

## **A holistic model for coordinating supplier and customer relationships**

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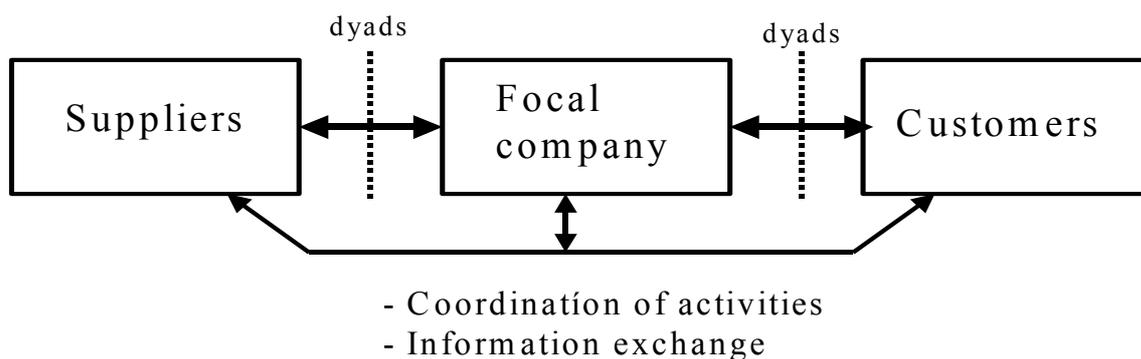
**Competitive paper**

## 1. Introduction

A firm needs to develop effective coordination between the suppliers and the customers, in order to maximise the potential for converting competitive advantage into profitability. For example, coordinating the rate of order fulfilment to match actual demand is only successful from the customer's point of view, if it results in satisfying a customer's delivery date and lowers logistics costs. The question is how to achieve the best fit among the supply chain partners, so that the tasks of different players are completed in a manner consistent with the mutual goal, because supply chain performance depends on how well all members work together and not on how well each member performs separately.

**The purpose of the paper is to create a framework for selecting and evaluating the success-factors and the coordinating activities in the 'supplier – focal firm – customer' relationship' – see also Figure 1.**

Figure 1: The 'supplier– focal firm – customer' relationship'



### 1.1 Methodology:

The paper aims to create idiographic, holistic and context dependent knowledge. This is achieved by producing thick descriptions (Ryle, 1971; Geertz, 1973: 5; Denzin, 1989: 83) of one medium-sized Danish OEM companies, originally founded in the iron- and metal industry and now moved to

a related industry. The single case study was thereby chosen as research strategy for this study and the case were purposeful selected (Kuzel, 1999: 33-34; Morse, 1989: 129; Light et al., 1990: 53).

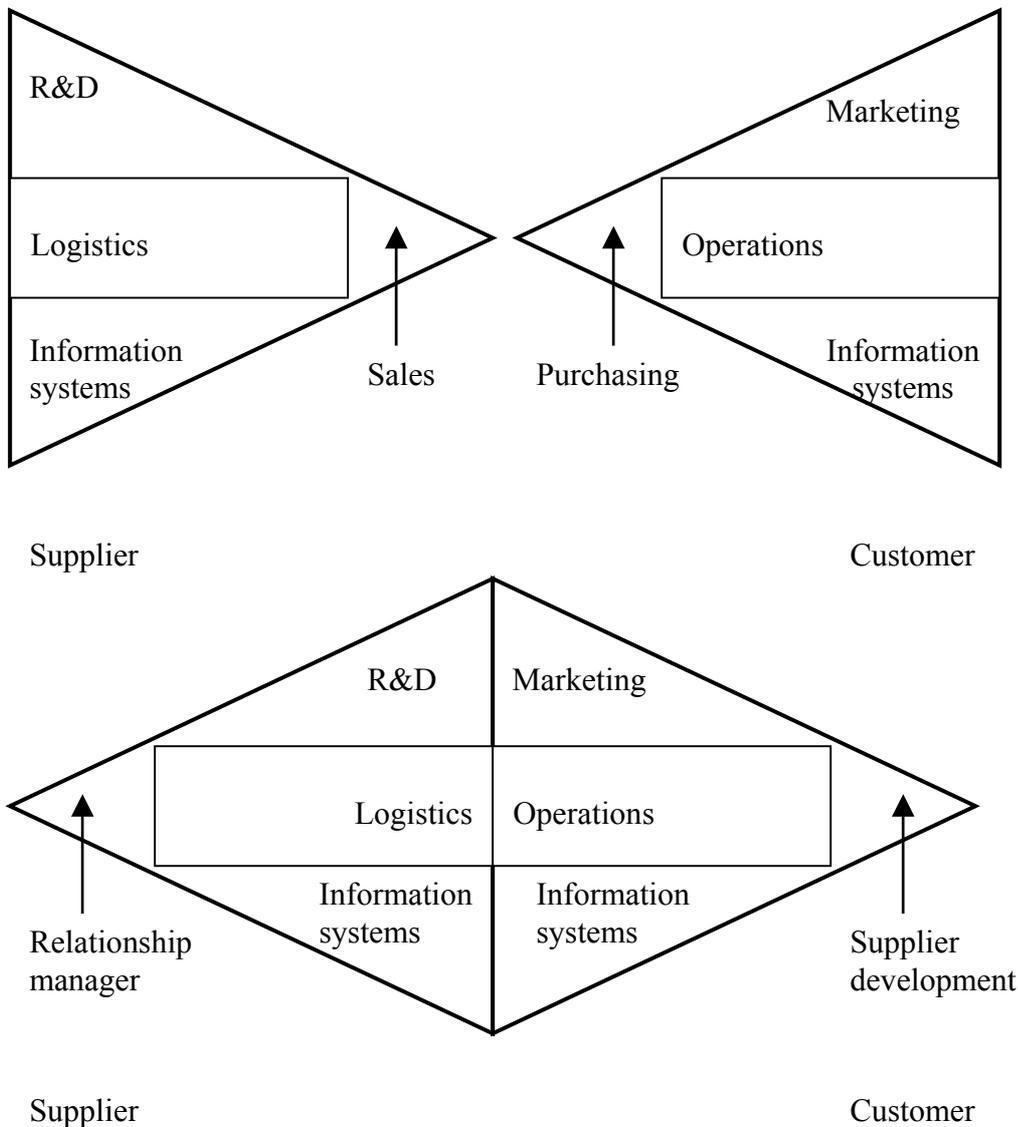
In this paper aspects of supplier cooperation will be illustrated in a holistic supply chain perspective. When the decision to outsource activities to a given supplier has been made, control and cooperation demands become urgent. These control and cooperation demands have had theoretical interest for a long time (see e.g. Olsen & Ellram, 1997a; Olsen & Ellram, 1997b; Turnbull, 1990). It is interesting for a buying organization to secure efficient supplier cooperation, as this will enable the organization to provide value to its customer portfolio. The precondition is, of course, good and detailed information about customer needs – information mainly provided by a company's functional areas, which are in frequent contact with its customers (e.g. sales and development departments). When control and cooperation demands are to be determined, it is not enough to focus on the supplier portfolio. It is also necessary to integrate customer needs in these considerations, or as Håkansson & Snehota formulate it:

