

THE ROLE OF GREEN PRACTICES IN CONTEXT OF BUILDING RELATIONSHIPS WITH SUPPLIERS

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Abstract

The aim of this article is to identify green practices and to determine their role in the context of building relationships with suppliers. In this case, green practices are defined as all practices related to managing processes of the organization in the way that minimize the environmental impacts.

The research method used in this paper is the review of the existing literature.

Firstly, different types of green practices in the supply chain are identified and characterized. Secondly, the context of building relationships with suppliers is described. Next, the observations and findings are presented. In the end, the conclusions and recommendations for future research are outlined.

The results concern the use of different practices related to minimizing the environmental impacts in the context of building relationships with suppliers and an attempt to determine if there can be established any trend regarding the stated problem.

Keywords: Green practices, supplier relationship, literature review, environmental practices, supply chain

1. INTRODUCTION

Increasing environmental consciousness of customers is constantly gaining the attention of companies. This is more crucial because of the increasing significance of corporate social responsibility and sustainable development. It results in enterprises commitment to the implementation of environmental (green) practices. On the other hand, advancing globalization leads to the growing importance of supply chain integration, that might be achieved e. g. by building relationships with suppliers. In this paper, green practices are discussed in this context.

The aim of this article is to identify green practices used by companies and to determine their role in the context of building relationships with suppliers. Having considered the positive linkage between building relationships with suppliers and supply chain efficiency (Gallear et al. 2012, p. 83) and the fact, that the common denominator of the green practices and building relationships with suppliers is the supply chain, the background of the supply chain must be taken into account.

Green practice in the supply chain can be identified as any action performed across the supply chain inward to the focal company and involving relationships with partners upstream and downstream in order to eliminate or reduce any kind of negative environmental impact (Azevedo et al. 2011, p. 851).

In order to achieve the aim of this paper, the review of existing literature was performed using the following databases: Science Direct, Emerald Insight, Wiley and Springer.

2. GREEN PRACTICES IN SUPPLY CHAIN

GPs in SC are also be identified as practices of green supply chain management (GSCM) (Azevedo et al. 2011, p. 851). However, the question that remains unanswered is: is the use of GPs in CS always consistent with the implementation of GSCM?

There are also similarities between using green practices and introducing Lean concept to the supply chain (Govindan 2015c, p. 29). The main common features of Lean and „Green“ are the following: focus on waste reduction, waste reduction techniques, order lead time reduction and supply chain relationships (Dües et al. 2013, p. 97).

However, there are certain aspects of the Lean concept, which are in clear contradiction with reducing environmental impacts. It includes practices of Just-In-Time, such as frequent stock replenishment, which may result in higher levels of carbon dioxide emissions (Dües et al. 2013, p. 94). This calls into question the compatibility of using green practices and implementing the principles of the Lean concept in the supply chain.

Due to the above, the focus of this article is related to the area of green practices in the supply chain regardless of a possible background concept, such as GSCM or Green Lean.

3. RESEARCH METHODOLOGY

In order to achieve the aim of this paper, the review of literature related to the discussed topic was performed in December of 2018, using the following scientific databases: Science Direct, Emerald Insight, Wiley, Springer and Taylor and Francis. The articles from years 2009-2018 were taken into account. The following keywords were used:

- „green practices“ AND „cooperation with suppliers“ AND „supply chain“.

The results are presented in **Table 1**.

Table 1 Results of the literature review [own study]

Database	Number of records for the keywords (years 2009-2018)
Emerald Insight	16
Science Direct	33
Springer	11
Taylor & Francis	5
Wiley	5

The analysis of the chosen sources was performed using the snowballing approach was used. The criteria used for the evaluation of the results were the following:

- compliance of the use of the term „green practice“ by a specific scholar with the definition adopted in this paper;
- the use of green practices in cooperation with suppliers.

It should be pointed out, that the results include the areas of the green practices performed in cooperation with suppliers as they were identified and described by the particular scholars. Therefore, the results do not contain any specific tools or activities, but areas of operation as described in the adopted definition of the green practice.

4. GREEN PRACTICES IN COOPERATION WITH SUPPLIERS

GPs in SC can be divided due to the parties involved. Azevedo et al. (2011, p. 856) pointed out the difference between green practices performed in cooperation with suppliers (upstream green practices), green practices performed in the company without cooperation with any outside party and green practices performed in cooperation with clients (downstream green practices). Due to their positioning in the supply chain, upstream

green practices can be related to building relationships with suppliers. Proposed classification of green practices performed in cooperation with suppliers is presented in **Table 2**.

Table 2 Classification of green practices performed in cooperation with suppliers (upstream green practices) [own study].

