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Supply Chain Management and Sustainable Development in Regional Context

INTRODUCTION

The growing importance of logistics and its development (both theoretical and practical) are closely linked to the globalization of the economy. Logistics activities are increasingly international in scope which requires companies to ensure an appropriately high level of logistics strategies. This requires a high integration of companies. Logistics costs, customer service levels, management of inventory, quality control are just some of the factors that have a major impact on the development of logistics. And modern logistics is analyzed from supply chain point of view.

SUPPLY CHAIN MANAGEMENT (SCM)

Through a process known as supply chain management, many companies integrate their infrastructure, functions and activities involved in the production of goods and services from suppliers to consumers [Russell, Taylor, 1998, p. 440].

The concept of integrated supply chains develops rapidly. Supply chain is understood as the net of flows from the first tier of suppliers to final consumers. The supply chain can be considered a value chain, as suppliers, manufacturers and customers work together in order to achieve greater value. But companies rarely think in terms of total value of the supply chain. Hence the small scope of cooperation and relatively few joint activities. The creation of integrated supply chains is still a problem because of lack of uniform rules of cooperation.

Non-integrated supply chains can cause problems for customers such as: excessive inventory, incomplete deliveries, delays. Suppliers can also experience difficulties with the uncertainty of orders and lack of adequate information on the activities and needs of customers. This results in a generally lower level of customer service, higher costs and lower profits. Integrated supply chains are characterized by strong ties between all the organizations creating these chains. This facilitates the flow of information through the chain and thus improves the timeliness and quality of decisions [Campbell, Sankaran, 2005, p. 3325].

Supply chain management is the process of decision making, leading to the integration of its participants and coordination of products and information flows. As earlier stated, the integration extends the company and includes participants in the channel. It also encompasses many different business processes – not only logistics. Companies must be willing to work together, but it is not sufficient to ensure integration. Sharing of resources and joint investments may also be required. Effective integration requires mutual understanding, common vision, sharing of resources and achievement of collective objectives [Stank, Keller, Daugherty, 2001, p. 31]. Main tasks of SCM include, among others:

- Ensuring optimum product quality,
- Minimizing total costs,
- Acquiring and maintaining reliable and competitive suppliers,
- Minimizing stock levels and smoothing flow of raw materials,
- Cooperation and integration with other areas of the company.

THE IMPORTANCE OF SUSTAINABLE DEVELOPMENT IN SUPPLY CHAINS

Sustainability can be viewed as taking into consideration economic, social and environmental dimension (fig. 1). Sustainable development is often described as development meeting the needs of present without compromising the ability of future generations to meet their own needs [*World Commission...*, 1987, p. 43]. Thus sustainable development encompasses a number of areas and highlights sustainability as the idea of environmental, economic and social progress but within the limits of the world's natural resources.