*“The performance and effectiveness of organizations operating in a network by whatever criteria these are assessed, become dependent not only on how well the organization itself performs in interaction with its direct counterparts, but also on how these counterparts in turn manage their relationships with third parties”.*

## **2. Integration of supplier and customer cooperation**

Based on the argumentation above that what could be called the merger of supplier and customer cooperation can be obtained by adopting an interactive perspective, in which the basic unit of analysis is the relation between two active partners. Thus, the theoretical embeddedness lies in relationship marketing. The consequence of a relationship marketing way of thinking will be a more integrated and cooperative form with an interpersonal starting point. The buying and selling organization proceeds from having contacts between selling and buying actors to communication and interaction between actors representing fields of activity all over the organization. Figure 2 below shows this graphically:

Figure 2 Organizational consequences of a dyad relationship perspective



Source: Payne et al., 2000: 14

The figure illustrates that new "control" demands/tasks emerge in the focal company of the supply chain. The crucial goal is to transform information from financially attractive customers to the suppliers of the focal company, and the ability to interpret and subsequently transform customer information is the mechanism that enables the focal company to create value for its customers. In other words, such a system of gathering and transforming information constitutes a competitive advantage that can hardly be copied by potential competitors. Consequently, focus is on aspects only related to the core product, and therefore the price will no longer have a central place in the relationship between supplier and purchaser. In other words, the price elasticity will decrease.

### **3. Evaluating success-factors - A holistic model for obtaining efficient supplier cooperation**

Above we have argued in favour of a holistic approach when a) developing appropriate supplier structures and b) making decisions on the density of relationships. Once the supplier structure has been established and the character of the relationships has been determined, the relationships should be monitored with a view to further development and improved efficiency of benefit for both parties, but also with a view to potential dissolution, if the original conditions for the cooperation are changed. Based on this argumentation we need to specify the contextual conditions at different analytical levels. We suggest a division in 6 analytical levels<sup>1</sup>:

#### **a. Market characteristics**

The buying and selling organization has no influence on the market characteristics as they are given from outside. At this analytical level we will find conditions constituting the external environment of a trade: macroeconomic conditions, political conditions, social trends, technological developments, the place of a relationship in the supply chain etc. These conditions may be very important to the trade in question and thus to the other analytical levels. At this level companies normally have extensive, good and specified information.

#### **b. Trade characteristics**

Here focus is on competition intensity, number of suppliers and the speed at which technological aspects are changing. If competition intensity is high and there are several suppliers the price will be brought into focus as a decisive competitive parameter. In addition, if the products are standardized at least one of the actors in the relationship will not be encouraged to enter into a close relationship. A high technological replacement speed will probably mean that the buyer is careful not to commit himself too closely to the supplier for fear that the supplier cannot meet the rapidly changing technological demands.

#### **c. Organizational characteristics**

At this analytical level conditions in the organizations of the actors are in focus – conditions like, e.g., uniformity of business values, strategy, organizational culture, organizational structure, size – including power and resources – and finally the extent of their mutual organizational knowledge. Different size of the buying and selling organizations might e.g. result in imbalance of power in this relationship, and it may subsequently have consequences when conflicts are to be solved. The power aspect will be widened below. The extent of uniformity or the perceived resemblance play an important role for the speed at which relationships develop into partner-like relationships. If the starting point is high perceived congruity there will be much confidence and thus increased willingness to develop the relationship. Mutual organizational knowledge is emerging as a result of the duration trade and this knowledge may have arisen on the basis of trade across business areas. More specifically, there might be knowledge of each other's production technology, product points, markets conditions, trade costs etc. It should be noted that the result of a high degree of knowledge

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<sup>1</sup> The analytical levels were inspired by the IMP Group's conceptualisations

is that buyer will obtain detailed insight into seller's costs and consequently also his profit level. This will make it difficult for seller to increase his profits – even by internally improved efficiency. Profit margins are best increased by mutual efforts from both parties, which can be obtained by dividing realized gains.

