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The Role of Relations with Suppliers in the Creation of Sustainable Supply Chain – Practical Examples

Abstract: There are many factors that may have an influence on the method by which a supply chain is managed and the way the relationships among all its links are developed. Sustainability, as a complex and challenging concept, affects the approach to establishing and maintaining relations, extending their scope and scale. Next to the traditional understanding of relations in a supply chain, additional goals emerge, resulting in both positive effects and challenges which its different links need to face. The concept of sustainability means that a business organisation takes on shared responsibility for the whole supply chain to achieve its long-term goals. Relationships are an important factor affecting the ability to create and manage a sustainable supply chain. Relationship Management seems to be the basis for the creation of a stable and continuous chain which presents characteristics of maturity. The aim of the article is to introduce the issue of maturity which determines the degree of achievement of sustainable development objectives in a supply chain. A case study based on the author's own research will be presented.

Keywords: sustainability, supply chain, relationship management, sustainable supply chain, maturity, maturity model

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1. Introduction

There are two different concepts which help to understand and manage social and environmental aspects of business activity: sustainable development and corporate social responsibility. They were invented independently, but nowadays, especially among business organisations, both are treated as methods to improve performance and build a positive image of business in society. They are even used interchangeably. However, it is worth knowing their historical roots. Sustainable development provides the macro-level framework, including decisions and policies proposed by national governments and international organisations such as the United Nations. It builds shared responsibility for all to adopt social and environmental goals and to translate them into a particular company's strategy. The aim of responsible business conduct is to support the implementation of sustainable development at the micro level. It is based on the integration of the following three dimensions: economic, social and environmental (Elkington, 1998). The main assumption of social responsibility provides a clue how to understand the essence of relationships with key stakeholders, including suppliers. There are different concepts which have evolved on the basis of CSR and sustainable development linked to a supply chain such as: Responsible Supply Chain, Sustainable Supply Chain (SSC), Green Supply Chain or Closed Loop Supply Chain. The focal point of all the concepts is the relationship between the supplier and the buyer and the way of management of the whole supply chain.

Suppliers are responsible for the delivery of raw materials and products for manufacturing or service processes, which strongly determines their responsibilities. They are an integral part of the external environment, therefore for socially responsible companies, it is important to know their needs, expectations, plans and strategies to be able to respond to them effectively. The scale of cooperation and number of suppliers to manage is sometimes enormous, which makes their monitoring and evaluation a very challenging process. From this perspective, suppliers are risk bearers (Clarkson, 1995). Moreover as Buysse and Verbeke suggests supplier are these stakeholders who have greatest impact on environmental strategy (its success or failure), (Buysse, Verbeke, 2003) implemented within a supply chain. They share the responsibility of final products, so it is highly justified to treat them as key stakeholders and pay attention to their way of operating and business plan, as well as the non-economic dimension of their activities.

To recapitulate the scale and scope of their role, the attention should be paid to the following points:

- 1) suppliers are part of the business environment with their own needs and expectations that should be recognised,
- 2) their strategies and plans influence business goals of the recipients,
- 3) suppliers are bearers of economic and non-economic risk,

- 4) they co-create the trust and credibility of the organisation and the whole supply chain,
- 5) they have an impact on the reputation and competitive advantage,
- 6) suppliers affect the value of the final product,
- 7) they support/hinder the achievement of environmental goals of the whole supply chain.

A coherent plan for building and sustaining a relationship with this kind of strategic partner is needed. The main goal of the paper is to provide an overview of the idea of relationship management, including the issue of sustainability in the light of maturity. Short case studies will be presented to illustrate theoretical considerations.

2. Relationship Management as an important element of building Sustainable Supply Chain Maturity

2.1. Supplier Relationship Management

Partnership relations in a supply chain can be treated as a strategic goal of modern corporations (Ocicka, Raźniewska, 2015). Development of relationships between organisations depends on many factors from the past, present and future. It means that relationships are behind each business process and can shape its final result (Hakansson, Ford, 2002: 134). The concept of Supplier Relationship Management (SRM) aims at explaining the issue of building and maintaining relations in a network. It could be defined as “the process of engaging in activities of setting up, developing, stabilising and dissolving relationships with in-suppliers as well as the observation of out-suppliers to create and enhance value within relationships” (Moeller, Fassnacht, Klose, 2006: 73).

