

## **Trust and knowledge creation: how the dynamics of trust and absorptive capacity may affect supply chain management development projects**

JAN KETIL ARNULF\*†, HEIDI C. DREYER‡ and CARL ERIK GRENNESS§

†Norwegian School of Management, Department for Leadership and Organisational Management,  
PO Box 580, N-1302 Sandvika, Norway

‡Norwegian University of Science and Technology, Norway

§University of Oslo, Norway

A case study is presented from a project where five companies representing manufacturer, wholesaler and retailer roles tried to establish supply chain management practices. The researchers had the role of project managers and facilitators, thereby acting as action researchers. Although devised and conducted in a way that seemed adequate to the participants, the project was only partly successful. Our analysis of the case shows that dynamics of institutional trust and distrust caused obstructions to the mutual learning capacities of the participating companies. If the project management had been able to attend to and manage these dynamics in a more reflective manner, the project may have been more successful. This hypothesis is substantiated through quantitative analysis of accountancy data from one participating company as well as qualitative analysis of transcripts from project meetings.

*Keywords:* Trust; Interorganisational learning; Supply chain management; Project management

### **1. Introduction**

Supply chain management (SCM) has been on the logistical agenda for several years (Christopher 1998, Lambert and Cooper 2000, Mentzer *et al.* 2001, Skjoett-Larsen *et al.* 2003). Valuable contributions have been made in producing insight into successful SCM operations, into how SCM is practised and the value and obstacles of SCM (Simchi-Levi *et al.* 2003). Today, SCM is one of the leading management philosophies and contributes significantly to the development of logistics. During the last few years, however, several scientific contributions have been concerned with the obstacles and complexities inherent in the implementation of SCM (Bask and Juga 2001, Bowersox *et al.* 2002, Zineldin and Bredenl w 2003, Kwon and Suh 2004, Larson and Haldorsson 2004).

Theoretically well-founded business practices and organisational developments may be difficult to implement in practice even though they are popular as theoretical concepts

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\*Corresponding author. Email: jan.k.arnulf@bi.no

(e.g. Tissan and Heikkilä 2001). This has been demonstrated in various areas such as total quality management (Beer and Nohria 2000), Balanced Scorecard (Nørreklit 2000), strategic alliances (Larsson *et al.* 1998), or SCM (Fawcett and Magnan 2002). While some such concepts may turn out to be fads (e.g. Strang and Macy 2001), theoretically sound concepts (and theories “in good standing”) are valuable guiding tools for change initiatives and knowledge creation projects.

In this paper, we address the mechanisms present when forming and implementing an SCM system, and specifically reflect on and discuss how interorganisational knowledge creation affects the SCM process and its outcome, and thus the ability to implement an integrated logistical system. Based on empirical data from a research project aimed at innovating logistics and trade practices, the aim in this paper is to analyse some of the obstacles that occurred in this project by drawing on relevant available research and theory. It is hoped to contribute to the knowledge of practical implementation of SCM projects and similar interorganisational change efforts.

The research project comprised five independent companies in a supply chain. The principal aim of the project was to create new practices according to the principles of SCM, as preliminary analyses revealed significant potential for improvement throughout the supply chain. The participating companies expressed strong commitment to the project and had confidence in us as project managers and change agents. Despite this, the project ran into unforeseen difficulties and failed to achieve the potential gains.

We start with a short presentation of the case and the focus of interest, and then proceed to a review of relevant theoretical perspectives before discussing the data gathered during the project.

## 2. The case: an SCM project in a supply chain

The aims of this project (referred to as “the project”) were to analyse the logistics properties of a given supply chain, design improvements, and implement them. Five independent companies were involved. Companies 1 and 2 were suppliers (*i.e.* manufacturers), company 3 was a wholesaler, whereas companies 4 and 5 were customers, *i.e.* constructors installing the goods that flowed through the chain. The project, which took place in Norway, was to be managed and supported by SINTEF<sup>†</sup> acting as both researchers and consultants.