#### **d. Actor characteristics**

Relationships exist because actors in buying and selling organizations have long lasting contacts. The ties between the actors are so to speak the life nerve of the relationship. It has, however, been argued that relationships can exist between individuals and organizations. Gummesson (2000: 6) call this “embedded knowledge”. However, the actors of a relationship undoubtedly both start and maintain this relationship, and in this way their personal goals, motivation, experienced risk, education, experience and expectations will be playing an important role. As mentioned at the next analytical level, experienced risk and importance are influenced by the buying situation but also by the individual actor's own experiences - experiences that are attached to similar products and services and experiences with the supplier in question.

At this analytical level supplier experience is an important issue. The amount of supplier experience will depend on whether there has been previous trade with the supplier in question. In case of potential new suppliers the specification and importance of the expectations will increase, as the buying organization has no real experience. Expectations can be specified through 3 sources: a. buyer's previous experience with similar products, b. the experience of other comparable persons (business colleagues), and c. situational expectations (created by seller in the specific buying situation) (Thibaut & Kelly, 1959). Thus, the most important sources of expectation are one's own previous experience, information from persons considered to have high resemblance (buyer, members of buying centres), and finally with least influence information from seller (LaTour & Peat, 1979: 434). Consequently, the situation decides which of the mentioned components will be of special importance for the actors of the relationship and their demand for interaction.

#### **e. Characteristics at what is exchanged (products/services)**

At this analytical level focus is on what is actually exchanged between the actors of the relationship, and here the complexity of products or services will decide the demand for communication and cooperation. As customers often have very specific specifications, the complexity is frequently decided by factors that are not controlled by the actors. High product complexity often implies complicated production technology with the result that the focal company will be in a new task situation, and in case of frequent new task situations, thorough experience with a given supplier will mean specific and realistic expectations and lower perceived risk.

Perceived risk was one of the issues at the actor characteristics, and illustrates the close connection and mutual influence of the various analytical levels. Costs connected with exchange of supplier (switching costs) is another important issue at this level. Switching costs are especially interesting, as they are drivers of the duration of the relationship. High switching costs will automatically lead to long lasting relationships. Switching costs and their importance will be treated in detail below.

The buying situation was mentioned above. It also plays an important role. The Buygrid model is one of the most quoted models of the industrial buying process. According to this model buying situations can be divided into 3 types. They are a. new task, b. modified rebuy, and c. straight rebuy (Robinson et al., 1967: 14).

The buying situation may be perceived as a spectrum of possibilities in which perceived risk is used as discriminatory variable when categorizing buying situations. In a new task situation the organization will buy what it has never bought before – products or services that are very important for this organization. There is no previous experience, and the organization will consequently perceive high risk. Because of the demand for information and search of the market to choose the best possible suppliers the result will typically be a long buying process involving many persons. In the other end of the spectrum we will find the straight rebuy. Due to extensive experience and resulting low demand for information it is characterized by opposite characteristics, i.e. a short buying process involving few or only one person. In other words, a high degree of novelty combined with high experienced importance and risk in connection with industrial purchase will increase the demand for frequent and extensive contact between buyer and seller. The preconditions and demand for a close relationship have been met.

#### **f. Characteristics at the interaction process**

At this analytical level focus is on the interaction process. In a relationship 4 elements are normally exchanged: a. products and services, b. information, c. liquid assets and d. social aspects (Ford, 1990: 10). Other concepts like trust, equal business values, experienced distance between the parties, the degree of commitment (e.g. investments in transactional assets), the interorganizational balance of power and the production technologies of the parties also play an important role for understanding a given interaction process.

A way of determining the importance of the abovementioned factors is to define the relationship, and the phase in which it is. There are several relational phase models for this purpose (see e.f. Ford, 1980; Dwyer et al., 1987, Kotler, 1997). Dwyer et al. (p. 15) operate with 5 phases: a. awareness, b. exploration, c. expansion, d. commitment, and e. dissolution. This model is interesting because it includes dissolution of the relationship (phase e). This is not the case in the other 2 models. Each phase has several characteristics offering a good description of a given relationship.

Dependent on the phase of the relationship it is possible to describe the abovementioned factors. Uncertainty will be highest in the attention phase (phase a), as conditions must be determined here. Organizations that wish to streamline their supplier structure will, however, have a portfolio of relationships, the character of which can and will vary. If the relationship is in the commitment phase the organization will know exactly what is exchanged, what is the level of information, what are the costs, and which social characteristics are dominating. The level of experience will be high, the uncertainty low, the information exchange high, the confidence high, the investments in transactional assets high, and the balance of power will be predominantly symmetric.

### **3.1. Implications, exemplification and explanation of some of the contextual conditions**

As can be seen there are many different conditions, which are of course not equally important. Their importance depends on where the organization is in the specific situation. Creating optimal relations to the supplier portfolio may appear to be an extensive task of collecting and treating information, but it should be remembered that this information is nearly always present in the companies. They may not all be explicit, categorized and systematized, but they exist, e.g. as experience in the management of the company.

The information contained in the 6 analytical levels is meant to be a checklist - a checklist where only some items are important. All this information is equally important and may be characterized as areas that influence each other mutually and are dynamic in their fundamental structure. Analyses will consequently only be snapshots – snapshots/ bases for decision that may be changed next time the analysis is performed. The development should be constantly monitored thus making it possible to predict at which levels there will be changes in the near future as well as the consequences of these changes for the other areas.