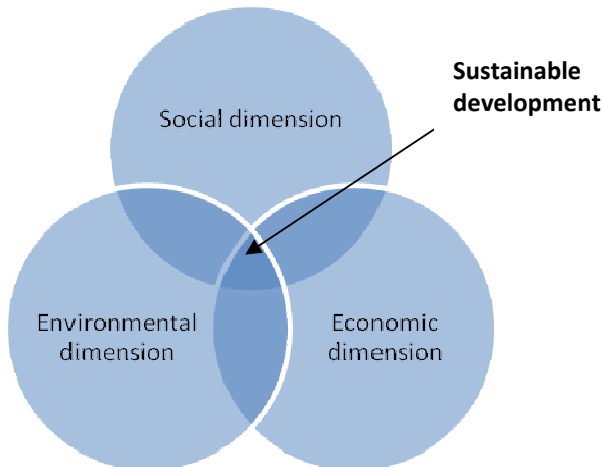


Figure 1. Sustainable development

Many businesses and their trading partners currently restructure their functions and processes into more sustainable shapes and forms. It even seems essential and compulsory for companies to integrate sustainability issues in their SCM. One of the reasons is growing interest in Corporate Social Responsibility. Social, environmental and economic factors must be taken into account and added to more usual set of performance criteria of supply chains (quality, cost, flexibility). Factors such as purchasing, manufacturing, and distribution with the emphasis on environment emerge as common themes in SCM. The new term Sustainable Supply Chain Management (SSCM) was coined to stress this change [Carter, Rogers, 2008, p. 360–387]. Carter and Rogers define Sustainable Supply Chain Management (SSCM) as “the strategic, transparent integration and achievement of an organization's social, environmental and economic goals in the systemic coordination of key inter-organizational business processes for improving the long-term economic performance of the individual and its supply chain”.

External pressures, especially regulatory ones, encourage companies to adopt SSCM practices. But penalties and fines for companies that do not respect regulations are a “negative incentive”. Positive influence can be created as a proactive engagement in sustainable practices when companies see the benefits of environmental strategies. These can be various environmental programs, grants, partnerships, etc., especially with suppliers.

Environmental and social problems present in the entire supply chain must be analyzed and monitored by companies. For example, companies such as Nike, Levi Strauss, Benetton, or Adidas have been blamed in recent years for problems occurring during the production of their clothing [Searing, Muller, 2008, p. 1699–1710].

Procter&Gamble views suppliers as critical partners in improving the environmental sustainability of P&G’s end-to-end supply chain. The Supply Chain Environmental Sustainability Scorecard was designed by the company to track improvement on key partner-related environmental sustainability measures.

Since 2003, Ford Motor Company requires its suppliers to have ISO 14001 certification and more than 5000 collaborators have been affected by this decision. Companies such as Adidas and Sony have also taken steps toward increased sustainability with their suppliers.

Wal-Mart by creating a Sustainability Index Consortium hopes to create a single repository of data for evaluating the sustainability of products – not how long a product will last before it degrades but rather how close to “carbon neutrality” that product comes. The database will collect hard data such as GHG emissions, solid waste, water use, as well as subjective information such as “ethical production” and “social compliance [Blanchard, 2010, p. 206]”.

But these are only several examples of big multinational corporations engaged in such practices. Most of the companies (especially smaller ones) ex-

perience difficulties with their sustainable business development practices. And many focus only on Public Relations side of their action not the real improvements [Ageron et al., 2011].

According to a survey conducted by analyst firm Manufacturing Insights, the main reason why companies get involved in green initiatives is to comply with government and/or other regulations (42 percent of responses). Twenty-one percent say they've gotten into green projects because of a mandate and/or pressure from customers and consumers. The third reason (20%) is the opportunity to reduce costs [Blanchard, 2010, p. 204].

HOW TO TAKE A SUSTAINABLE SUPPLY CHAIN MANAGEMENT APPROACH

Today, supply chain managers must think beyond short-term financial considerations and build relationships that can deliver long-term value along the entire supply chain is a new challenge. In „The 2011 Global Supply Chain Agenda” survey presented by Capgemini Consulting 35% out of 300 surveyed companies started their sustainability program. But for many firms it is difficult to start a new project like this. Walker and Brammer as well as Rajesh suggest that before implementing sustainable strategies in the supply chain members must ensure the following [Gopalakrishnan et al., 2012]:

- Understand the concept of sustainability, government and social policies and legislations.
- Ensure they have the potential to implement sustainability in terms of cost, quality and culture.
- Take into consideration financial capabilities, since social/green production methods are expensive at adoption.
- Develop appropriate organizational culture and avoidance of resistance to change.
- Find key sustainable suppliers who support the principle of environmentally and socially friendly systems.

These factors influence implementation of sustainability. More detailed way is presented by Gopalakrishnan who enlisted 10 essentialities of implementing sustainability in supply chains (fig. 2).

