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Building Winning Supply Chains by Riad Aggoune and Claire Navarra  
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# Building Winning Supply Chains

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## Abstract

Supply Chain Management is an important source of competitive edge for hard industry and services companies. It is an efficient trust-based long term partnering of geographically and legally separated organizations, always fostering win-win relationships. It is as well the synchronization of materials, information and financial flows.

This paper presents the latest results of an ongoing study performed within companies and administrations in Luxembourg and the Great Region. The aim of this study is to identify the main and common problems regarding supply chain management practices. A dual objective is to show what problems are specific to the different activity sectors. Working groups involving key management persons were thus formed in each company, in order to discuss the problem they were encountering inside the company as well as with other links of their supply chains. These diagnoses allowed highlighting that most companies were not maintaining trust-based relationships with their respective partners.

**Keywords:** Supply Chain Management, Diagnoses, Trust.

## 1) Introduction

Companies have new challenges to reach. The intensification of intercontinental exchanges, the globalization of production of goods and services and requirements of customers have made companies rethink their functioning. These last years, the Supply Chain Management is the object of many scientific publications, specialized newspapers and books (see Gattorna, 2006, and the references therein). Supply Chain Management is an inherent concept of companies and is becoming an important source of competitive edge for hard industry and services companies. Previously, logistics were covering a purely operational field, today we are speaking about a managerial yet entrepreneurial logistics: the “Supply Chain Management”. To define the Supply Chain Management, we retain the definition given in (Christopher, 1998), Supply Chain Management is about the management of relationships across complex networks of companies that whilst legally independent are in reality interdependent. Successful supply chain will be those which are governed by a constant search for win-win solutions based upon mutually and trust. This definition highlights that the companies must not seek for performance at a local area but beyond the boundaries of the company. This changing incites the companies to build new relationships with their partners in order to get a sustainable supply chain. (Christopher, 1992) considers the supply chain as a network of organizations performing various processes and activities to produce value in the form of products and services for the end of the customer. Many empirical and theoretical papers come to the conclusion that companies must improve their competitive advantages through supply chain management. They must consider their different partners upstream as well as downstream the chain.

This paper reports the results of an ongoing study performed within companies from Luxembourg and the Great Region. After the realization of state of the art in supply chain management, that is to say a theoretical analysis, we have chosen to consider the problems that companies were encountering in practice when trying to build a winning supply chain. This work with the companies has allowed us to have a real view on their problems. To have a complete diagnosis, we have decided to select companies from different sector activities in order to see whether there were generic causes and/or effects preventing from building winning supply chains. In our opinion, this means establishing a collaborative supply chain based on long term partnership, trust and win-win relationship.

The remaining of this paper is as follows. In the next Section 2, we first describe the methodology applied during the diagnoses, and then present the results of that phase. In Section 3, the results are discussed regarding studies from the supply chain management literature. Finally Section 4 concludes the paper and provides some directions for future research.

## 2) Supply Chain Management: Diagnoses of problems

In order to realize our analysis and to find the different problems which companies are confronted, we have decided to schedule several meetings for each of them. As said before, we have chosen companies from different sectors in Luxembourg and the Great region. Companies were contacted for those diagnoses, and the first answers came from public services and major companies from the hard industry. The diagnosis phase is ongoing but six (3 in the automotive sector and 3 public services) of them are completed.

The companies have had a real interest for this study. Indeed, the intensification of exchanges between their different partners and the requirements of their customers or users accentuated their interest in better managing their supply chain.