From an economic point of view, supplier relationship management is the process of conditioning a competitive advantage (Croxtton et al., 2001). According to Moeller, Fassnacht, Klose, the greater the strategic importance of the supplier and the higher the relationship contribution, the more complex the management development and real value enhancer can be expected (Moeller, Fassnacht, Klose, 2006: 78). Supplier relationship management defines the way how a company interacts with its suppliers and fosters ties which result in mutual satisfaction (Croxtton et al., 2001). It covers practices of supplier selection, evaluation and development (Schiele, 2007). Similarly to customer relationship management, it allows to differentiate purchasing strategies and design the process of trust building. SRM is also about cost optimisation.

Supplier relationships play a role in shaping a sustainable supply chain. They may provide a key way for businesses to influence the sustainability and adap-

tation of ethical practices among network partners. It can be achieved by a set of relationship strategies, e.g.: information sharing and gathering, cross functional teams, incentives and financial support, training programmes, supplier certification, awareness programmes or supplier education (Kumar, Rahman, 2015: 119–120). In practice, improving supplier relationship management helps to adopt practices and initiatives (e.g.: the code of conduct, supplier development strategy, sustainable procurement training) oriented at social, environmental and economic results of the whole supply chain (Lepelt et al., 2013: 100).

2.2. Maturity of Sustainable Supply Chain

The idea of maturity in a supply chain is quite well described in the literature. It could be understood as: “engagement in extensive collaboration across wide arc of supply chain partners in order to implement appropriate integrative practices” (Done, 2011: 3). There are many different characteristics of maturity in a supply chain, e.g.:

- 1) supply chain costs, partnership and collaboration, responsiveness, risk management, information share, resources share, regulation and incentives in the chain, and resources used in the chain (Daozhi et al., 2006 in Frederico, 2017);
- 2) customer focus, customer satisfaction, planning, visibility and on-demand orientation, strategic focus, partnership and collaboration, responsiveness, formalisation and structuration of processes, integration of processes, information technology and control systems, information share and performance measurement (Oliveira, 2009 in Frederico 2017);
- 3) customer relationship management, performance measurement systems, inventory management, collaboration, process management, information systems and technology, integration of processes, risk and project management, human resources management (Reyes, Giaghetti, 2010 in Frederico, 2017).

It is a broad concept that tries to justify the way of reaching business goals and the method of supply chain management, including the most strategic aspects. Moreover, the idea of maturity appears also in relation to the concept of sustainability.

An exemplary proposition is, for example, a stage model of supply chain development. In this approach, the highest level of maturity – Extended and Sustainability Leadership – means that “processes are systematically managed through continuous improvement. There is full supply chain collaboration embracing sustainability leadership role.” (Reefke, Sundaram, Ahmed, 2010: 313 and next).

Baumgartner and Ebner in their paper present maturity linked to sustainability strategies: introverted (risk mitigation strategy), extroverted (legitimisation strategy), conservative (efficiency strategy), and visionary (holistic sustainability strategy). They identify four levels of maturity: beginning, elementary, satisfying, and sophisticated/outstanding. There is a set of factors analysed in a single organisa-

tion to assess the current position of a given company (Baumgartner, Ebner, 2010: 81 and next). The proposed model is complex and it could be very complicated to assess the current level of maturity for the whole supply chain.

Another proposition of maturity regarding responsible supply chain practices draws attention to three main aspects: the management system, methods to increase supply chain visibility and actions to improve social, environmental or ethical performance. This proposition distinguishes two main types of supply chains: lagging and leading. In each category, there are subcategories identified to show the spectrum of maturity understood as “the degree of formality and comprehensiveness of business practices” (Porteous et al., 2012: 2). The authors assume that a leading supply chain has an integrated approach to sustainability (at the level of scorecard, communication, performance, projects, etc.) (Porteous et al., 2012: 3). There is also the proposition of Sustainable Supply Chain Management Capability Maturity Framework. The focal concepts for the model are: Resource-Based Theory of the Firm, business process orientation, maturity and sustainability. Capability in relation to a supply chain is “an organisation’s capacity to deploy its resources exercised through organisational processes involved in sustainability practices”. It includes four components: six capability types, four levels of maturity associated with each capability type and four categories of organisations (Unaware, Unprepared, Committed, Advanced) which differ in the status of their respective maturity levels of Sustainable Supply Chain Management capabilities (Kurnia et al., 2004: 4 and next). Moreover, there are also commercial models of sustainable supply chain management maturity by Terra Infirma, the GAIA Supply Chain Sustainability Maturity Model by LMI or the Sustainability Management Maturity Model: Version 2.0 by Triplepundit.