Green practices performed in cooperation with suppliers	Authors
Environmental collaboration with suppliers	Azevedo et al. (2011), Green et al. (2012a), Govindan et al. (2015a), Grekova et al. (2017)
Environmental friendly practices in purchasing/green purchasing practices/green procurement practices	Azevedo et al. (2011), Green et al. (2012a), Chin et al. (2015), Govindan et al. (2015a), de Sousa Jabbour et al. (2015)
Green design/Eco-design/Working with designers and suppliers to reduce and eliminate product environmental impact	Azevedo et al. (2011), Govindan et al. (2015a), Schmidt et al. (2017)
Green logistics practices	Chin et al. (2015), Schmidt et al. (2017)
Reversed logistics practices	Azevedo et al. (2011), Chin et al. (2015), Govindan et al. (2015a)

Schmidt et al. (2017, p. 15) support the positive relationship between performing GPs in SC and market performance and between GPs in SC a financial performance. Govindan et al. (2015a, p. 7217) support the positive relationship between GPS in SC and environmental performance. Moreover, Zhu et al. (2013, p. 113) support the positive relationship between green practices, operational performance, environmental performance and economic performance. Notwithstanding, there is no distinction between individual GP in CSs in those studies. Furthermore, the issue of the relationship between the use of GPs in CS and environmental and operational performance might be seen so far as inconclusive (de Sousa Jabbour et al. 2015, p. 368).

4.1. Overview of green practices performed in cooperation with suppliers

This subchapter contains an overview of green practices performed in cooperation with suppliers (upstream green practices). Definitions given below were developed taking into account works of cited scholars.

Environmental collaboration with suppliers - an interaction between organizations in the supply chain relating to joint environmental planning and shared environmental know-how or knowledge with direct involvement of suppliers (Azevedo et al. 2011, p. 856; Green et al. 2012a, p. 293; Grekova et al. 2017, p. 1863);

Environmental friendly practices in purchasing/green purchasing practices/green procurement practices - purchasing practices, such as supplier selection based on their environmental performance, preparation of design instructions for suppliers and introducing supplier development programs, performed in order to avoid buying in waste, to reduce disposal and liability costs, to develop products that are environmentally sustainable and to improve the resource conservation and public image of the organization (Azevedo et al. 2011, p. 856; Green et al. 2012a, p. 293, Chin et al. 2015, p. 697 Govindan et al. 2015a, p. 7210; de Sousa Jabbour et al. 2015, p. 368);

Green design/Eco-design/Working with designers and suppliers to reduce and eliminate product environmental impact - design collaboration with key suppliers regarding product life-cycle analysis, environmental risk management, pollution control, waste management, resource conservation, energy and material requirements for manufacturing, usage, secondary usage, reuse, recycle and recovery of components in order to reduce the business waste and environmental cost and to avoid or reduce the use of hazardous products within the manufacturing process without affecting the performance of material requirements (Azevedo et al. 2011, p. 857; Govindan et al. 2015a, p. 7209; de Sousa Jabbour et al. 2015, p. 368);

Green logistics practices - practices, such as delivering goods directly to the user site, using alternative fuel vehicles, grouping orders together, rather than in smaller batches and investing in vehicles that are designed to reduce environmental impacts (Chin et al. 2015, pp. 697-698);

Reversed logistics practices - practices involving product recovery, collection and transportation of recovered products and packaging, recycling, reusing, remanufacturing and disposal in collaboration with all supply chain partners in order to minimize the business waste, increase total environmental gain, maximize the value of the returning items and minimize the reverse logistics cost (Azevedo et al. 2011, p. 857; Chin et al. 2015, pp. 697-698; Govindan et al. 2015a, p. 7209).

Diabat et al. (2013, p. 957) show that green design and reverse logistics are among practices that have the greatest effect on GSCM performance - including all previously defined green practices in the supply chain. The study by Green et al. (2012a, p. 299) supports the positive relationship between green purchasing, being one of crucial GPs in SC and economic performance. Another study by Green et al. (2012b, p. 199) supports the positive relationship between internal environmental management and environmental collaboration with suppliers, between green information systems and environmental collaboration with suppliers, between environmental collaboration with suppliers and environmental monitoring of suppliers and between environmental monitoring of suppliers and environmental performance. Furthermore, Grekova et al. (2017, p. 1868) support the positive relationship between environmental collaboration with suppliers and cost savings and between environmental collaboration with suppliers and market gains. Moreover, Albino et al. (2012, p. 309) partially support the positive relationship between environmental collaboration with suppliers and environmental performance. Above considerations support the significance of the specific green practices in supplier relationship management.

5. GREEN PRACTICES IN BUILDING RELATIONSHIPS WITH SUPPLIERS

Building relationships with suppliers is related to supplier relationship management, which can be divided into the following operational sub-processes (Lambert et al. 2012, p. 341): supplier differentiation, preparation of the supplier management team, internal supplier review, identification of the opportunities with the suppliers, product/service development agreement and communication plan, product/service agreement implementation and supplier performance measurement and supplier cost/profitability reports generation.

Considering the above, internal supplier review and supplier performance measurement clearly indicate a relationship with such green purchasing practices as supplier selection, assessment and evaluation taking into account environmental (green) performance. Supplier selection taking into account the use of green practices was discussed among others by Kannan et al. (2014, p. 432). Furthermore, green criteria in supplier selection and evaluation were studied among others by Hashemi et al. (2015, p. 178), Razaeei et al. (2016, p. 577) and Govindan et al. (2015b, p. 66).