## 2.1) Methodology : The thinking process

In order to analyse, the different problems in building winning supply chain, we have chosen to use an approach based on the discussion and on the participation of all the actors of an organization involved in the supply chain management. This methodology called the thinking process was proposed by E. Goldratt in 1984 (see Schragenheim, 1998, for more details). The thinking process is a methodology that allows highlighting the problems that the companies have in reaching their goal. The diagnoses take the form of brainstorming sessions, during two days, of working groups composed by key persons of the companies. Generally the main key functions are represented: planning, accounting, quality, sourcing and management. The attendees have to answer a unique question: What prevents the company from reaching its goal? From this question, the key persons of the organization give a series of undesirable effects. Normally, the thinking process is realized in three stages: the analysis of current situation, the building of ideal situation and the proposition of an action plan for attaining the ideal situation. In our study we only applied the first phase of the approach that corresponds to establishing a diagnosis of the companies. This phase consists in building a cause-and-effect tree. More precisely, the problems or undesirable effects listed by the attendees are challenged and we try to connect them to each other. The aim is to find the effects that are only symptoms and the ones, called core problems, which generate the others. In our study,

we have mostly considered the undesirable effects which have a direct link with the supply chain and prevent its success.

### 2.2) Results

In this paper, the results of several organizations are taken into account. These organizations are non-profit making or profit making. The problems reported during the different meetings are not only difficulties met at the external but also internal point of view. A winning supply chain cannot be built only by taking into account external relationships. The internal relationships between all members of the organization can have an indirect impact on the relationships with partners in the sense that the weakness of internal communication does not favour good external communication and collaboration.

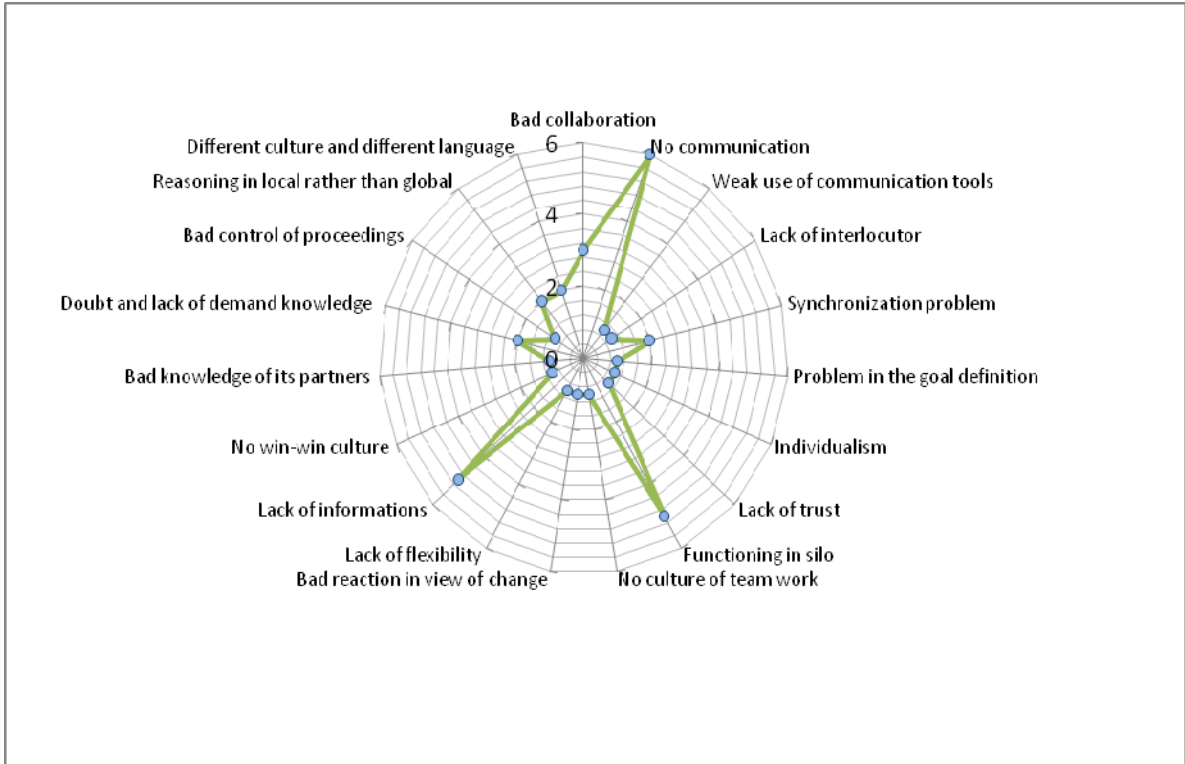


Figure 1 – Undesirable effects

Figure 1 presents the undesirable effects collected during the diagnoses. They represent the perceived barriers to a winning supply chain.