Above we have briefly described the information contained in each analytical level. Some of them will be drivers for which normative ideal relationship should be established to the focal company's suppliers and customers. Relationship drivers may be: competitive intensity, exit barriers, growth rate on the focal company's markets, complex products/services, product life cycle, and technology heavy products/services. If a company's products have high growth rate, high exit barriers, complex products and services, technology heavy products/services it will need a close and intensive dialogue with both customers and suppliers. Below some of the most important drivers will be described and discussed. They are:

- Product complexity
- Switching costs
- Balance of power (symmetry)

#### **3.1.1 Product complexity**

Product complexity is an interesting factor as very complex products lead to mutual dependence on both customer and supplier side. There should be extensive contacts with the customer who may be very proactive and thus a crucial factor in the product development of the focal company – a product development that may result in changed demands to information systems, production technology, product properties or the like. Quick adaptability and good understanding of the focal company's customer derived demands are important characteristics for a supplier.

Homse (1981: 150) operates with 6 types of product complexity: a functional complexity related to the number of sub-components and sub-assemblies, a production complexity related to production difficulties, a specification complexity related to the test period of the product, an application complexity related to buyers' learning before use, a commercial complexity related to contractual aspects such as payment, terms of delivery, performance demands, potential sanctions, and finally a political complexity related to interest among various factions. Homse's categorization of product complexity is interesting because the details enable an assessment of the product complexity at many levels. Therefore, it will not only be possible to predict how close the supplier relationship

should be when discussing product complexity, but also precisely which tasks this mutual dependence will be comprising.

### **3.1.2 Switching costs**

A closer examination of e.g. switching costs/barriers will indicate how relationships to suppliers and customers should be. Switching costs must be considered as exit barriers for the focal company's customers and for the focal company itself. In other words, switching costs may be considered as a shield against potential competitors.

Switching costs or exchange barriers are especially interesting, as insight into and understanding of switching costs, knowledge of the type of switching costs and consequently the factors that cause these switching costs, decide to which suppliers and customers the focal company should have partnership-like relationships or to whom it should have transactional relationships. Dwyer & Tanner (1999: 468) define switching costs as follows:

“The forgone value of investments plus economic penalties and other expenses associated with finding, evaluating, and using a new supplier”.

Using examples Jackson specifies the concept by dividing switching costs in 2 general groups. She speaks of “Investments” and “Risk, where “Investments” and “Risk” can be illustrated as follows:

“They invest money; they invest in people, as training employees to run new equipment; they invest in lasting assets, such as equipment itself; and they invest in changing basic business procedures like inventory handling” Risk – That is, the danger to customers of making bad choices”.

In both definitions purchase costs and tangible, quantitative costs are connected with the choice of a new supplier. Jackson includes risk, which is used qualitatively but is attached to the risk of making too close ties to a wrong supplier – a supplier who might behave in an opportunistic way later on. When assessing potential suppliers for partner-like relationships the size and power of the actors in the supply chain play a decisive role.

### **3.1.3 The balance of power of the relationship**

The balance of power between interacting organizations is often symmetrical (Gummesson, 1999). When solving conflicts the difference in power will often have direct influence on the behaviour. In situations with imbalanced power and a high degree of dependence there is a risk that the strong part will focus on realizing short-term advantages. Palmer (1996, 20) calls a situation with imbalanced power combined with dependence “absence of symmetrical dependence”. Palmer further argues that “symmetrical dependence”, i.e. more balanced power will protect against such opportunistic behaviour. Close relationships characterized by mutual dependence function better when the power of the actors is balanced. This theory seems probable and could explain why

relationship marketing comes from Scandinavia and England<sup>2</sup>. The majority of companies in these countries are small and medium sized companies.

In Dwyer & Tanner's definition the term "penalties" is used. Several authors have criticized the point of view that customers are kept by means of switching costs created for this purpose by sellers. Barnes (1994: 556) describes companies that practise such behaviour as "a hiding to nothing". Storbacka et al. (1994: 28) argue that using penalties as exchange barriers may create dissatisfaction among customers who will disappear forever when offered the opportunity. There are, however, other types of exchange barriers than "penalty" barriers created by the supplier. These exchange barriers are created by the customer as a result of the relationship and may e.g. be emotional or social barriers.

Based on above-mentioned explanation it can be realized that it is possible to develop a meaningful, contextual linkage between a company's suppliers and customers. However, this requires a priori determination and analyse of a number of conditions, as the situation in which the company is will be crucial for the procedure that should be used when making an appropriate linkage between a company's suppliers and customers. Subsequently, we will attach special importance to the situations in which conditions for entering into relationships are present.

After the discussion regarding the general context factors, which the focal firm should monitor and evaluate in order to succeed in the marketplace, we will now go into a deeper discussion about the specific activities, which should be coordinated in the 'supplier – focal firm – customer'-relationship.

#### **4. Four types of cooperation and coordination activities in the supply chain**

We suggest four relevant types of cooperation and coordination activities in the integrated supplier-customer cooperation for a closer analysis (Twigg, 1998; Simatupang et al.,2002):

1. Co-operative product development
2. Logistics synchronisation
3. Information sharing
4. Collective learning

The following sections discuss strategies of each coordination and expose insights from real world applications.