By an analysis of the flow of goods and information through the chain, the project sought optimal solutions for warehouses, transportation, information and trade. The goals of the project were to balance the marked demand and logistical capacity by reducing the inventory capacity and inventory, transport and transaction costs. All participants were to profit from the project and enhance their competitive advantages. The economic incentive for participating was an initial analysis that yielded an estimate of 12.5 million euros to be gained from smoother logistics.

The project started with a status quo analysis comprising a market survey and a mapping of stock locations as well as the flow of information. At the end of the first year, a report had been submitted together with a strategy document, and an activity plan for designing new solutions and the implementation of these. The plan envisaged three types of working activities: a *supervisory group* was to consist of members from the senior management of all participating companies in order to ensure top-level commitment; a *work group* consisting of professionals from all companies to assure local knowledge and commitment; and finally,

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<sup>†</sup>The Foundation for Scientific and Industrial Research at the Norwegian Institute of Technology—NTH. (Now: The Norwegian University of Science and Technology, NTNU.)

the *researchers* from SINTEF were to direct all meetings, carry through all gathering and analysis of data and work out all suggestions for models and forms of co-operation. The project period was planned as three consecutive phases, consisting of: (1) analysis; (2) design; and (3) implementation.

Very soon it became clear that warehouse structure, flow of goods, flow of information and electronic trade solutions were promising points for logistics improvement. The existing price structure and trade practices turned out to be obstacles to effective transactions in the value chain. The companies engaged in a huge number of single pricing requests—even where unequivocal frame agreements existed. A reduction of price discussions might reduce unnecessary transaction costs and also make electronic ordering systems possible.

A crisis emerged as the project advanced from analysis to design. The participants complained that group discussions had turned into endless discussions about the price system that made it impossible to advance in the project. The supervisory group decided to focus only on logistical topics and lift the question of the pricing systems out of the project. It was to be solved as “strategic” negotiations in meetings between the top-level executives. This never happened, and the project never recovered from this unsolved matter.

It was decided that the project should continue even if the price question remained unsolved. The design of an integrated logistical system between the companies was completed and accepted as a suggestion but never implemented full scale.

### 3. Theoretical considerations

SCM is the management of supply chains in order to increase efficiency through eliminating redundancy in the form of unco-ordinated operations between business processes (Tyndall *et al.* 1998, Scharj and Skjøtt-Larsen 2001, Mentzer *et al.* 2001, Taylor 2004). This will secure competitiveness and productivity improvements, an alluring outcome for most companies. A central element in SCM is to let each company specialise in its core competence through outsourcing or redistribution of activities in the supply chain. The ideal goal is to achieve a lean, holistic and integrated system of materials and information from “suppliers’ supplier to customers’ customer” (Fawcett and Magnan 2002).

Thus, applying SCM often implies both restructuring and adjusting activities between the participants, a process that necessitates new knowledge (Hyland *et al.* 2003). SCM implementation will therefore be a case of interorganisational learning. Such endeavours have been shown to imply a series of obstacles to learning, challenges that are not specific to SCM.

For instance, learning something significantly new requires reflective enquiry into present day practices, which in itself may trigger organisational defences (*e.g.* Argyris and Schön 1996). The creation of collectively valid or “actionable” knowledge requires free distribution of information and activities between the participants in order to create a collective terminology that “makes sense” to them (*e.g.* Weick 1995, Ring and Van de Ven 1994). Both local constraints and the mutual characteristics of the firms involved will limit their absorptive capacity and thereby the learning achieved (Lane and Lubatkin 1998). Authors such as von Krogh *et al.* (2000) warn that interorganisational learning is no direct implementation of theoretical solutions, but a recreation of abstract knowledge in the form of business practice.

Adding to these obstacles, information about business practices and capabilities is an asset of value that may be used in asymmetric ways to gain advantages for single actors among the

participants (Eisenhardt 1989). This involves risk-taking and thereby issues of trust and distrust among the participants (Baiman 1990, Lane and Lubatkin 1998). Capabilities developed during the knowledge creation process are relation-specific assets that may render the participants even more vulnerable to opportunistic behaviour from their collaborative partners since they are not protected by market mechanisms (Williamson 1985, Baiman 1990).