Regarding of the obtained results, the lack of communication and the lack of information are the most cited problems. For each company these problems were admitted by all representing members of the organization. Besides these main problems, more specific problems such as the lack of trust, the difference of language or culture, the functioning of an organization in silo or also the lack of interlocutor, appear.

Another remark is that some mentioned elements can be seen as causes and other effects. The primary problems at which companies must concentrate their energy are the communication and the information. Indeed, these primary problems generate problems such as the weak knowledge of partners, the lack of knowledge of demand or the bad collaboration with partners. In the same way and more specifically for the internal problems, the functioning in silo or the lack of culture of team working will not encourage the communication between these members.

Among all these undesirable effects, the lack of communication and the lack of information are principal. However, they are strongly related to the less cited lack of trust. The companies must work on this notion that may be seen very difficult to control. In what follows we show from previous studies of the literature that trust, communication and information sharing are correlated and have a strong impact on the establishment of a winning supply chain.

### 3) Discussion of results

Academic and specialized literature in supply chain management has identified the benefits of increased collaboration and integration between organizations (Nusland and Williamson, 1998). This collaboration is realisable only if the parties of the chain communicate and share the same information with the same language. And, the partners of the chain are ready to communicate only if they have trust in their collaborators.

To build a winning supply chain, the relationships between all parties of the chain must be based on information sharing and trust. Indeed, effective supply chain planning based on shared information and trust among partners is an essential requirement for successful supply chain management (Kwon and Suh, 2004). The two notions of this observation are strongly correlated in the sense that the information sharing can be possible only if the involved partners have trust. So, in order to encourage this sharing of information, the companies must work on the notion of trust that is a key point in the building of relationships with partners. Moreover, trust is an element that induces the commitment of partners of the chain. Information sharing is also considered as one of the most important factor for successful supply chain (Bowersox et al., 2000; Handfield et al., 2000). In the same way, many studies have been admitted that information sharing is a critical factor in the trust building process of supply chain implementation (Bowersox and al., 2000). In our results, this element of information sharing has been named in other terms as the absence of communication and/or the lack of information.

In (Morgan and Hunt, 1994), trust exists when one party has confidence in an exchange partners' reliability and integrity. Trust is also defined as a belief by one party in a relationship that the other parties will no act against his or her interests, where this belief is held without undue doubt or suspicion and in the absence of information detailed information about the actions of the other party (Laasksonen et al., 2007). These definitions strongly highlight that partners should be transparent towards each other. In practice, trust is not understood in the same manner by all the partners of the chain. They therefore must agree on a common definition of trust, and specify their relationships. They also must be engaged in a common objective of making all the chain and not only themselves success. Their commitment can take place only if all the partners of the chain are transparent. Thus, the interrelation between communication, information exchange, trust and commitment is very strong (see Figure 2).