3. Practical examples

The issue of maturity of sustainable supply chain could be understood as willingness to integrate the social and environmental management system into business operations, plans and strategies in a supply chain. The maturity is the level of engagement of the whole network in achieving sustainability goals and the level of understanding of risks and opportunities which can affect supply chains and their ability to sustain in the future. It requires continuous improvement and can be developed thanks to the available initiatives, methods and tools. It is also dependent on the quality of relations maintaining. The proposed model is composed of five phases of maturity and six categories: knowledge, impact, social risk, environmental risk, cooperation and communication¹. A company that is responsible for designing and managing a supply chain makes a self-assessment ranging from

¹ The idea of the model and theoretical approach was presented in: Rudnicka, 2016; Rudnicka, 2017.

1 point (an immature approach, many sustainability gaps, unstructured processes and incoherent goals) to 5 points (the highest level of sustainability approach in the supply chain at the moment of research) in each category.

There are five phases of maturity proposed: starting, aware, aspiring, sustainable business leaders, and masters of sustainability (Table 1).

Table 1. Levels of maturity in sustainable supply chain management

Level of maturity	Description
Starting	There are organisations that do not manage their supply chains. They are only focused on short-term relations with suppliers. Non-compliance actions (social/environmental) appear. There is no detailed knowledge about processes and relations in their supply chain. The issue of sustainability is not taken into consideration as an important element of their business strategy.
Aware	Organisations are aware of social and environmental aspects of their supply chains but they are characterised by a reactive attitude. They identify potential risks but have no strategy how to manage them.
Aspiring	Organisations know about sustainability but it is not their priority. They manage social and environmental risks and include a non-economic aspect into their supply chain management system.
Sustainable business leaders	Processes in a supply chain are known, managed and controlled. There is a set of measures to assess the level of achievement of non-economic KPIs. Organisations identify and manage their risks. The impact on processes is huge so organisations can influence the way suppliers behave. Sustainability is the main orientation of their development.
Masters of sustainability	The most sustainable organisations in the industry. Sustainability is an element of their business models and the main factor of supply chain management. They manage sustainability issues but also communicate about them. They are independently assessed and certified. They educate their partners in supply chains. New projects and goals are set to improve KPIs.

Source: own proposition

The differentiation between the levels is made on the basis of points a given company got in the whole self-analysis. If the company collects only 1 point in 4 to 6 categories, it is called a starting company, if it collects 2 points in 4 to 6 categories, it is called an aware company, etc. In the situation when an organisation gets the same number of points in 3 categories, it is qualified to the lower level of maturity. There is also the possibility of gaining very dispersed results between more than two levels. It means that the management system is not coherent and requires a more careful approach in the neglected areas.

The results presented below are empirical findings from a theoretical conceptual model. There are three different companies described:

Company A. A service company in the construction industry.

Company B. Production of building materials.

Company C. Manufacture of transport equipment.

All of the companies are known at the national level. Interviews were conducted in the second half of 2016 during personal meetings with business representatives. The table below shows the main results.

Table 2. Research results for the surveyed companies

Assessed area	Company A	Company B	Company C
Knowl- edge	2	4	4
	Processes in the life cycle are identified. The knowledge about suppliers and their partners in terms of social and environmental aspects is limited.	The whole life cycle is known. Processes are transparent. Social and environmental aspects are included in the maps of processes.	The whole life cycle is known. Processes are transparent. Social and environmental aspects are included in the maps of processes.
Impact	4	5	5
	A strong position in the supply chain, an impact on social and environmental aspects.	A huge impact on the whole supply chain (including customers). The organisation can decide about the policy and direction of further development.	A huge impact on the whole supply chain (including customers). The organisation can decide about the policy and direction of further development.
Social risk	2	4	2
	Identified.	Identified, managed and evaluated.	Identified.
Environ- mental risk	1	5	2
	Not identified.	Identified, managed, evaluated, independent assessment, certified.	Identified.
Coopera- tion	3	4	3
	Clear business rules established. Cooperation aims at a long-term relationship built on trust.	Regular meetings with suppliers, education and training, ethical principles.	Clear business rules established. Cooperation aims at a long-term relationship built on trust.
Commu- nication	3	4	2
	A structured system of communication, social dialogue with suppliers.	A good system of communication in the whole supply chain, a whistle-blowing policy, and a special channel to communicate about unethical cases.	Bilateral communication limited to official agreements.