As distrust will limit the amount of information available to the participants (McAllister 1997), learning may be seen as a strategic game of trust: the behaviour of the participants may be expected to vacillate between collaboration, competition, compromise, accommodation and avoidance in their approach to participation (Larsson *et al.* 1998). These approaches will not be constant, but may vary according to the state of the project. Forces contributing to distrust will push the firms into contributing less and, ultimately, to abandoning the learning endeavour. Conversely, incentives (better learning stakes) and a collective understanding of the learning process among the participants may enhance contribution and push the participants towards collaboration (Larsson *et al.* 1998).

This makes the topics of trust, information and knowledge an intertwined task for project managers to handle. Additionally, practical project management must deal with the fact that the theoretical terms have different meanings on different levels. Specifically, trust may, on one level, describe institutional governance and risk-taking between organisations (Child and Faulkner 1998) and, on another level, trust is a personal relationship between the business people involved. While conducting project meetings and activities, these levels are not always discernible to the actors.

The discussion is summarised as follows.

- (1) The design and implementation of SCM in a supply chain consisting of independent companies is an interorganisational learning project.
- (2) There are good theoretical reasons to expect such projects to be vulnerable to two types of interorganisational dynamics: (a) the mutual absorptive learning capacity; and (b) the development of institutional trust and distrust among the partners.
- (3) Owing to these imposed limits, the actual persons involved may not be sufficiently aware of their mutual dynamics. To the extent that they are aware, there will also be limits on their will and ability to express such matters in discussions. The dynamics of trust and distrust may therefore unfold in vicarious argumentations and asymmetries.
- (4) The personal trust of the project participants may suffer due to the frictions caused by these dynamics, thereby endangering the whole project. Practical project management must attend to and handle effectively these matters.

#### **4. Methodology**

This study relies on quantitative and qualitative analysis of data obtained by researchers participating in the project. This is action research in the sense that we have actively participated in creating knowledge and developing new logistical solutions as well as being project managers (Yin 1994, Greenwood and Levin 1998, Näslund 2002). This role has given us access to valuable empirical data for scientific analysis.

Several sources of information exist to help analyse the case and substantiate our theoretical claims.

- Financial data.
- Transcripts of discussions from project meetings.

- Comparative interviews with competitors.
- Information accumulated during the project itself.

#### 4.1 *Financial data*

The financial data were the corporate accountancy records from company 3, the wholesaler. We assumed that a statistical exploration of these data could shed light on how various budgetary parameters influenced profitability at this crucial point in the value chain. If the resulting picture could be shown to deviate from the assumptions in the project, one might assume that processes might be linked to a “core competence” other than those espoused in the project.

When viewed as a map of business decisions, accountancy data may reveal how volume, productivity, profitability and pricing practices interact. It was decided to undertake a principal component analysis of central accountancy values covering 3 years of business. The following values were entered.

- To obtain measures of the business as a goal-seeking behaviour, the measures of sales, profit margin, costs and net operating results were entered as percentages of budgetary targets. These were seen as indicators of strategies adopted by salespeople in their approach to business.
- A central element in both SCM and the pricing arguments of the actors in this case is volume. To see how the traded volumes relate to business approaches and outcomes, the sales figures were entered in absolute terms. A related measure, productivity, was calculated as the ratio of costs to sales and entered into the analysis.
- The main indicator of outcome is entered as “economic value added” (EVA), which was the target for operative success in each unit of the company (defined as net operating results minus the cost of capital employed, such as warehouse stock and accounts payable). EVA is entered first in absolute numbers, then as percentage of sales to make profitability comparable between units.