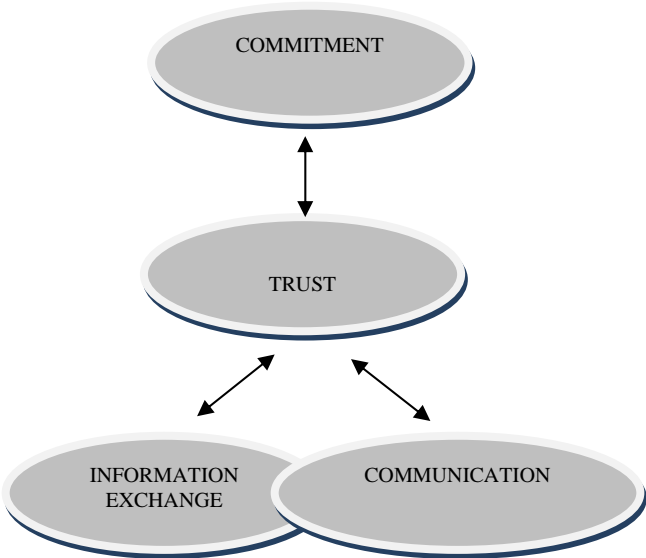


Figure 2 – The roots of the trust

(Denize and Young, 2007) perfectly underlines the strong link between communication, information exchange and trust. As shown in Figure 2, commitment is also based and generates trust in the relationships.

This figure illustrates the advantages that the companies will have in building these partnerships on the base of information exchange and communication. Regarding the results of our exchange with companies, the collected problems illustrate in a relevant manner the current barriers to building a winning supply chain.

#### 4) Conclusions and perspectives

The approach of this study was to allow to exchange with relevant actors of different companies and to support the idea that the roots of sustainable relationship between the members of the supply chain are based on the trust relationships. And these trust relationships as the literature and the different working groups can demonstrate it, are based on an information exchange and a good communication.

Today, companies are aware that they must develop this aspect of the relationship with their partners and that without trust they will not become a competitive supply chain. An initial point to gain trust from our partners and vice-versa is to have the same view and the same goal. In the winning supply chain relationship, each party must have an advantage in this collaboration. In this article, we did not develop the two other aspects that we advocate to build a winning supply chain, namely the long-term partnerships and win-win relationships. These two factors were not cited by companies as the factors representing the main barriers.

In the different working groups that we have organized, only one company has mentioned the lack of win-win relationships. It is a fact that must be taken into account.

How to promote trust-based relationships and how to make that these relationships sustainable are the direct perspectives of this study. To have a sustainable supply chain, the notion of long term partnership is inherent. So, it is important to work on the three pillars, namely trust, win-win, and long-term partnerships, and to encourage the companies to promote this type of relationships with their partners in the chain.

## References

Bowersox, D.J., Closs, D.J., and T.P. Stank (2000), *Ten mega-trends that will revolutionize Supply Chain Logistics*, Journal of Business Logistics, vol 21(2), pp. 1-16.

Christopher, M. (1998), *Logistics and Supply Chain Management*, second edition, Prentice Hall, London

Christopher, M. (1992), *Logistics and Supply chain Management*, Pitmann Publishing, London

Denize S. and Young L. (2007), *Concerning trust and information*, Industrial Marketing Management, vol. 36, pp.968-982

Gattorna, J. (2006), *Living Supply Chains*. FT Prentice Hall, London

Handfield, R. D. Krause, D. R. Scannell, T.V and R.M. Monczka (2000), Avoid the pitfalls in supplier development, Sloan Management Review, pp. 37-49.

Laaksonen T., Pajunen K. and Kulmala H.I. (2007), *Co-evolution of trust and dependence in customer-supplier relationships*, Industrial Marketing Management

Morgan, R.M. and Hunt S.D. (1994), *The Commitment-Trust Theory of Relationship Marketing*, Journal of Marketing, vol.58, pp.20-38

Nusland, D. and Williamson, S.A. (1998), *Supply Chain Integration: Barriers and Driving Forces in an Action-Research Based Industry Intervention*, An International Journal, vol. 9, pp.70-80

Schragenheim E. (1998), *Management Dilemmas: The Theory of Constraints Approach to Problem Identification and Solutions*, the St. Lucie Press/APICS Series on Constraints Management

Kwon, I. W G. and T. Suh (2004), *Factors Affecting Level of Trust and Commitment in Supply Chain Relationships*, the Journal of Supply Chain Management, pp.4-14