This model presents a very precise list of elements that must be included while adopting sustainability but most of companies need a set of general recommendations helping them to start the process. It seems that a problem can be to separate action which will become a basis to create SSCM. The crucial issue is integration and joint cooperation with suppliers. Upstream partners are frequently the most concerned with environmental preoccupations. Incorporating sustainability issues into the company's sourcing and purchasing practices is the most important issue today and triggers true SSCM with other chain members.



Figure 2. Essentialities of supply chain management

Source: [Gopalakrishnan et al., 2012].

Although companies have been reducing their supplier base for years and tried to integrate their processes, still their efforts are focused on financial aspects. Their attention is paid to improving flow of information and materials, minimization of inventory, forecasting, etc. When planning optimization activities of this part of a chain (supplier – local firm) social and environmental aspects are very seldom taken into consideration. Another thing that might be cumbersome for companies is measurement of effects of implemented actions – what is the outcome of sustainable development activities. Stemming from these

consideration the following steps must be taken by companies wishing to achieve sustainability in their supply chains:

- Develop and communicate the criteria for cooperation with suppliers (economic, social, environmental) in the form of relevant documents, codes, criteria,
- Conduct audits of suppliers and in case of problems ways of dealing with them,
- Educate suppliers on issues related to sustainable development,
- Introduce system for monitoring economic, social and environmental aspects of a supply chain (carbon footprint),
- Introduce standards and norms (quality standards, CSR),
- Create channels of communication with suppliers.

Through proactive, collaborative efforts companies can respond to increasing pressure to account for their performance both environmentally and socially. The thing of a great importance is also pressure from local and regional authorities and stakeholders. It will become more and more important because apart from very popular view of analyzing supply chains from a global perspective, a regional context is very important. As for more and more companies it makes more sense to procure as close as possible this means a need for regional supply strategies. A popular attitude is also forming regional clusters which can compete on a global scale. But this can create a threat for regional environment and societies. Companies must be aware of this and work closely in their chains to include these issues in their supply chain strategies

CONCLUSIONS

Contemporary logistics sets the directions for efficient enterprises management, helps to strengthen the company's competitive position on the market and maximize profits. But to do this a company must continually review the needs of the market and think integrally. Looking at competition from supply chain point of view instead of a single company is much more appropriate and gives insight into broadening the concept of logistics into the concept of Supply Chain Management. Companies willing not only to look at the financial perspective of their activities should adopt a sustainable approach, which can strengthen their position on the market. Stakeholders, especially on a regional level, should support adoption of SSCM practices.

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Summary

The fundamental problem concerning development of supply chain strategies is not taking into consideration social and environmental dimensions. Companies and entire supply chains focus on financial issues. External pressures make an issue of Sustainable Supply Chain Management more and more important. Companies start to integrate their efforts to include sustainability in their supply chain strategies. The problem is lack of universal rules and widely accepted metrics of performance. The issue is also very important from a regional point of view because developing regional supply chains can be a threat for the environment and local societies.

Zarządzanie łańcuchem dostaw a zrównoważony rozwój w kontekście regionalnym

Streszczenie

Podstawowym problemem w zakresie rozwoju strategii łańcucha dostaw jest nieuwzględnienie wymiaru społecznego i środowiskowego. Firmy i całe łańcuchy dostaw skupiają się w większości przypadków na kwestiach finansowych. Jednak presja zewnętrzna w kwestii zrównoważonego zarządzania łańcuchami dostaw staje się coraz bardziej istotna. Firmy zaczynają integrować swoje wysiłki na rzecz włączenia zrównoważonego rozwoju w swoje strategie w łańcuchach dostaw. Problemem jest brak uniwersalnych reguł i powszechnie przyjętych wskaźników wydajności. Kwestia ta jest również bardzo ważna z regionalnego punktu widzenia, ponieważ rozwój regionalnych łańcuchów dostaw może stanowić zagrożenie dla środowiska i społeczności lokalnych.