Source: own research

As seen in the above-presented table, there were three different approaches to sustainable supply chain management identified. Company A has an incoherent managerial system. Company B is a sustainable business leader. The last organisa-

tion, Company C, is aware of some processes related to sustainability but the concept cannot be treated as part of its business strategy. Company B has a stable strategy in which elements related to sustainability play a huge role. This is reflected in the process of building and maintaining relations with suppliers. The company builds long-lasting bonds based on trust. It involves suppliers in the planning process and provides an opportunity to share their opinions about possible improvements of products or operational procedures. It also has independently verified environmental aspects and takes care of minimising social risk in the whole supply chain. The other two organisations are less developed in terms of sustainability. Some changes can be implemented to make the managerial system oriented more towards sustainability (Table 3).

Table 3. Propositions of possible improvements in supply chains of the researched companies

Company	Possible actions for supply chain management
Company A	<ul style="list-style-type: none"> – criteria of choosing suppliers including social and environmental aspects – a monitoring system oriented towards social and environmental aspects as risks during the cooperation – a sustainability policy known by the whole network – working on more sustainable products (from the initial stage) – implementation of managerial tools, e.g.: the code of conduct or suppliers audits
Company B	<ul style="list-style-type: none"> – clear communication about sustainability goals and achievement in the whole supply chain (including customers) – one coherent sustainability strategy/plan for continuous improvement – implementation of KPIs at the level of processes in a supply chain
Company C	<ul style="list-style-type: none"> – including social and environmental aspects at the level of product planning and improving – risk management plans – improvement of relations with suppliers (a common business strategy, social dialogue, common business projects) – communication with customers about benefits of sustainability (changes at the level of customer relations and more offers that meet the sustainability criteria)

Source: own elaboration

There are different approaches to managing sustainability in a supply chain. The presented companies had various levels of understanding of the issue of supply chain sustainability. Company B seems to have a mature approach to social and environmental aspects of supply chain. It has procedures and clear plans how to integrate its business with non-economic expectations but this does not mean that it has achieved the mastery. The issue of sustainability needs continuous improvement: new processes, projects, initiatives and goals. A great deal of effort should be made to maintain the current level and to exploit market opportunities to develop the company's ability to design a more mature sustainable supply chain. The other two companies need to develop a more coherent approach to sustaina-

bility. It is possible by employing a set of tools and methods used in different links of supply chain. The attention should be also drawn to customers who decide about the final products offered on the market. The more knowledge about sustainability among customers, the more precise the expectations for the whole supply chain are and the easier the implementation of sustainability standards is.

4. Conclusions

The paper presents empirical results from a theoretical model of sustainable supply chain maturity. It is assumed that elements covering the issue of relationship management support the understanding of the idea of supply chain maturity. There are many different factors that influence relations in a supply chain: an approach to cooperation, a communication method, risk management or a win-win strategy that have much in common with maturity. Additionally, the relationship is crucial for building the stability of supply chain. The limitation of the relationship to just a single-transaction perspective, without sharing goals and expectations, makes it difficult, or even impossible, to create mature chains that are oriented towards achieving sustainability goals. A reciprocal connection between the partner relationship and the possibility of designing and managing sustainable supply chains seems clear. The partner relationship means willingness to undertake topics which are important for the whole network and determine the opportunity to obtain common benefits.

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Rola relacji z dostawcami w projektowaniu zrównoważonego łańcucha dostaw. Przykłady praktyczne

Streszczenie: Sposób zarządzania współczesnymi łańcuchami dostaw oraz kształtowania relacji uzależniony jest od wielu czynników. Koncepcja zrównoważonego rozwoju wpływa na sposób nawiązywania i utrzymywania tych relacji. Skutkuje to zarówno pozytywnymi rezultatami, jak i wyzwaniem, którym muszą sprostać przedsiębiorstwa. Zrównoważony rozwój oznacza dla biznesu wzięcie odpowiedzialności za wszystkie procesy i decyzje podejmowane w całym łańcuchu dostaw, aby osiągnąć długookresowe cele przedsiębiorstwa projektującego dany łańcuch. Istotnym czynnikiem, mającym wpływ na możliwość tworzenia i zarządzania zrównoważonym łańcuchem dostaw, są relacje. Zarządzanie relacjami wydaje się podstawą tworzenia stabilnego i ciągłego łańcucha, który przejawia cechy dojrzałości. Celem artykułu jest przybliżenie problematyki dojrzałości jako cechy warunkowanej relacjami, która determinuje stopień osiągnięcia założeń zrównoważonego rozwoju w łańcuchu dostaw. Całość rozważań zilustrowana została studium przypadku opracowanym na podstawie badań własnych autorki.

Słowa kluczowe: zrównoważony rozwój, łańcuch dostaw, zarządzanie relacjami, zrównoważony łańcuch dostaw, dojrzałość, model dojrzałości

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