##### **4.1 Co-operative product development**

Over the recent years a new paradigm has emerged within the total supply network, which incorporates integrated product development and the early involvement of suppliers in design activities. In the automotive industry for example competitive advantage has been centred on

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<sup>2</sup> E.g. Uppsala University, Sweden, Nordic School of Service Management, the Swedish School of Economics and Business Administration, Helsingfors/Vasa, Finland, Stockholm University, Sweden, School of Management, UMIST, Manchester, UK.

delivering products quicker to the customer, ensuring quality throughout the production and delivery phases and at lower costs. As a consequence, there has been an emphasis of improvement focused on purchasing and supply management, and logistics management. As these operations become leaner (Lamming, 1993), focus will necessarily shift earlier in the product development process, especially to the product development relationships that a company creates with its outside suppliers.

This movement of activities earlier in the product development process necessitates a re-examination of the total supply network. Supply chain literature has traditionally examined procurement and value-adding activities without explicitly defining product development as part of these. The increased movement towards outsourcing design activities is bringing recognition for this process as part of the total supply network (Twigg, 1998)

Increasingly suppliers are becoming involved much earlier. This upstream participation in the product development process has led to changes in the management of the customer-supplier relationship, with a tendency towards the partnership form.

The development towards cooperation in product development activities has been particularly strong during the 1990s. A significant feature of these partnership networks is the role of direct, system suppliers and their network of associated indirect, subcontracting firms.

For example, in the automobile industry the first tier supplier for the car-manufacturers - as coordinator of other tiers of supply, is selecting suppliers who can progress from being parts suppliers to taking responsibility for the development and supply of modules/systems. Their intention is that all functional parts of new models will, in future, be entirely based on pre-developed components; thus, suppliers will be integrated early to provide pre-developed modules. For example, Fiat subdivides each new model into 440 system and major component areas (such as seats, bumper, fascia assembly, heating and ventilation system), each of which they ultimately see as being the responsibility of a single supplier (Twigg, 1998). The potential supplier for each of the modules/systems is rated by product, capability, and project management. For Category A suppliers, price is a qualifier, but of importance too are the product development lead-time, delivery schedule time, delivery quality and reliability, component weight control and reduction.

## **4.2 Logistics synchronisation**

Logistics synchronisation means recognising and concerting improvement initiatives that significantly contribute to value creation in the acquisition, consumption and disposition of products and services in today's rapidly changing markets. This typical coordination refers to the market mediation function of a supply chain that aims to match the variety of products reaching the marketplace with customer needs and wants.

The real challenges include focusing on core activities that provide real value to the customer, and subordinating other supporting activities to ensure the value creation process. Analysing the value creation process across the supply chain can provide a road-map for strategic initiatives that clarify specific roles for each participating member. The collaborative logistics processes refer to joint decision-making such as assortment planning, joint forecasting, joint inventory management and

replenishment. Nike and Dell are examples from the real world that show how supply chains are synchronised to create customer value.

Nike has reaped profitability by concentrating on its strengths in designing and marketing high-tech and fashionable footwear for sports and fitness. Nike established one small manufacturer that makes some sneaker parts. Other supporting activities such as footwear production are subcontracted to suppliers in Taiwan, South Korea and other Asian countries. Synchronising its speciality and its suppliers' capabilities allows Nike to build-in flexibility to keep up with the changing tastes of customers (Tully, 1993).

Dell prospers by focusing on two aspects of the computer business: direct sales and build-to-order production (Magretta, 1998). It sells personal computers directly to customers and thereby eliminates the reseller's mark-up and the costs and risks of large inventories of finished products. Build-to-order production means that a product is customised and manufactured according to specific customer request. Dell owns no plants but leases two small factories to assemble computers from outsourced parts. Internet-based technology is used for just-in-time ordering and to share daily schedules with the suppliers. The suppliers utilise shared data to plan and adjust procurement and production in order to deliver parts and components to the factory only when they are needed for assembly. Dell's strategies of direct sales and build-to-order production have proven successful in minimising inventory and bringing new products to market quickly, enabling it to increase market share and achieve high returns on investment.

### **4.3 Information sharing**

The coordination of information sharing attempts to make relevant, accurate and timely information available to the decision-makers. Chain members often have different private information, which is often not shared with others - thus asymmetric information is inherent in supply chains. The idea is, then, to share customer information with the upstream members – the suppliers. The visibility of demand data and inventory at the point of sales allows the upstream members to update forecasts and ensure continuous replenishment of the products.

The coordination of collection, processing and dissemination of information among the chain members must be accompanied by the readiness of the chain members to use shared information in the execution of logistics tasks that contribute to operational and financial performance. For instance, the manufacturer needs to reengineer his operation for late-phase differentiation to take advantage of receiving real-time customer orders. Information technology (IT) such as the Internet, intranet, software application packages and decision support systems can help to facilitate information sharing between customers and suppliers.

Benetton electronically receives orders and sales information from hundreds of company agents located around the world (Camuffo *et al.*, 2001). By tying its logistics and manufacturing systems in with its suppliers and company agents, Benetton can achieve both the best cycle times in the industry and near-perfect customer service levels. Levi Strauss, another fashion firm, also capitalises on information sharing and computerised fabric cutting to customise a variety of jeans for different customers (Schonfeld, 1998). With the increase in customisation, Levi Strauss can charge premium prices for personally fitted jeans.

#### **4.4 Collective learning**

Several examples from real world application show that collective learning can be used to improve the capabilities of managing the supply chain. Close customer relationships allow Dell to understand and satisfy their needs (Magretta, 1998). Dell segments its customers into categories such as consumer, medium business, large corporate, government and education. With direct contact, it is possible to gather credible data about customer needs and buying trends. Each segment has its own sales, marketing and technical support teams. This method allows Dell to tailor marketing, sales and services strategies to the unique requirements of each of those types of customers. Through collective learning, Dell is able to extend the skill of demand forecasting that guides the design of product and ordering flows from the customers to the suppliers.