Moreover, the connection between upstream green practices and building relationships with suppliers was highlighted among others by Albino et al. (2012, p. 306), Green et al. (2012b, p. 191), Zhu et al. (2013, p. 109) and Luthra et al. (2013, p. 937). Moreover, Fu et al. (2012, p. 358) pointed out the relevance of green supplier development programs in relationships with them.

One of the major problems related to green practices in building relationships with suppliers might be the matter of coercion regarding the use of green practices by the suppliers (Caniëls et al. 2013, p. 134). It concerns suppliers in short-term relationships with buyers. Instead of providing the basis for further development of cooperation, suppliers are treating green practices resulting from the buyer's pressure as the necessary evil. However, it does not mean that building long-term relationships with suppliers will change this situation. Caniëls et al. (2013, p. 139) show, that there is no positive relationship between long-term relationships with suppliers and their participation in green practices. Furthermore, Mitra et al. (2014, p. 2098)

support the positive relationship between a collaborative relationship with suppliers and eco-design and green logistics and between eco-design and green logistics and economic performance.

6. OBSERVATIONS AND FINDINGS

There were following green practices identified, based on the literature review: environmental collaboration with suppliers, green purchasing, green design, green logistics and reverse logistics. Given the classification of upstream green practices, it might exhaust the possibilities of environmental cooperation with suppliers. Hence the increasing importance of GSCM, they can play a major role in greening the supply chains.

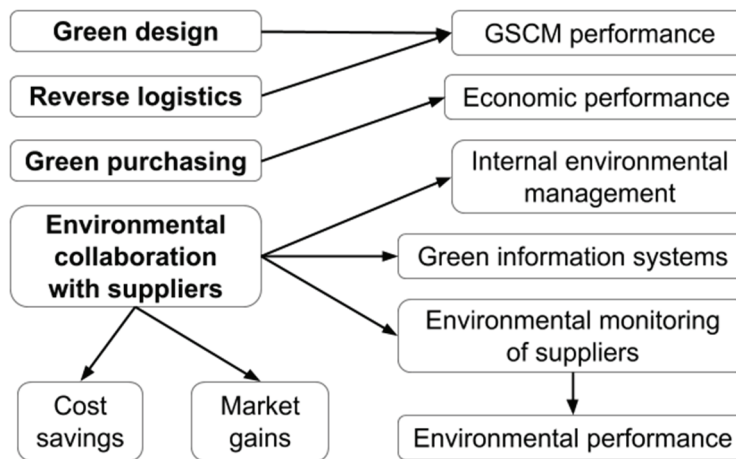


Figure 1 Classification of green practices performed in cooperation with suppliers (upstream green practices) [own study].

The positive relationships between upstream green practices and economic performance, environmental performance, cost savings and market gains are confirmed in described studies - see **Figure 1**. The connection between upstream green practices and building relationships with suppliers was also highlighted - see **Figure 2**.

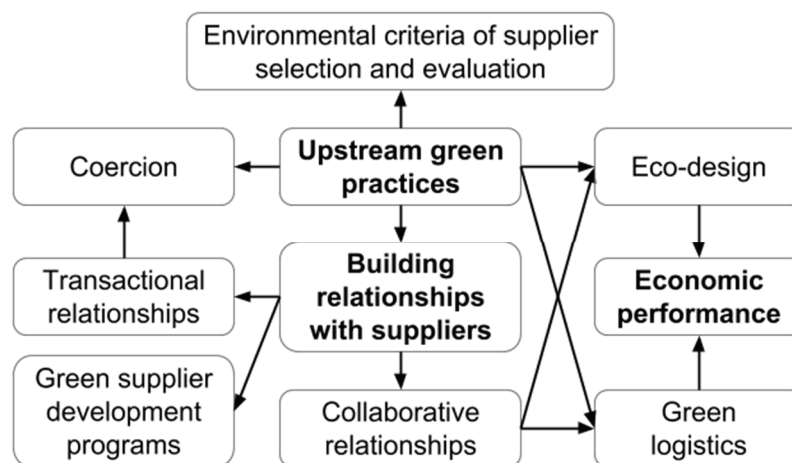


Figure 2 Classification of green practices performed in cooperation with suppliers (upstream green practices) [own study].

There are premises of possible significant role of the green practices in building relationships with suppliers but there is a need of complex empirical research focusing on different upstream green practices and their connection with building relationships with suppliers taking into account the matter of coercion. In order to do that, given the classification of upstream green practices might be further developed due to the general meaning of such green practices, as environmental collaboration with suppliers or green purchasing.

7. CONCLUSION

Taking into consideration the aim of this paper, the role of green practices in building relationships with suppliers can be crucial and may vary on the type of the green practice but the issue clearly requires the empirical research, as described above.

One of the recommendations for future research is the empirical study of relationships between specific upstream green practices and building relationships with suppliers. It might be an essential argument both in using green practices and building relationships with suppliers. Another issue is the evaluation of specific green practices and the balance of related costs and benefits. It also remains to be determined using the empirical research.

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