#### 4.2 *Transcripts of project meetings*

All discussions in the supervisory group were recorded verbatim. The analysis of transcripts was done in ordinary MS-Word files, and the procedure followed two distinct patterns. First, all verbal contributions of each organisational participant was purified in “monologues” to highlight their main contributions and concerns: What were the obstacles that were named, and which solutions were suggested? Second, passages of verbal exchange were coded for content and named by the topic implied. These topics were then examined for how they related to the project timeline, and how recurrent they were.

#### 4.3 *Comparative interviews with competitors*

The companies involved in the project were of the largest in this business on a national scale, but not without competition. Two other large wholesalers were central in a series of competing supply chains in the same market. The chief executive officers (CEOs) of these two companies agreed to an interview about their opinions on a project such as the one presented in this paper. The interview was conducted in a semi-structured fashion and in two phases. First, open-ended questions were posed to the CEOs to assess if they could guess in advance which possibilities and problems the project would encounter. Next, they were given highlights of what had actually happened and asked if this was recognisable.

## 5. Results

The main body of results presented here focuses on the calculations of the profit in company 3; and later on, upon the discussion of the logistical system. In the following, we take a closer look at results that demonstrate this situation.

### 5.1 *Tacit knowledge and profitability*

The principal component analysis yielded four factors. The first two of these suggest a contradiction between the logistical business of selling large volumes on the one hand and the price requests on the other hand (table 1).

The relative profitability of each business unit in company 3 is tied primarily to the activities that relate to pricing requests or trading. This is probably no surprise to the people involved, which is why the question of pricing controls kept appearing. The profits obtained by selling large volumes in a more productive fashion are not that great, but may appear so from certain viewpoints because the larger volumes are visible as larger numbers. This will be of more interest to strategic planners at the company's headquarters.

The combination of discussion transcripts and accountancy analysis indicates that the project management—along with the supervisory group—was mistaken to label price negotiations as unnecessary transaction costs, and not as core competence.

Since these data were derived from the wholesaler, the other four companies are necessarily linked to this dynamic as well. Most of the personnel involved in sales and purchase within the chain will probably know that price request is a powerful way of outmanoeuvring the other participants.

### 5.2 *Trust and power*

Personal trust was a central prerequisite for starting the project, and therefore ought to be present from the beginning. People involved in the project were established business acquaintances, most notably at the senior executive level. The companies had been trading with each other for years. When the researchers initially posed their theoretical worries about trust, the managers were almost insulted by the implication that they might not trust each other. Their tone was cordial and all expressed their intention not to keep things secret. Further, the

Table 1. Principal component analysis of accountancy data from company 3, showing factors influencing profitability, volume, productivity and business activities.

Accountancy parameters	Price request component	Volume advantage component	Sales-related component	Cost control component
Sales achievement	0.00	0.00	<b>0.97</b>	0.00
Gross profit margin achievement	<b>0.87</b>	-0.22	-0.25	-0.11
Gross profit achievement	<b>0.63</b>	-0.14	<b>0.70</b>	-0.13
Cost control achievement	0.00	0.00	-0.20	<b>0.85</b>
Net operating result achievement	0.30	-0.34	<b>0.41</b>	<b>0.53</b>
Return on investment	<b>0.88</b>	0.23	0.15	0.23
Productivity	-0.11	<b>0.68</b>	0.26	<b>0.44</b>
Sales, absolute numbers	0.00	<b>0.78</b>	-0.14	-0.21
EVA, as % of absolute sales	<b>0.85</b>	0.30	0.14	0.22
EVA, absolute numbers	0.31	<b>0.82</b>	0.00	0.00

\*Parameters influenced positively are indicated in bold, parameters influenced in a negative direction are indicated by italics.

participants had confidence in the researchers—and we had been deliberately chosen for our reputation in similar projects.

During the design phase it became clear to the participants that considerable transaction costs were generated by price enquiries with the aim of bargaining on already fixed agreements. It would not be possible to develop an effective logistical system in the value chain as long as this bargaining tradition existed. At this point, the project ran into a barren stalemate, which was at its most acute when a system of predictable price agreements was on the agenda. Some passages are worth citing to show how the discussion developed.