Collective learning assists chain members to catch up with the capabilities required to create logistics innovations. Information sharing eliminates lack of visibility about product movement and logistics processes. To sum up, an understanding of the interaction of the drivers among coordination modes is important for devising a means of harmonising them in an attempt to attain superior supply chain performance.

In the subsection below we will present a case from which it appears that cooperation with the supplier base is controlled by changed market conditions, customer demands and the business values of the case company. In other words, supplier cooperation and consequently handling this cooperation is governed by contextual preconditions and changes in these conditions.

#### **5. Case: Müller Gas Equipment**

Müller Gas Equipment (MGE) is part of the Arthur and Hubert Müller Foundation. The group consists of the parent company (Arthur and Hubert Foundation) and the subsidiary companies

- A/S Pettersson og Palmer
- Müller Gas Equipment A/S
- BMV 2 Vollerup A/S

MGE is a foundation owned production company in the metal processing industry producing to order. Their most important business areas lie within customer specified products. MGE is a medium sized company with 220 employees at the end of 2002.

##### **5.1 History and development**

Müller Gas Equipment was founded in 1930 by the twin brothers Arthur and Hubert Müller. At that time it was a small engineering shop covering an area of app. 30 m<sup>2</sup>. Since 1934 the company was primarily sub supplier to Danfoss. Since the beginning of the 30s the company experienced steady and calm growth, the decisive feature of the philosophy being that growth was only to take place by own means – an attitude that obviously originated from the macroeconomic situation at that time. Table 5.1 contains the most important events of MGE's development from the start up till now.

**Table 5.1 The development of MGE from 1930 to 2003**

<b>Year</b>	<b>Event</b>
<b>1930</b>	First business area: contract work
<b>1930-1940</b>	Second and third business areas: valves for technical gases and regulators for gas
<b>1945-1965</b>	Many new business areas including odd products, e.g. milking machines, drawing machines, fishing wheels, roller skates etc.
<b>1979</b>	Establishment of family foundation
<b>1980-1987</b>	Intensified focus on internationalisation and focus on growth by means of extensive investments in new productive equipment
<b>1997</b>	Acquisition of small competitor in Zealand (A/S Pettersson og Palmer)
<b>1998</b>	Establishment of subsidiary company in Germany (Müller Gastechnik GmbH)
<b>2000</b>	New company structure – Müller Gas Equipment A/S is founded

Source: Own make

The table mentions the company’s business areas as well as the most important events in order of time. In addition, the company’s attempted routes to growth can implicitly be noticed. During the period from 1945 to 1965 the product portfolio was e.g. increased rather uncritically, but as it did not prove efficient the portfolio has been reduced significantly. The company returned to its core areas and today it operates with 3 overall business areas:

- Contract work
- Valves for technical gases
- Regulators for gas

All business areas are closely connected with gas. The focus is on core areas in which the company has gained long experience and competence. It is therefore our impression that the company has thorough knowledge of central trade conditions such as suppliers, competitors, customers, new development trends etc. Furthermore, the company is very aware of strengths and weaknesses in own organisation. Strengths are expressed in many years’ deliberate choice, whereas weaknesses exist, as the company has learned that it is not wise to spread too much.

## **5.2 MGE’s mission, strategy, culture and learning**

MGE has not written down their mission and strategy explicitly, but in spite of this both concepts are well known. Even among lower level employees there is a good feeling for which factors contribute to ensuring the existence of MGE. The mission is as follows<sup>3</sup>:

“To produce customer specified, high quality products efficiently and flexibly at a competitive price”

<sup>3</sup> Based on interviews

The central aspects of the mission can be obtained through continuous purchase of new and specialized production technology. In this case core competence has been worked up in:

- Choice, establishment and extension of relationships to central suppliers and customers.

The strategy is founded on focused differentiation between quality, customer specification, product development and interpersonal skills. Having experienced additional value customers are likely to pay a higher price than would otherwise have been the case.

According to Bower, 1966; Deal and Kennedy, 1982 and Schein, 1985 organizational culture consists of the central values that members of the organization strive for. The organization's market characteristics will reflect this behaviour. MGE's image is created internally and externally by Arthur Müller, the strong and charismatic managing director of the company, and therefore his values are the ones that reflect the organization. Often recruited from among themselves new members of the managing group have in advance been able to interpret, understand and exert behaviour in accordance with the values of the organization. In this way mutual understanding and learning of organizational values are secured.

### **5.3 Changed market conditions and resulting consequences**

Due to new competitors, primarily from Eastern Europe, competition has been intensified during recent years. These competitors are located in Eastern, Southern and Northern Europe and in the East. The chief competitors are producers located in Northern Europe, producing rather small series with extensive customer specification. Within European production of valves Müller considers themselves as being one of the 2 to 3 largest valve suppliers (out of 5 close competitors). On a worldwide scale Müller estimates the number of competitors to be 17. In spite of decreasing market growth one of their close competitors has increased production capacity considerably during recent years in connection with modernizing his production plant. This has also increased competition.

As for the production of regulators, competition on "standard products" is now so keen that Müller's material price in some cases exceeds the retail price at which the producers in the East offer their products. As countermove to the increasing competition on valve and regulator markets MGE have focused their efforts on core competences. Their strategy is dual. First, in order to meet customer demands they constantly develop new products by e.g. building new functions into the products. This product development often takes place in close cooperation with customers and is sometimes initiated by customers. Second, MGE have tried to build closer relationships with selected suppliers and customers.

