR applications across the supply chains in different business and cultural contexts. Thus, future research should specifically focus on empirical studies to further contribute on how social

responsibility can be more effectively and efficiently integrated into the functions and the processes of the supply chains.

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References

[1] Bowen, H.R. Social Responsibilities of the Businessman, New York: Harper & Row; 1953.

[2] Carroll, A.B. A Three Dimensional Conceptual Model of Corporate Social Performance. Academy of Management Review 1979, 4(4), 497-505.

[3] Nemli, E. Sürdürülebilir Gelişme: Ekonomi ile Çevre Arasındaki Denge. Sunum, Kalder-Çevre Uzmanlık Grubu, İstanbul; 2005.

[4] Lehtonen, M. The Environmental Social Interface of Sustainable Development: Capabilities, Social Capital, Institutions. Ecological Economics 2004, 49(2), 199-214.

[5] Büyüközkan, G. & Vardaloğlu, Z. Yeşil Tedarik Zinciri Yönetimi. Lojistik Dergisi 2008, 8, 66-73.

[6] Maignan, I., Hillebrand, B., & McAlister, D. Managing Socially Responsible Buying: How to Integrate Non-Economic Criteria into Purchasing Process. European Management Journal 2002, 20(6), 641-648.

[7] Carter, C.R. & Jennings, M.M. Logistics Social Responsibility: An Integrative Framework. Journal of Business Logistics 2002, 23(1), 145-180.

[8] Ciliberti, F., Pontrandolfo, P., & Scozzi, B. Logistics Social Responsibility: Standart Adoption and Practices in Italian Companies. International Journal of Production Economics 2008, 113, 88-106.

[9] Van Hoek, R.I. From Reversed Logistics to Green Supply Chains. Supply Chain Management 1999, 4(3), 129-134.

[10] Kopicki, R., Berg, M.J., Legg, L., Dasappa V., & Maggioni, C. Reuse and Recycling Reverse Logistics Opportunities. Council of Logistics Management, Oak Brooks, IL; 1993.

[11] Srivastava, S.K. Green Supply Chain Management: A State-of-the-Art Literature Review. International Journal of Management Reviews 2007, 9(1), 53-80.

[12] Zhu, Q., Sarkis, J., & Lai, K. Initiatives and Outcomes of Green Supply Chain Management Implementation by Chinese Manufacturers. Journal of Environmental Management 2007, 85, 179-189.

[13] Sarkis, J. A Strategic Framework for Green Supply Chain Management. Journal of Cleaner Production 2003, 11, 397-409.

[14] Feitelson, E. Introducing Environmental Equity Dimensions into the Sustainable Transport Discourse: Issues and Pitfalls. Transportation Research 2002, 7(2), 99-118.

[15] James, K., Fitzpatrick, L., Lewis, H., & Sonneveld, K. Sustainable Packaging System Development. In: L.Filho (Ed.), Handbook of Sustainability Research, Frankfurt, Germany: Peter Lang Scientific Publishing; 2005.

[16] Guide, V. & van Wassenhove, L. The Reverse Supply Chain. Harvard Business Review 2002, 80(2), 25-26.

[17] Prahinski, C. & Kocabaşoğlu, C. Empirical Research Opportunities in Reverse Supply Chain. The International Journal of Management Science 2006, 34, 519-532.

[18] Erol, İ., Nurtanış Velioğlu, M., & Sivrikaya Şerifoğlu, F. AB Uyum Yasalari ve Sürdürülebilir Kalkinma Bağlaminda Tersine Tedarik Zinciri Yönetimi: Türkiye'ye Yönelik Araştirma Firsatlari ve Önerileri. İktisat, İşletme ve Finans 2006, 21, 86-106.

[19] Erol, İ., Nurtanış Velioğlu, M., Sivrikaya Şerifoğlu, F., Büyüközkan, G., Aras, N., Demircan Çakar, N., & Korugan, A. Exploring Reverse Supply Chain Management Practices in Turkey. Supply Chain Management: An International Journal 2010, 15(1), 43-54.

[20] Wei, Y. Reverse Supply Chain Management. Unpublished Masters Thesis, University of Gothenburg; 2011.

[21] Vogt, J., Pienaar, W., & de Wit, P. Business Logistics Management: Theory and Practice. Oxford: Oxford University Press; 2002.

[22] Dyckhoff, H., Lackes, R., & Reese, J. Supply Chain Management and Reverse Logistics. Springer; 2004.

[23] Anderson, H. & Brodin, M.H. The Consumer's Changing Role: The Case of Recycling. Management of Environmental Quality: An International Journal 2005, 16, 77-86.

[24] Seuring, S. & Muller, M. Core Issues in Sustainable Supply Chain Management: A Delphi Study. Business Strategy and the Environment 2008, 17, 455-466.