*Company 4:* We spend a lot of time checking prices. What if we didn't have to do that—what could we gain from trusting each other?

*Company 3:* We need a central, smooth IT-system or an e-commerce-system creating trust within the chain. . .

*Project manager:* Central purchases require very solid trust . . .

*Company 3:* The critical success factor here is that we actually have a system—and that people dare to submit information.

After several meetings, some participants showed an uneasy feeling about this question.

*Company 3:* Then the manufacturers must devise a pricing system to support the chain. Today, the pricing system will sometimes reward small purchasers. It is one thing to say this, but a different matter to do it. This is a question of power.

*Project manager:* Then we are talking about pricing systems. There must be effective incentives, correct information, and good prices must be trusted.

Among the managers, there is a strong faith in the possibility of solving the problem by technology as well as bewilderment as to how this can be done. The following is a typical excerpt from such a discussion.

*Company 1:* A central IT-system makes it easy to track each delivery and secure smooth operations . . .

*Company 3:* But this is a deep cut! When the salesman loses his ability to influence prices, he loses his dignity.

*Company 5:* There is a job to be done at several levels here!

*Company 3:* But today's level of costs in this field is killing!

*Company 4:* We must not doubt that this is why we are working on this. Costs are to be allocated to the expedition of goods.

*Company 3:* This will be a radical change from what we have today, both technically and emotionally. We must create accept!

*Company 4:* No, this is where one just has to cut through the crap!

As the topic was never solved in work group meetings and kept coming back to the supervisory group, the question of pricing control was thrown back and forth in the group.

*Company 3:* (The CEO walks to the board and draws a picture of how everyone can have better prices even at lower quanta if price bargaining is terminated.)

*Company 5:* In our business, we are dependent on acquiring this extra gain. The margins are not better!

*Company 4:* But then you are the sinner! You must say no!

*Company 5:* As long as it is possible, we will do it! You are the ones that must come to an agreement.

*Company 3:* One thing is to do something with it. It is a different matter to make the rest of the market comply.

*Project manager:* The work groups must elaborate on this. The gain must come from cost reductions, which must result in better long-term agreements than we have today. (*The group applauds.*)

Almost 6 months into the design phase, the problem accentuates.

*Project manager:* . . . (*Summarises the main technological elements of the project thus far.*)  
These were the main elements, but then follow three points where I am uncertain as to how we should attack them. These are the roles in the value chain, price mechanisms and product ranges. We can design an effective model, but we cannot implement it if there aren't any price mechanisms to support it . . . As long as the prevailing price mechanisms drive up the frequency of transactions, you don't get the organisation to act differently.

*Company 4:* To me, this is a discussion of price.

*Project manager:* A transparent logistics chain requires confidence in prices.

Here, it is finally decided that the question of prices is central to the implementation of all other technological solutions; but this happens almost incidentally, and is not commented on until a plan for further project activities is on the agenda:

*Project manager:* Pricing discussion—who is to direct it, evaluate elements and conditions around it?

*Company 3:* We cannot do that while at the same time presenting the logistics model. But we can take the steering wheel and lead the process.

*Project manager:* Then we agree on a path to follow?

*Company 3:* Prices and agreements are to be discussed by the senior managers of the participating companies alone in a meeting at the HQ of company 3 at [date], 10 a.m.

Then, a curious lapse in project management happened—the projected meeting was skipped, but without really being cancelled. The envisaged price discussion at CEO level never took place. Instead, there was a softly spoken conclusion through phone calls outside the formal meetings—that the project had been unsuccessful in reaching its targets. A termination of the project was mentioned, but the participants concluded finally that the best idea was to let it continue with reduced ambitions and with a scope that did not bear on the price structure.

At the time of the stalemate, the daily business operations saw various unfriendly actions contradicting the expressed aims of the project, but overtly carried out by executives other than those present in the project groups:

- Company 4 cancelled its purchasing agreements with company 3, and signalled that it wanted to reduce the traded volumes.
- Company 5 signalled that it wanted to reduce purchases from company 3 by 50%.
- Company 5 established a business alliance that was communicated as a competitive step against company 3.
- Company 1 cancelled the transport agreements that had been important for the logistics model envisaged in the project.