### **5.4 Putting the case information into perspective**

From the MGE case it can be seen how changed preconditions at one analytical level can lead to changes at another analytical level – changes that have forced MGE and other comparable horizontal actors to stake on meeting complex and technology heavy customer demands. The result has been that highly skilled employees combined with a state-of-the-art production technology have been central components in the satisfaction of the mentioned customer demands.

In accordance with the conceptualisations of the paper the development of MGE's strategy and the character and control of their supplier cooperation can be explained as follows:

The political development in Eastern Europe has resulted in an increasing number of actors in the industry – especially in product lines with much standardization. The development of the production technology has also led to increased competition within product lines with much standardization, and these developments have led to declining gross profit. Thus, it can be seen how changes in a. the technological development (market characteristics, see e.g. subsection 2) and b. the number of suppliers and thus competition intensity (trade characteristics) lead to changed strategy in MGE. The chosen strategy is influenced by third level components - the characteristics of the organization - and here MGE's business values or what could be called business consciousness play a crucial role. Every company has central values that govern the perceptions and decisions of central organizational actors. By business consciousness is meant: The organization's aggregate learning/knowledge and confidence in present and future profitable survival.

MGE's business consciousness led to focus on establishment of relationships to central actors on both supplier and customer side. MGE decided to stake on the customer segment, which required complex and very specified products – products with few or no standard components. This area is (or can be) financially attractive for 2 reasons. Fewer suppliers will reduce competition, and it is possible to obtain a considerably higher gross profit percentage. Furthermore, MGE has realized that within this type of products the contextual preconditions are chiefly relational.

Thus, it is possible to gain the previously mentioned advantages (less price elasticity, efficient competitive barriers, lower transactional costs, increased rate of innovation, increased customer satisfaction, increased loyalty and increased profitability) by establishing, maintaining, developing and closing supplier and customer cooperation. Especially when developing customerized products close cooperation with customers and suppliers, e.g. through extended access to their information systems, is necessary (see Figure 2). On the supplier side special customer demands necessitate development of new production technologies, and this can only take place in close cooperation with selected suppliers. It is also important to preserve a close dialogue in connection with the regular maintenance of the often very complex and expensive production plant. The actually long lasting relationships with some of MGE's partners are reflected in supplier relationships that have existed since the mid-70s - for app. 30 years.



actions which based on the present satisfaction level are to diminish, maintain or increase the satisfaction level, and e. finally after some time follow up on the actions of the previous phase in order to determine if the desired effect was obtained.

Concerning phase a. measuring customer satisfaction: we do not need comprehensive measurement systems as information can often be found, if not in tangible data, then at least among the actors of the relationship. When measuring satisfaction one should have realized in advance what is to be measured. In other words, we need to find out what customers perceive as important. When making new tasks it is not sufficient for the customers that they are offered product and service endowments.

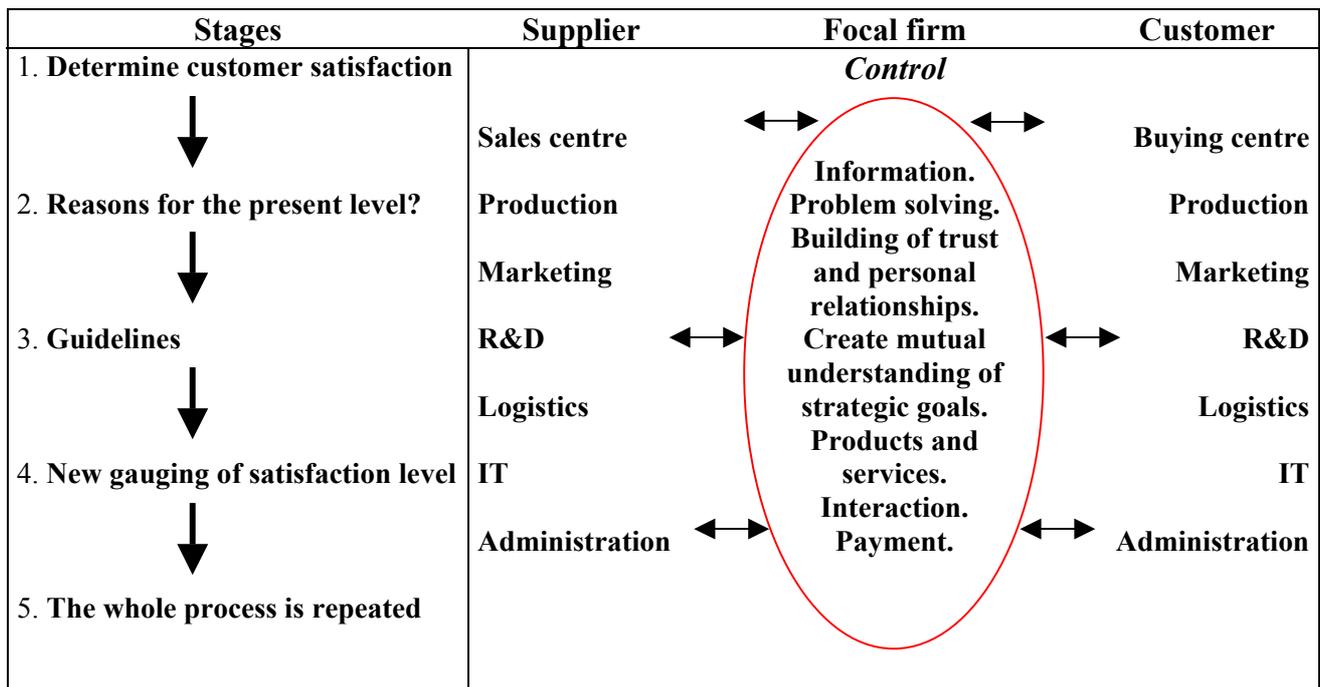
According to Grünbaum (2002) satisfaction is a consequence of many factors evaluated at different times of this purchasing process, which means that different importance is attached to these factors. The conditions can be divided into satisfaction dimensions consisting of sub factors, and examples of these dimensions are (Grünbaum, 2002: 162-166): the **technical** dimension (quality, operational quality and agreed capacity), the **service** dimension (the supplier's service dimension), **reliability** (the reliability of the information, observance of agreements) and the **economic** dimension (price and other purchasing costs). The case study showed that the buying organization's basic business values were decisive for the satisfaction dimension.