### 5.3 Comparative data

Comparative interviews with the CEOs of parallel supply chains showed that they thought that this project would be attractive, profitable and feasible. The only limitation they saw—and perhaps kept them from doing this—was that the time designated for project work would be a limiting factor. They were not able to predict the disruptive effect of the price discussion, although they recognised it when told of it by the researchers.



## 6. Discussion

Our results show how a project aimed at designing a logistical SCM system changed from a positive co-operative environment to a conflicting situation that prevented the implementation of SCM. This change was unexpected and was in clear contrast to the participants' espoused intentions: it created a crisis for the project management.

Initially, all participants showed strong motivation and enthusiasm. Personal and institutional trust existed between the managers. This expressed trust made the SCM project seem feasible. The participants had unanimously agreed that to obtain the necessary knowledge, information had to flow freely. The financial incentives seemed strong enough, and top management was committed. The ground seemed well prepared for a successful project because the relationship was characterised as strong consisting of elements such as trust, co-operation, common interest and openness (Riddalls *et al.* 2002, Moberg and Speh 2003).

From a structural point of view, two elements disturbed the project. Stress appeared first as we defined the roles of each participating company and tried to assign responsibility for the warehousing and transporting activities and again as we addressed questions of price negotiation.

According to the principles of SCM, the distribution of tasks, roles and responsibility between companies must build on each company's core competencies—the activities they do really well and where they have a differential advantage (Porter 1985, Christopher 1998, Stabell and Fjeldstad 1998). The design in the project assumed that each company's core competence corresponded to their official roles and profitability potentials, which were manufacturing, wholesaling and retailing. The unique, value-adding task for the wholesaler was defined as "distribution" with responsibility for warehousing and transporting in the supply chain. The other participants disagreed, arguing that they were as effective as the wholesaler, and that these activities had strategic importance to themselves.

During the design of the new logistical system, price negotiations were seen as disturbing effects and were described as both transaction costs and old habits. The senior managers went overtly along with this view, and agreed that this negotiation practice had to be stopped; but the transcripts suggest that contradicting arguments often appeared in the discussion at this point.

The analysis of financial data shows that the price negotiations could actually be part of the core competence of one actor in the chain, as the wholesaler was acting as a goods exchange. In other words, the retailers used the wholesaler not only to provide distribution according to logistical rationality, but also as a market-place and thereby to control the manufacturers.

Unsurprising as this may seem in hindsight, it was not taken into account in the status quo analysis or the strategy document for the project. More than 18 months passed until the implications of price mechanisms surfaced in project meetings, but they were seldom reflected upon in an open manner. Still, the project seemed at risk whenever the price-related questions arose. It therefore seems correct to assume that the price mechanisms were tied to mutual control and power exertion, but in ways that were not transparent to the managers when they expressed their support for SCM. Whenever this topic emerged, the overt knowledge-generating process was disrupted and the project managers partially lost control of the process without understanding why.

The vulnerable spot in the project was where questions of trust intersected with the cognitive activities necessary for interorganisational learning. According to the views of Child and Faulkner (1998), mutual trust could be enhanced as information and knowledge were exchanged in the project, but the opposite occurred. Pure theoretical considerations stemming from principal-agent theory or transaction cost theory predict instead that the actors had several reasons to distrust each other and keep their local information guarded

(Baiman 1990). According to the model of Larsson *et al.* (1998), companies participating in an interorganisational learning endeavour will move away from collaboration, towards competition and ultimately adopt an avoidance strategy when they perceive that the learning dynamic makes them more vulnerable to one another. This fits well with our observations.