Some satisfaction dimensions were identical across companies. Others were unique, as they were situation and context dependent. The results also showed that the satisfaction dimensions were mutually dependent and consequently were to be seen as a complex interactive system the importance of which was changing as the purchasing process changed. In the pre purchase phase where the market is screened for potential suppliers, the reliability dimension plays a crucial role. If the potential supplier appears to be untrustworthy (if an agreement is broken, more is promised than can be done etc.) in this phase, the supplier will be sorted out, which can be done quickly and painlessly, as there are no special switching costs at this time of the process.

Understanding satisfaction dimensions means insight into what leads to and how satisfaction is gained. This means that it is possible to determine very specifically the reasons for the identified satisfaction level (phase b). It is also relatively simple to find out what should be done to influence the satisfaction level favourably (phase c).

We must go through a number of phases to gain insight into the customers' satisfaction with a company's products and services. Subsequently, the insight and understanding acquired when studying customer satisfaction must be related to the interactions between suppliers and company and company and customers. Provided that the focal company really wants to develop a relationship, that the behavioural factors indicate a placing at the relational end of the behavioural spectrum, that an exchange is possible, and that the strategic goals of the company can be realized, the linkage model below may be used as a conceptual framework for connecting supplier and customer portfolios appropriately. The model may also be used under more transactional conditions, but in this case the managing tasks of the focal company will have another character.

Figure 6.1 Managing relational processes between supplier, FC and customer



Source: own make

As mentioned the linkage model consists of five phases, which are to provide an understanding of customers' experienced satisfaction with the products and services of the focal company. In phase 2 it is crucial to determine if the reasons should be found in the focal company or the supplying company. If these reasons should be found in the supplying company, and if they have fundamental character, e.g. lack of congruity between strategy and company culture, it should be discussed if the supplier can be replaced.

However, if the problems are superficial, they should be solved as quickly as possible. The problems in focus have provided the customer with experiences that differ from the expected performance level, and these problems may have caused higher as well as lower performance levels. If the performance level is higher than expected it should be discussed if cooperation with this supplier should be developed further.

If the present level is due to internal conditions in the focal company it should be discussed if this level can be improved e.g. by means of benchmarking and subsequently sourcing strategies. In phase 3 guidelines for how to maintain or improve given levels are prepared: extend cooperation with present suppliers or search for suppliers with the characteristics that are crucial for the customers' experienced satisfaction.

In phase 4 and 5 it is examined if the decisions of phase 3 have resulted in the desired changes of the satisfaction level, and the process is repeated, as it is continuous. Concurrently with the process the focal company has a number of management tasks, which mainly aim at securing harmonious interaction between supplier and customer portfolio – tasks like securing an efficient flow of information e.g. by means of information technology, problem solving in case of unexpected crises, attempts to create mutual understanding of strategic goals etc.

As appears from the model there are a sales centre, a buying centre and a number of identical lines of function on “each” side of the focal company. Based on thorough analyses of the preconditions, based on the measured customer satisfaction, understanding of the lines of function and staff characteristics it is important to establish a managing organization. In the model the focal company should be perceived as a vacuum, which is normally not in focus. By focusing on the market characteristics it will be possible to fill up the vacuum with the managing tasks that may result in a linkage between supplier and customer portfolio.

Using the conceptual procedure in the linkage model will enable a company to decide rationally which suppliers should remain in the supplier portfolio, the character of these relationships (loose/firm) to the different types of suppliers, the formulation of clear cooperation goals for the supplier but also for the company itself. It will also be possible to assess and evaluate the company’s customer portfolio. How should the relationship to different customer types be, and due to lack of congruity and profit which customers do we not want to serve any longer?

## **7. Concluding remarks**

The point, and message, of this paper is that in order to secure efficient and profitable control of suppliers and customers a company needs to understand and interpret the layers of preconditions that partly surround and partly are embedded in the focal company. It also appeared that due to the extent of interactive and continuously changing factors short and unambiguous strategic recommendations are not desirable in the process of achieving the wanted coordination and control. Instead we have made a point of preparing an extensive systematic analysis, in which the importance of the individual factors depends on the reality in which the organization is embedded. Furthermore, it becomes important to have a continuously updated understanding of the layers of preconditions. We therefore recommend a decision support system that incessantly search, and analyse relevant information with the purpose of providing management with relevant and focused strategic supplier and customer information. Among other purposes, this information should be used for evaluating supplier capabilities, because in the future we will see a need for developing coordination competences in the focal company. The ability to transform customer wants and demands into cooperation opportunities in relation to suppliers will be crucial in future.

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