Such constellations may move the participants of the project away from each other with almost fatalistic force. This would be the point where the project managers would have to intervene to change the course of events. Larsson *et al.* (1998) claimed that it should be possible to “empower” the participants in ways that make them more trusting and co-operative. Other writers, such as Christopher and Jüttner (2000), advocated the use of individual “trust ambassadors”.

We think our case supports these views—there is a cognitive dimension involved here, which could be instrumental to the project management if recognised. Our point is that interpersonal trust must be strengthened by a combination of overt reflection on the obstacles and a testing out of practical solutions.

In their treatment of relative absorptive capacity, Lane and Lubatkin (1998) pointed to several learning obstacles between firms, and emphasised that these obstacles can and must be managed. Companies, just as humans, vary in their ability to recognise and value new knowledge, and in their ability to assimilate it. The nature of trust and its dynamics in inter-organisational projects was a theoretical issue to the researchers, but probably not to the other participants. The threats emerging from opportunism and asymmetry were therefore not articulated under the heading of “trust”, but emerged latently in the pricing and role discussions instead.

The pricing mechanisms were used in ways of which the actors were not fully aware. At the same time, the attempts to discuss possible solutions were just the points that made the actors turn to avoidance, which implies some awareness of the risks involved. It is difficult to assess how conscious the actors actually were of these mechanisms and how much they were deliberately concealed in attempts to gain competitive advantages, by hoping that others would expose more of themselves. It remains a fact that it took a crisis that could have ruptured the whole project to make the project managers aware of the power potential in these apparently futile discussions.

We saw this as an instance of *tacit knowledge*, as described by Polanyi (1983). Types of tacit knowledge are: (1) what is taken for granted by *everyone*, internalised over years; (2) what *no one* understands completely; and (3) what *some* understand, but cannot explain without great cost and effort (*e.g.* Boisot 1998, Baumard 1998). By focusing on the price agreement problem as something no one understands completely, we saw an opportunity to engage in overt reflection with the aim of creating knowledge, or sense, as outlined by von Krogh *et al.* (2000) or Weick (1995). This would be in contrast to assuming that there is a situation that is definable for everybody, and where a professional solution exists, ready for implementation.

Once we began overt reflections on this matter, tensions seemed to soften and it helped the process towards explicit choices and decisions (Fawcett and Magnan 2002). A partial breakthrough was made, as one initiative led to the design of an electronic order-and-invoice system between the wholesaler and one retailer, and that relied on the practice of net prices. It resulted in a reduction of trading frequencies and thus the transaction costs. Interestingly, the retailer who went along with this system was the smallest of the participating firms. It was also the one that most fervently favoured bargaining practices and articulated scepticism towards the trustworthiness of the others.

This observation corresponds with Fawcett and Magnan (2002), who reported that SCM introduction often is incremental and narrow in the sense of being a practice developing over time, and which covers only a limited number of logistical operations and companies.

## 7. Conclusion and generalisability

To some extent, the dynamics of trust may be deducible from theoretical considerations; but in practice, the effects of distrust will be expressed through the actions and opinions of the people participating in the project. The absorptive capacity of the people and the organisations they represent may limit their ability to understand and address these matters in a direct manner. Distrust may therefore be expressed vicariously. The ability of project managers to bring to the surface the trust dynamics and provide suggestive explanations may help the participants to create knowledge that bridges the gaps of distrust.

Even where no practical solutions are found, we think that overt choices are to be preferred against seemingly irrational incidents that may wear down the initial personal trust and endanger the whole project with personal conflicts.

The processes described here may alternatively have been due to random misfortunes, such as bad project management or incapable managers in the groups. The comparative interviews suggest otherwise: managers of the competing supply chains were equally interested in the topic, thought the project feasible, and it seems likely that they would have run into the same problems unawares.

In their previously mentioned study on the dynamics of trust, Larsson *et al.* (1998) called for contributions in the form of case studies because these may accumulate useful knowledge where nomothetic data leave out the processual dynamics. This is in accordance with the claims of other authors (*e.g.* Näslund 2002, Larson and Halldorsson 2004). We therefore see our case as generalisable in the form of accumulated case material.

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